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School of Information Student Research Journal

Volume 6 | Issue 2 Article 6

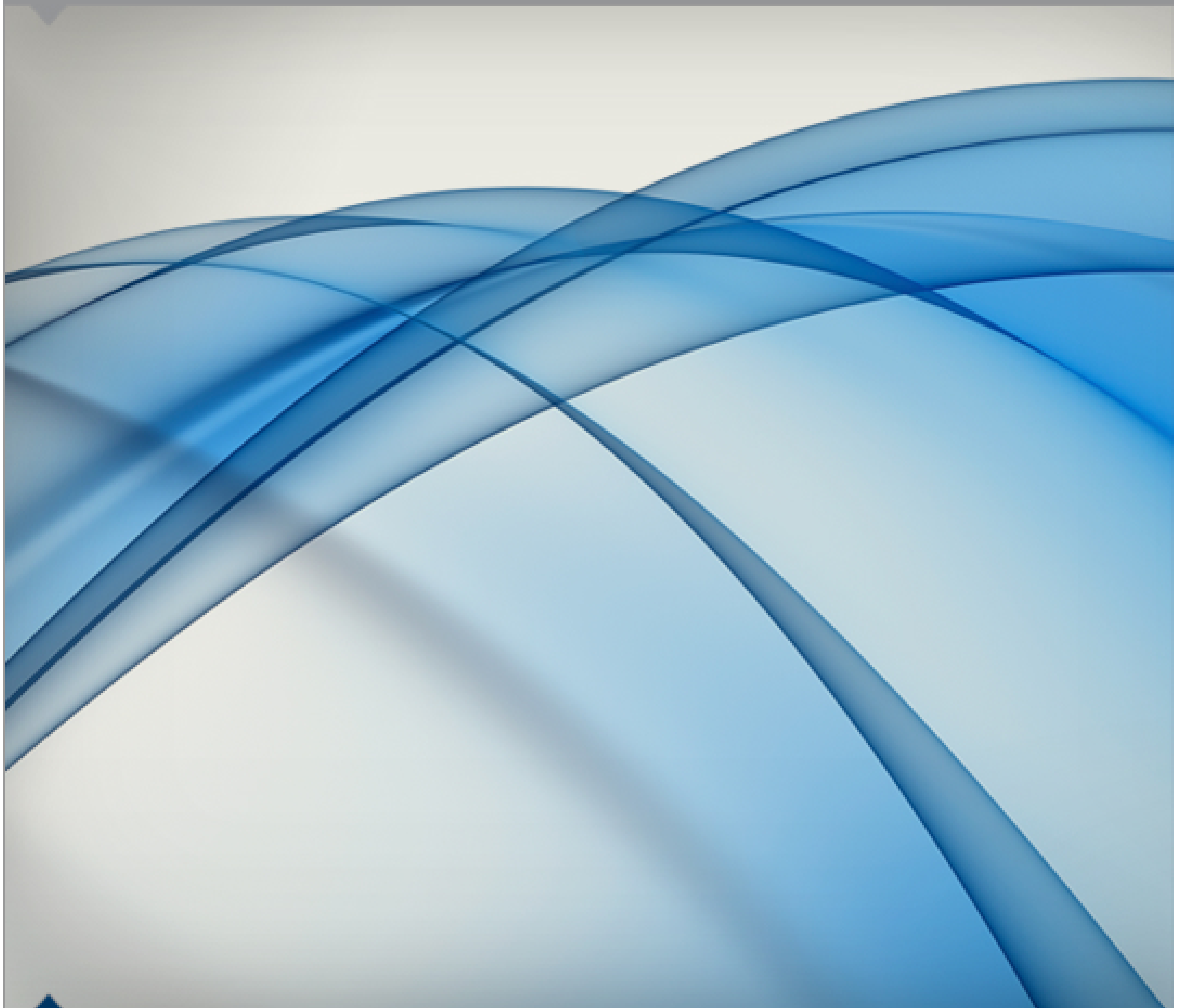
January 2017

SLIS Student Research Journal, Vol.6, Iss.2

SLIS Student Research Journal, Vol.6, Iss.2

Keywords
SLIS Student Research Journal, SRJ, San Jose State University, School of Information, iSchool, School of Library & Information Science

SAN JOSÉ STATE UNIVERSITY, SCHOOL OF INFORMATION



SLIS Student Research Journal

Volume 6, Issue 2 (2017)

ISSN 2160-7753

SJSU | SCHOOL OF INFORMATION

SLIS Student Research Journal

VOLUME 6, ISSUE 2

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Expanding the Perimeter

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This issue of the *SLIS Student Research Journal* (SRJ) is the first which I have the privilege to introduce as the Journal's Editor-in-Chief, and I am particularly honored to introduce the first publication in *SRJ*'s new reviews section. *Overcoming Information Poverty: Investigating the Role of Public Libraries in the Twenty-First Century* (McKeown, 2016), is deftly reviewed by Vasudeva whose analysis showcases how critical reviews add to the scholarly conversation by contextualizing a work within the literature of the field. Researchers and practitioners interested in public libraries and information literacy will benefit from reading this review.

Our first article in the peer review section is a literature review and analysis of Big Deal subscription models for packaged electronic serials by Sjoberg. Sjoberg found that the transition involved in breaking up these subscription packages, and subsequently loosing access to some database collections, is most often successful when consultation and a combination of evaluative methods are used. However, Sjoberg notes a gap in the literature regarding longer-term repercussions or successes, and that while cutting up these expensive Big Deal package can be done, "the process that follows e-journal cancellations is less clearly addressed in the literature" (p. 7). Concluding that "there is no one-size-fits-all approach to the evaluation of e-journal subscriptions" (p. 10), Sjoberg urges serials librarians and others involved in collection development to focus on communication with stakeholders and customization of their approach to decision-making.

Our second peer-reviewed article is an especially timely piece in light of the recent #WeNeedDiverseBooks movement: Ting examined diversity in children's books, beyond "foods, festivals, and customs" (p. 1), and whether children are finding themselves represented in the characters and themes of the novels they read. Ting found not only that is there a need for more diverse books (in comparing population to representation), but there is a need for further, rigorous research concerning whether and how children may benefit from a diversification of representation in their books and novels. Most poignantly, Ting notes that "it does not matter how many great, diverse books are on the shelf of the library if children do not read them" (p. 6), thus urging researchers to continue investigating the motivations of child readers, and how to better connect readers with diverse books.

This issue of *SRJ* features an invited essay contribution from Dr. Swygart-Hobaugh who elucidates the specialization of data services in academic libraries. Drawing parallels to other facets of reference services, Swygart-Hobaugh discusses a leveled service framework for parsing the myriad ways *databrarians* (p. 3) may serve their users. Within this exposition of the work and skillsets of databrarians, Swygart-Hobaugh concurrently designates data services a "strange beast" (p. 1) and yet posits that data services are in many ways "a natural extension of the established roles of academic librarians" (p. 3). Swygart-Hobaugh's essay brings us into close quarters with data librarianship, demystifying data services, and explicating the connection between librarianship and research data.

This contradiction of data services as both strange and natural as propounded by Swygart-Hobaugh is perhaps a microcosm of a broader question concerning what exactly defines the perimeter of LIS. As Swygart-Hobaugh's piece implies, librarianship encompasses a diverse array of specializations; new roles are expanding the multitudinous ways in which the profession is defined by its work. The many manuscripts submitted to *SRJ* during the past months have also borne testament to the diversity of LIS specializations as represented in the MLIS, and by this necessity the *SRJ* is also a diverse forum. This issue of the Journal addresses collection development, literature, literacy, professional ethics, shifting service roles, and perceptions of the profession. Defined as both a practicing profession and a theoretical discipline (Bates & Maack, 2010), and further as a *meta-discipline* applicable to all subject matters (Bates, 1999), LIS research seems to incorporate its contradictions by broadening and expanding the scope of its perimeter.

The scope of the *SRJ* reflects the multifaceted nature of the field, and the Journal welcomes submissions of manuscripts on the widest diversity of topics in LIS. In the absence of a strong thematic niche, what most coheres the *SRJ* is its quality of writing, research, and the discourse advanced by its authors. By strength of its editorial team, the *SRJ* aims to highlight graduate scholarship believed to showcase research and writing which advances the scholarly conversation of the field. The *SRJ* provides the opportunity for graduate scholars to join the myriad conversions of our profession, and is proud to once again welcome new voices in this twelfth issue of publication.

Acknowledgements

I hope that our readership finds something new and of value in this twelfth issue of the *SLIS Student Research Journal*. Thanks to our authors for moving the conversations forward, and in new directions. Acknowledgement and thanks to *SRJ*'s exceptional editorial team for their diligent work in reviewing submissions and developing the Journal's new reviews section. Special thanks to our outgoing Managing Editor, Gina Nichols, for her exceptional organization, and to our long-suffering Faculty Advisor, Dr. Anthony Bernier, for his guidance and training.

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SLIS Student Research Journal

Volume 6 | Issue 2

Article 2

January 2017

Data Services in Academic Libraries – What Strange Beast Is This?

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As an academic librarian, explaining my job to the average person on the street is not easy. As soon as they hear "librarian," most people immediately conjure up the image of a public librarian who leads children's story hour, gives them advice on what book they should read next, or helps them find that obscure tax form. I then further compound their confusion by telling them I am a "data services" librarian. Nowadays the moment people hear the word "data," they most likely think of their smartphone's data plan, and then they think, "Why do we need a librarian for THAT?" Even within the academic world, most students and faculty, when told someone is a "data services" librarian, will furrow their brows in puzzlement. And due to its relative rarity as a specialization, many academic librarians themselves find the notion of "data services" perplexing. As a practicing data services librarian I myself am often unsure about what I am or should be doing – and I betray this uncertainty by compulsively putting air quotes around the phrase "data services" when telling people my job title.

Thus, this essay is a brief but sweeping attempt to demystify what is this strange beast called data services in academic libraries. Since the best way to elucidate something abstract is to give concrete examples, I will describe activities from my San José State University INFO 220-12 class, "Data Services in Libraries," which illustrate the core aspects of this specialization in academic libraries. In so doing, I hope to elucidate how this area in academic libraries is simultaneously scary and exciting – as it often sends us fumbling out of our comfort zones but challenges us to flex our intellectual curiosity, deepen our knowledge, and expand our roles, which is what librarianship is all about.

What's "Data," and What "Services" do Data Services Librarians Provide?

Kellam and Thompson (2016, p. 3) offer a broad definition of what researchers and data services professionals supporting them generally envision as "data":

> The data we are concerned with here are the product of taking that raw informational input and assembling it into a structured form for analysis. Data are a product of research as well as an input for research. Research data collections (or *datasets*) are generally in electronic form and are accompanied by or incorporate metadata, or documentation that describes the structure and content of the data. In brief…data will be taken to mean electronic files containing information that has been collected systematically, structured, and documented to serve as input for further research. Data are the raw materials for research, produced through any systematic collection of information for the purpose of analysis.

From this definition, data can be both numeric/quantitative (e.g., an SPSS statistical software file containing data collected from the *General Social Survey,* an annual U.S. national-level sample study of attitudes toward various social issues) or qualitative (e.g. recordings or textual transcriptions of in-depth interviews with a smaller sample of adults asking them open-ended questions about their attitudes). As Kellam and Thompson (2016) note, most raw data cannot be found, understood, or reused by others unless it is accompanied by metadata or documentation. For example, the SPSS file containing the raw, numeric data from the *General Social Survey* would be accompanied by a PDF or TXT "codebook" file that contains the purpose of the study, the data collection and sampling methods, the wording of the questions asked, and the response choices accompanied by the numeric value or code corresponding with that response choice in the SPSS file (e.g., Yes = 1, No = 2, Don't Know = 9, No Answer = 99).

Academic librarians are accustomed to collecting, cataloging, and helping users find and use the scholarly publications produced from researchers' analysis of data. A "databrarian," to borrow Kellam and Thompson's (2016) portmanteau, essentially fulfills these same purposes, except their focus is on collecting, cataloging, and helping others find and use the *raw data* on which these scholarly publications were based. So, in many ways data services is a natural extension of the established roles of academic librarians. Likewise, it can encompass all the various specializations of librarianship: collection development and management, cataloging and metadata creation, and reference and instruction. In addition to these typical areas of support, some data services librarians are venturing into more unchartered waters by providing training and support for statistical analysis softwares (e.g., SPSS, SAS, Stata, R), for qualitative analysis softwares (e.g., NVivo, Atlas.ti, Dedoose), and for cleaning, organizing, and formatting data files for analysis purposes and long-term access and preservation. Likewise, data visualization services (e.g., GIS mapping, social networking visualizations) are frequently housed in academic libraries and offered by librarians. Finally, data services librarians are increasingly supporting researchers' management of their data throughout the entire research data lifecycle. For a comprehensive look at the levels, variety, and possibilities of data services within academic libraries, I would strongly encourage reading the following texts:

Kellam, L. M., & Thompson, K. (Eds.). (2016). *Databrarianship: The academic data librarian in theory and practice*. Chicago: Association of College and Research Libraries.

Kellam, L. M., & Peter, K. (2011). *Numeric data services and sources for the general reference librarian*. Oxford: Chandos Publishing.

Geraci, D., Humphrey, C., & Jacobs, J. (2012). *Data basics: An introductory text*. Ann Arbor, MI: Inter-University Consortium for Political and Social Research. Retrieved from http://3stages.org/class/2012/pdf/data_basics_2012.pdf

What Background Does a Data Services Librarian Need?

I teach INFO 220-12 Data Services in Libraries at San José State University, and in this course I touch on the knowledge, experience, training, and skills one would need to be a successful data services librarian, in my professional opinion. And, because my own experience primarily lies in the public services and social sciences realm, the course was constructed to give students a taste of what public-services, social-sciences data services librarians do in their day-to-day. As such, the course assignments are very real-world/application oriented and, at times, a bit of a baptism by fire – reflecting my experience that much of librarianship in general and data services librarianship in particular is a learn-by-doing-and-sometimes-messing-up experience.

One of the best ways to gauge what knowledge, experience, training, and skills are necessary for a specific career path is to look at job postings in that area. Thus, students start my course by reading Xia and Wang's (2014) article that examines the core competencies and responsibilities in data services librarian job postings. My students also look at some current data-services job postings to gauge for themselves their readiness for such positions and what knowledge, skills, etc., they believe they would need to build to get that position. In my first lecture I cite highlights from Xia and Wang's (2014) findings to contextualize what we will be covering in the course and how it maps back to actual data services librarian job expectations.

Perhaps the most pressing question besetting data services librarianship is this: Does a librarian need a data/statistical and research methodologies background to adequately offer data services? As with any subject specialization within academic librarianship, I think the honest answer is that, yes, if you have such a background you are going to have an edge in supporting data users as compared to someone who does not. However, I also think that with study and perseverance one can gain enough foundational knowledge and disciplinary language in these areas to adequately support data users without having to have an undergraduate degree, second masters, or Ph.D. in a data-heavy discipline. Thus, I have a unit dedicated to students' learning key statistical and data literacy concepts, and all the remaining course units and assignments require their application.

The next course unit is focused on data reference and instruction models and approaches, as a core responsibility of public-service-oriented data services librarians is teaching data users how to find, evaluate, and use data and statistics in their project. In this unit students are first exposed to Geraci, Humphrey, and Jacobs' (2012) "levels of reference" service that will serve as a foundational framework for approaching their remaining course assignments. Geraci et al. (2012) demarcate these levels to compartmentalize data reference into a hierarchy of basic to advanced data reference/instruction; in addition, they believe that the level structure can assist data services providers in clearly articulating what services they will and will not provide. Throughout the course, we discuss how neat and nice these levels and "we'll do this but not that" service plans look on paper, but how in practice a data services librarian is often negotiating these boundaries on the fly. Similarly, we have sometimes passionate discussions of who on campus should hold responsibility for some levels and kinds of data services – e.g., should librarians be teaching students statistical and data literacy concepts and how to use statistical software, or should that only fall in the realm of faculty's responsibilities? Through these discussions students learn that, much like all library positions, data services librarians are in a constant state of figuring out their roles and responsibilities – and, while intimidating and sometimes frustrating, it is the flexibility and constant opportunity for growth that also makes the position stimulating and fun.

After laying this foundation for going forward, we spend four weeks exploring various resources for identifying ready-made statistics, datasets ready for crunching, raw data resources for generating statistics online and extracting datasets for analysis in statistical softwares (with a demo of SPSS to give them a basic feel for getting data users started in its environment), and qualitative data (with a demo of NVivo qualitative data analysis software). We have another unit dedicated to discussing researchers' data management needs across the research data lifecycle – once again problematizing where librarians seem to fit in that cycle and where we might be perceived as overstepping our bounds. And we have a last unit dedicated to assessing data users' needs, developing a data service plan in response to those needs, and marketing those data services to targeted users.

When it comes to the course assignments, I basically plunge the students into the data-services deep end and hope they can swim – much like my experience when I first took on data services responsibilities in my own career. The assignments simulate very real-world, practical scenarios that one would experience as a data services librarian:

- Engage in a data reference email exchange with Mandy the Graduate Student, a first-year master's student seeking help in finding a dataset for her thesis research.
- Develop an instruction plan for a social sciences data or statistical resource and/or data or statistical literacy concept and deliver that instruction via a recorded presentation or a Guide on the Side tutorial.
- Conduct an environmental scan of the data services needs of a social sciences department, create a service plan in response to those needs, and craft a marketing plan for those services.
- Engage in an email exchange with Mandy the Faculty Researcher who is asking for assistance with writing a Data Management Plan (DMP) for her research project grant that must meet the National Science Foundation Directorate for Social, Behavioral, & Economic Sciences (NSF-SBE) guidelines.

Through these assignments, students get to exercise the knowledge and skills they learned in the course. Also, they get firsthand experience of what actual data services librarians do in their day-to-day work – including the uncertainty, constant role and boundary negotiation, and baptism-by-fire experiences that they face in the line of duty.

The First Step to Taming the Beast is Naming It

To conclude, data services librarianship is a longstanding yet fast evolving field. And at times it can feel a bit unwieldy and may not be for the light of heart. But, as facing uncertainty with curiosity, tenacity, and aplomb is the nature of this beast called librarianship, perhaps data services isn't such a strange beast after all.

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SLIS Student Research Journal

Volume 6 | Issue 2 Article 4

January 2017

Accessibility of Diverse Literature for Children in Libraries: A Literature Review

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Acknowledgements
I would like to thank Dr. Frank Cervone at SJSU for his guidance and teaching, and for demanding excellence from all us students in our writing and thinking.

Accessibility of Diverse Literature for Children in Libraries: A Literature Review

Cover Page Footnote
I would like to thank Dr. Frank Cervone at SJSU for his guidance and teaching, and for demanding excellence from all us students in our writing and thinking.

The issue of cultural diversity has long been on the radar of librarians specializing in service to children. Since the earliest focus on the availability of quality literature depicting minority cultures, librarians have understood the importance of reaching all children with a message of diversity and inclusion. While there are myriad ways librarians can promote diversity within the library, including programs, events, and services, offering children a diverse collection of books remains an essential component of shaping the choices of young readers.

The meaning of cultural diversity has come to encompass "all the shared characteristics that define how a person lives, thinks, and creates meaning" (Naidoo, 2014). These characteristics go beyond what has traditionally been considered culture, such as foods, festivals, and customs, and instead have become a complex mix of factors determined by person's daily experiences, social factors, and regional or national influences (Nieto, 1999 as cited in Naidoo, 2014). Cultural diversity is not limited to race or ethnicity; it also includes sexual orientation, socioeconomic status, language fluency, and much more.

In recent years, there has been much discussion surrounding the issues of increasing the diversity of representation as well as the quality of diverse representation within children's literature. These discussions focus primarily on the beginning of a book's life cycle, where the decisions of authors and publishers play a major role. This literature review was originally intended to look at the other end of the life cycle, at how readers make decisions and whether young readers are choosing the diverse titles that are available. After all, it benefits no one to have shelves of books representing diversity if no one checks them out or reads them. However, there was almost no primary research available on the subject of how children select reading materials, let alone how race and identity play a role in these selections. Consequently, the review was expanded to include bigger questions related to the accessibility of diverse literature in libraries at each step of the reading chain, from the publication of diverse titles to collection development and circulation. It also addresses the more fundamental issue of why accessibility matters, though there was also scant recent literature addressing this. In sum, this literature review addresses the following questions:

- What does the research tell us is the importance of having access to culturally diverse materials?
- Of the statistically low number of books featuring cultural minorities that are considered of excellent quality, how many of these titles do libraries actually purchase for their collections?
- Do children choose culturally diverse books to read? What factors influence which books circulate?

Each one of these questions will be addressed by presenting pertinent studies and data that shed light on the subject. They can be considered separately, but taken together, the literature forms a larger picture of the importance of diversity, the state of book availability and accessibility, and the challenges that lie therein.

The Importance of Diverse Literature

It is widely agreed within the library profession, and among children's librarians in particular, that books representing diversity are important. This conclusion feels right; it is intuitively satisfying. But the question remains – what makes diversity so great?

The article, "Books Like Me: Engaging the Community in the Intentional Selection of Culturally Relevant Children's Literature," looked at how involving community leaders in the selection of African American themed literature for local child care centers and schools changed the way people thought about books and about themselves (Zygmunt, Clark, Tancock, Mucherah, & Clausen, 2015). In this study, teacher candidates selected 61 books that portrayed African American culture and invited Black community leaders to a two-hour event where they perused the books and voted on their favorites. Using grant monies, full sets of the 21 books with the most votes were purchased for local child care centers, schools, and churches. The researchers conducted interviews with the event participants a week after the event, and the teacher candidates involved wrote about their impressions of the event in a journal.

The feedback from the participants and teacher candidates was overwhelmingly positive. The teacher candidates described coming to a deeper awareness of racism, segregation, and prejudice. They felt both more connected to the African American community as well as more inspired to work with the children in the community. Community participants also expressed how much they enjoyed the event, how it made them reflect on their own experiences and journeys, and how important history and culture were to pass on to children (Zygmunt et al., 2015). This affirms the commonly held belief that when books are "mirrors" in which people see themselves, they have strong positive associations. However, while it is clear from this study that books representing African American culture can have a profound impact on teachers, caregivers, and community adults, the study did not look at the impact these books had on the children themselves. A follow-up study with the recipients of the book sets would have been an informative way to gain an understanding of how a quality selection of books reflecting a child's own race and culture can affect them. After all, they are the target audience of this literature.

Smith and Lewis (1985) studied how children are affected by race represented in stories. They looked at whether the race of a book's main character affected recall in Black children who listened to stories. In the experiment, 120 Black children between six and seven years old each listened to two stories on cassette tape. One third of the children listened to two stories with Black main characters, one third listened to two stories with White main characters, and one third listened to two stories with non-human main characters. They then answered a survey that tested their recall of the stories.

As the researchers expected, recall was greater for children who listened to stories with Black protagonists—but only for the boys. Among girls, the difference was negligible. This, the authors pointed out, could have been related to the genders of the main characters in the stories, most of whom were boys. Unfortunately, because this factor could have influenced the results, the study's conclusion is not as clear as it could have been. While it is still possible to conclude from this study that boys' recall is affected by the race of the main characters, it is not that simple. The gender of the main character, as well as other factors such as the reader's age and background knowledge, may also play a significant role in recall.

In 1992, a teaching student at Michigan State University's College of Education looked directly at how reading multicultural books affected children. The study was conducted over the course of a school year in the third-grade class taught by the author. Kuperus (1992) used literature pertaining to three social studies units on Japan, China, and Native Americans to introduce culture, history, and discussion. Using surveys, interviews, observations, journal writing, and class discussions throughout the year, Kuperus was able to document changes in the children's attitudes and thinking about unfamiliar people and cultures.

Kuperus (1992) found that the children's attitudes were influenced positively; after reading the literature and learning about other cultures, they expressed more understanding, empathy, and global awareness compared to the beginning of the school year. This confirms the belief that reading books about unfamiliar people benefits everyone, and that books are a "window" into the lives of others. While the conclusions of this study are consistent with what educators intuitively believe, it must be considered carefully, since it was not peer-reviewed. It also prominently relied upon the observations and analysis of a single researcher and a single class of 23 children. This paper sheds light on how children are affected by literature, but its conclusions cannot be considered the most authoritative.

In fact, there is very little decisive information about the effects of diverse literature on young readers. Cheesman and DePry (2010) cite several more studies in the article "Critical Review of Culturally Responsive Literacy" that seem to offer evidence of how diverse literature correlates to academic achievement, but they point out that each study has flaws or makes unsubstantiated conclusions. Speaking specifically of the culturally responsive teaching (CRT) movement in which teachers "use students' culture as a foundation for learning," they state that "more rigorous study is needed to establish this promising practice as a fact" (Cheesman & De Pry, 2010, p. 91).

The evidence gathered from these studies shows that while the influence of diverse literature is anecdotally and intuitively positive, the research itself may not be academically rigorous. Practitioners in librarianship and education, however, seem to take for granted the idea that diverse literature always has a positive benefit both to readers who see themselves mirrored in a diverse book and to those who see characters unlike themselves through the window of literature. This theory holds up in practice, as there are no studies demonstrating a negative impact on readers.

Availability of Diverse Literature

If we assume that there are benefits to diverse literature as both mirrors and windows, then the availability of such books is of utmost concern. The United States Census Bureau declared that as of July 1, 2011, more than half of children under the age of one were racial minorities (United States Census Bureau, 2012). As of 2016, this group of children is ready to enter America's education system, and it is critical that there are books there for them.

Every year, the Cooperative Children's Book Center (CCBC) at the University of Wisconsin compiles data on the number of diverse children's books published in the United States. According to the CCBC, 3,400 children's books were published in 2015. Of these, 14.8% were about racial minorities, including Africans or African Americans, Native Americans, Asians or Asian Americans, and Latinos (Cooperative Children's Book Center, 2016). This number represents an increase over previous years, but it is still well below the corresponding percentages within the U.S. population, as reported by the Census.

A 2010 report, "Inside Board Books: Representations of People of Color," looked at all board books published between 2003 and 2008 to determine the extent to which groups of color were represented (Hughes-Hassell & Cox, 2010). The researchers found that 89.9% of the books contained white characters, with 59.6% containing *only* white characters. Only 36.6% contained one or more people of color, while 10.1% contained only people of color (Hughes-Hassell & Cox, 2010, p. 219-220). Given these statistics, those charged with developing children's book collections are facing an uphill battle to find suitable books that represent diverse populations.

In recent years, there have also been inquiries that looked at library collections to assess the level of diverse representation in their books. The broadest and most comprehensive of these is "Diverse Population, Diverse Collection? Youth Collections in the United States" (Williams & Deyoe, 2014). In this study, the researchers first developed their own list of 1,421 books that included the highest quality books from recent years representing racial and ethnic minority groups, people with disabilities, and lesbian, gay, bisexual, transgender (LGBT) characters. The authors then used WorldCat to search for each book on the list, and they compiled all the U.S. holdings data for every format of each title.

Williams and Deyoe (2014) found very specific data on the over 5,000 libraries that included any diverse books in their collections. They found that public libraries held the most, though their holdings still varied widely by region, size, and expenditure levels. Many libraries owned books with racially diverse characters, but none with LGBT characters or those with disabilities. Unfortunately, even among libraries that spent the most, one-third "did not achieve the minimal level for representations of racial/ethnic diversity or representations of disability, while half did not meet the minimal level for representations of LGBT orientation in youth collections" (Williams & Deyoe, 2014, p. 116).

Similarly, a smaller study looked only at LGBT books for youth within school media centers in two states and found that that up to 10% of students in eighth grade self-identify as LGBT (Oltmann, 2015, p. 25). High school media centers in one northeastern state and one southern state were studied to see if any collection patterns emerged. First, Oltmann compiled a list of 110 LGBT books of high quality and then compiled a sample of high schools from each state. Each high school's online catalog was combed to determine how many listed titles were in each collection. Oltmann found no significant differences between schools from the different regions, or most other variables, and an average of 20% of the research list was listed in each school's catalog.

Both Williams and Deyoe's study and Oltmann's study highlight that library collections vary widely when it comes to representing diversity. A high number of libraries have almost no diversity in their collections at all, while others have a significant collection. However, even the most diverse collections do not come close to representing the full spectrum of diversity in America's population.

In "Missing Faces, Beautiful Places: The Lack of Diversity in South Carolina Picture Book Award Nominees," Kurz (2012) took a different approach to assessing collections. After assuming that books nominated for the South Carolina Picture Book Award would be purchased and displayed prominently by librarians, Kurz analyzed the content of the nominated books to assess the quantity and quality of representation of racial minorities. Of the 112 nominated books since the inception of the award, but excluding those with non-human main characters, 61% featured white characters. Of the 22.4% that featured black characters, 12 of the 17 featured Africans, rather than African Americans. Clearly, award selection committees were not choosing books that represented the diversity of the South Carolina population.

The quantitative data on library collections speaks clearly. While the reasons behind the collection choices have not been pursued in any of these studies, they nonetheless illuminate the problem of underrepresentation of diverse cultures in library collections.

How Children Choose

It does not matter how many great, diverse books are on the shelf of the library if children do not read them. For anyone interested in increasing diverse books representation in libraries, getting children to read them must be a consideration.

Two papers looked specifically at race and how children respond to diverse reading choices. In "Readers and Book Characters: Does Race Matter?" researchers studied the reading choices of one class of third-grade students (Holmes, Powell, Holmes, & Witt, 2007). They created a library for the students that offered equal and balanced choices between books with White protagonists and books with Black protagonists. They observed which books children chose during free reading time and how long each child spent with the books they chose. The class included both White children and Black children. Surprisingly, they found no correlation between the race of the child and the books they chose, nor was there correlation with the length of time engaged with each book. The sample size for this study was small, only one class of 32 children, and there was no qualitative data from the children that might explain this result.

In another study, a group of Black children was asked to read five books specifically selected because they portrayed a broad spectrum of illustration styles, from quality realism to offensive stereotypes (McKenzie & Johnstone, 1998). Twenty fifth-grade students responded to surveys before and after reading each book and participated in small groups to discuss what they read. Though they generally agreed on which illustrations they liked most and least, which corresponded to the quality of the illustrations, they were surprisingly divided about both which books they would reread and which they would recommend to others. It seemed that their enjoyment of the books was not necessarily dependent on their reaction to stereotypes in illustrations. McKenzie and Johnstone concluded that adult intervention might be necessary to guide young readers to recognize hurtful images and stereotyped characters (1998, p. 47). This study was not published in a peer-reviewed publication.

When it comes to influencing which titles circulate, librarians often compile lists of outstanding books, award winners, and staff favorites. Awards such as the Coretta Scott King Award and the Pura Belpré Award also recognize quality diverse books, but these awards and lists may not influence children's selection process. In one study, researchers compared the circulation of books on the American Booksellers Association's monthly bestseller list to books that had won the Newbery Award and Caldecott Award (Ujiie & Krashen, 2006). Circulation and inventory data was collected for these two lists from six library systems in Southern California. During the month of data collection, bestsellers were checked out of all branches an average of 200 times, while award winners were checked out an average of 35 times. This outcome is unsurprising, since by definition, the bestsellers are the most popular books. A better comparison would have been to use the average number of checkouts across all children's titles to see how award winners compare to the average. Still, the results of this study may indicate that award-winning books are not necessarily the books that children are the most interested in checking out.

Two other papers not specifically related to diversity are also worth mentioning, if only to give librarians and educators more insight into how children tend to choose their books. This information can be useful for those seeking to increase circulation of their diverse book collection. In the first, "Girls Choose Fiction; Boys Choose Non-Fiction," the author found precisely this outcome (Hartlage-Striby, 2001). Using a tally mark system in three elementary schools showed that girls chose fiction more often than non-fiction, and boys did choose non-fiction over fiction. However, the students' choices could have been dependent on factors other than gender, such as which books were on display. When asked to provide tally marks, one librarian realized that she had not displayed any non-fiction books for a kindergarten class.

Researchers have also looked at how very young children choose their reading material. For example, researchers found that preschoolers and kindergarteners had strong opinions when it came to choosing their own books (Robinson, Larsen, Haupt, & Mohlman, 1997). Specifically, they tended to choose books they were already familiar with, books with fantasy elements, and books with simple text. Librarians can apply this knowledge when selecting books for a collection or a display.

Conclusion

While it is almost universally agreed upon that diverse children's literature benefits all children, there is surprisingly little rigorous research to back up this intuitive claim. The existing research shows this may be true, but more research is needed to clarify and substantiate the benefits. However, studies do make it clear that there is a wide gap between the number of diverse books published each year and the actual population of minority children, especially among books intended for the youngest readers. In addition, libraries' collections do not reflect the diversity of the population at large, which could be a result of many complex factors, including

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availability, lack of awareness, self-censorship, and lack of reviews. More research into this area could pinpoint which factors influence collections so that librarians can at least be aware of them.

Finally, children themselves may or may not be interested in choosing books with protagonists that look like them. It is not clear that simply having diverse books available on a shelf will result in children picking them up. There are many more factors involved with book selection than the race of the main character or the culture that a book represents. It is also unclear whether the low numbers of diverse books that are already available in libraries are circulating. More research into circulation patterns and selection patterns regarding diverse books could help librarians optimize their budgets and marketing plans to fully utilize the resources that they already have.

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SJSU | SCHOOL OF INFORMATION

SLIS Student Research Journal

Volume 6 | Issue 2 Article 3

January 2017

E-Journals and the Big Deal: A Review of the Literature

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The past fifteen years have seen a dramatic shift in the scholarly journals landscape. As libraries shed print subscriptions in favor of electronic-only access, issues of content provision and ballooning costs have become forefront in the literature. In particular, the large package subscription model, or *Big Deal*, has featured prominently, as libraries struggle to balance providing the highest-quality resources with the reality of rising costs and stagnant or declining collection budgets.

Libraries across North America and beyond are facing significant pressures to re- examine serials subscriptions. While libraries demonstrate a high degree of motivation in the literature to provide resources that meet the needs of their users, many find themselves facing the same challenges: large, inflationary price increases, decreasing budgets, and fluctuating exchange rates creating budget uncertainties (Bosch & Henderson, 2015). In particular, libraries are increasingly evaluating their Big Deal subscriptions in an effort to curb costs. The purpose of this literature review is to examine issues related to reducing e-journal costs, including criteria for subscription retention or cancellation, decision-making strategies, impacts of cancellations, and other options for e-journal content provision.

What's the Big Deal?

According to a study by Bergstrom, Courant, McAfee, and Williams (2014), the majority of North American libraries have subscribed to bundled contracts with large commercial journal publishers. Bergstrom et al. defined the Big Deal as "contracts for bundled access to a publisher's entire journal list" (p. 9426) and ascribed the origin of the term to Frazier's 2001 article, "The Librarians' Dilemma: Contemplating the Costs of the 'Big Deal.'" By 2001, Big Deals were becoming a fixture of the journal publication landscape; they originated in 1996 when Academic Publishing (AP) negotiated a three-year license with the U.K.'s Higher Education Funding Council for access to all 200 titles in the AP collection (Poynder, 2011). Frazier (2001) argued strongly against entering into bundled subscription contracts, using game theory to make the point that libraries acting in self-interest do not support the greater good of scholarly communication. Frazier predicted that this model would create indispensability of these products, allow large commercial publishers to control pricing, shift work traditionally done by serials vendors to library staff, and increase libraries' vulnerability to content changes.

Although Frazier conceded in a 2005 follow-up article that Big Deals could prove beneficial to smaller institutions, a review of the current e-journal landscape reveals a shift away from Big Deals. The 2014 EBSCO Budgeting and Trends Survey indicated that 57% of respondents would consider breaking up their Big Deal packages for subscriptions to individual titles, 77% plan to renegotiate pricing, and 74% of publishers plan to offer smaller packages (as cited in Bosch & Henderson, 2015). Participants in a 2006 panel session, "Serials Industry: Truth or Dare," expressed a preference for using multiple vendors rather than "putting their eggs in one basket," (Schoen et. al, 2006, p. 141) as they felt it granted them greater bargaining leverage.

The significant and rising cost of Big Deal packages is a primary contributing factor in libraries' decisions to reevaluate e-journal subscriptions. Historically, the Big Deal subscription fee was based on the institution's prior print subscription cost (Poynder, 2011). Publishers would add an electronic premium of between 5 and 11 percent and build in inflationary increases of 6% per year (Rowse, as cited in Poynder, 2011). This inflationary increase has prevailed in the market since the introduction of Big Deals (Bergstrom, Courant, McAfee, & Williams, 2014, p. 9426), with more than 3,000 e-journal packages offered by EBSCO in 2014 reflecting an average annual price increase of 6.6% (Bosch & Henderson, 2015, p. 31).

Breaking Up is Hard to Do

The focus of many articles published between 2005 and 2015 is the discussion of factors and strategies used to evaluate Big Deal subscriptions and the serials collection in general. For the purposes of this paper, factors are the objective and subjective data collected by each library to inform cancellation and renewal decisions. Strategies are the methods by which the factors are applied to the decision-making process. Libraries use several common factors when evaluating e-journals. These include pricing and inflation, usage statistics, cost per use, overlap analysis, and input from subject specialists.

Usage Statistics and Cost per Use

Usage statistics and cost per use are among the most often cited factors used to evaluate e-journals (Banks, 2006; Chilton & Zhao, 2012; Dawson, 2015; Enoch & Harker, 2015; Suseela, 2011; Sutton, 2013). Bucknall, Bernhardt, and Johnson (2014) analyzed cost per use data for deals with seven publishers with whom the Carolina Consortium held subscriptions in excess cost of $250,000 per year. They examined the data on three levels: deal level, school level, and title level. Their results identified seven schools in the consortium with packages demonstrating high cost per use. After balancing cost per use with a list of additional criteria, such as departmental needs and comparisons of package versus stand-alone pricing, three schools chose to cancel. Bucknall et al. (2014) stressed that cost per use alone is insufficient for determining cancellation decisions.

Jones, Marshall, and Purtee (2013) echoed this sentiment in a case study report from their own institution. Facing a major budget shortfall at Mississippi State University Library and a short timeline to deliver the necessary cutbacks, the authors reported basing cancellation decisions solely on usage statistics and cost per use data. The impact was substantial. Mississippi State University Library lost current access to over 2,800 journals; many disciplines with fewer faculty and students, especially in the Social Sciences, lost all of their titles previously available from the cancelled packages. To help mitigate negative impacts in the future, the authors outlined a plan to solicit input from faculty, reference librarians, and subject specialists, in addition to analyzing usage statistics and cost per use data.

Bucknell (2012) discussed the fallibility of cost per download data, including the various ways in which these data can be misleading and how the effects can be mediated. Bucknell identified the principle factors contributing to misleading data as user interface (UI) and the extent and type of content being compared. For example, when publishers actively improved their platform UI and engaged in marketing to increase the number of downloads, usage statistics increased. UI also affected user behavior when comparing HTML and PDF views, if both types of access were available. Davis and Price (as cited in Bucknell, 2012) found a measurable difference in the ratio of PDF to HTML views depending on the site design of the vendor platform; when a database or link resolver opened an HTML full-text version of an article on the landing page versus an abstract-only view, and the user then downloaded a PDF version, the usage was counted twice.

Bucknell (2012) also identified the amount and currency of available content as important considerations when examining cost per download. For instance, the number of downloads for a journal title with only two years of content cannot be accurately compared to a title with 15 years of content. This comparison unfairly penalizes newer journals and titles with recent subscriptions (i.e. those with no available backfile). Further, usage patterns may vary considerably between disciplines, thereby affecting usage statistics (Bucknell, 2012; Tenopir, 2009). Statistics considered low in one discipline may be considered average or high in another. This is due, in part, to the type of articles users access. Shorter news briefs and reviews may account for a greater percentage of use in some disciplines, compared to longer, more in-depth research papers used in others.

Counting Online Usage of NeTworked Electronic Resources (COUNTER) is a non-profit standards organization mandated with overseeing consistent usage reporting. It has developed a Code of Practice that has become the standard for counting the use of electronic resources (COUNTER, 2016). While COUNTER-compliant usage statistics are a positive development for the evaluation of electronic resource usage, Tenopir (2009) posited that these statistics alone provided little proof of actually fulfilling the information needs of the user. In other words, usage statistics do not indicate the value or satisfaction of the accessed information to the user, the user's purpose for accessing the information, or the impact of that information.

Overlap Analysis

Many libraries employed overlap analysis as a decision-making factor when evaluating journal subscriptions (Banks, 2006; Enoch & Harker, 2015; Sutton, 2013; Trail, Chang-FitzGibbon, & Wishnetsky, 2012). Overlap analysis is a comparison of current journal holdings to determine any duplication of titles. Many libraries described in the literature compared the content of Big Deal subscriptions with other electronic serials holdings. Trail et al. (2012) compared electronic to print holdings only (thereby factoring in the issue of bindery costs). Enoch and Harker (2015) compared Big Deal subscriptions with both electronic and print holdings. None of these authors used overlap analysis as the only factor; often it was one in a range of factors that included costs, usage statistics, input from specialists, and others. Banks (2006) also pointed to the importance of examining the specific years of coverage for overlapping journal titles, as matching titles did not necessarily equate to matching coverage.

Overlap analysis generally lead the authors to a further examination of the unique titles; specifically whether these titles were available through other current subscription packages (Banks, 2006; Sutton, 2013). In Banks' 2006 analysis of

Wilson Social Sciences Abstracts (Wilson SSA), researchers found that nearly 85% of the journals indexed and abstracted by Wilson SSA were also available in two or more of the four comparison databases, and that 100% of the unique titles were available from other databases not included in the initial comparison. Sutton (2013) described analyzing the unique titles identified through overlap analysis by both quantity and quality. While the quantity of unique titles is an important factor when considering cancellations, it becomes a moot point if the titles are of little use or low quality. Sutton's study used quality indicators such as lists of recommended resources compiled by discipline-specific professional organizations or Ulrich's Periodicals Directory, journals in which faculty publish, course reserve requests and recommendations from faculty, and citations from the institution's graduate theses and dissertations.

Subject Specialists

Input from faculty, liaison librarians, and other subject specialists played into the e-journal decision process for many libraries (Chilton & Zhao, 2012; Dawson, 2015; Enoch & Harker, 2015). Some researchers created formal rubrics or decision grids and asked subject specialists to fill them in (Blackburn, McFarland, & Reed, 2013; Chilton & Zhao, 2012; Enoch & Harker, 2015; Foudy & McManus, 2005). Chilton and Zhao (2012) developed a decision grid, asking subject librarians to rate criteria such as ease of access, breadth and audience, uniqueness of content and support for curriculum, alternative or similar resources, and frequency of use. Enoch and Harker (2015) asked faculty and librarians to rank journal titles in their subject area, as well as evaluate interdisciplinary titles. Based on a review of the research, Dawson (2015) concluded that combining multiple methods of evaluation, including soliciting input from subject specialists and other stakeholders, would best support informed cancellation decisions. To that end, Dawson conducted an online survey of faculty, graduate students, staff, and researchers from the University of Saskatchewan's Department of Chemistry regarding a proposed cancellation of the American Chemical Society's Web Editions Big Deal bundle. Dawson asked survey participants to rate each journal title included in the subscription as "'Essential,' 'Good to have,' or 'Unnecessary' with regards to *their own* research, teaching, and other professional activities" ("Method 3: User Survey," para. 3).

Researchers gained important feedback from subject specialists to support e-journal cancellation decisions, however the process of gathering and analyzing the information included challenges. Enoch and Harker (2015) found the process of collecting and collating feedback to be problematic; some faculty and librarians found the information too overwhelming, while others devised their own ranking system, forcing the authors to normalize the data before use. Dawson (2015) valued the feedback collected from the survey, but noted that user surveys are unsuitable for rapid analysis. Soliciting input was advantageous when final decisions were made however, as it improved acceptance by faculty and librarians (Enoch & Harker, 2015). In addition to the buy-in cultivated by collecting feedback from faculty and subject specialist librarians, collection librarians can use these opportunities to build collegial relationships and, as Dawson (2015) pointed out, help create awareness of electronic journal access models and their financial impacts. Most importantly, collection librarians can tap into the subject expertise of their colleagues to develop a more extensive and holistic understanding of their users' information needs.

Additional Factors

While usage statistics, overlap analysis, and input from subject specialists are the most frequently cited factors supporting e-journal cancellation decisions, several others are discussed in the literature. Dawson (2015) and Sutton (2013) employed citation analysis: Dawson examined trends drawn from amalgamating the reference lists of faculty-authored publications, while Sutton studied unique titles identified through an overlap analysis. Suseela (2011) identified citation analysis among twelve important considerations for serials assessment, including availability in alternate formats, core journals coverage, usage, cost per use, language, and price.

Impact factor is a metric that expresses the average number of times a journal's articles were cited over a two-year period, thus indicating the journal's relative value within the discipline. Impact factor was cited in several analyses of e-journal subscriptions (Juznic, 2009; Schöpfel & Leduc, 2012; Suseela, 2011; Sutton, 2013). Suseela (2011) listed impact factor as one of the important considerations for serials assessment, but did not apply it in this study. Sutton (2013) applied impact factors obtained from *Journal Citation Reports* as part of the second-tier of the evaluation process. Juznic (2009) further cited impact factor as a common instrument in e-journal evaluation and a good indicator of the quality of scientific journals.

Pareto's Principle, a theory positing that 80% of events (or uses, in this case) result from 20% of causes (or journal titles), has been used to determine the strongest and weakest performing journals in a Big Deal package (Dawson, 2015; Enoch & Harker, 2015; Schöpfel & Leduc, 2012). These data can be compared to analyses of other Big Deals or established benchmarks. Schöpfel and Leduc (2012) examined e-journal usage patterns to identify whether they reflected Pareto's 80/20 ratio or a variant of the ratio: Anderson's *long tail* distribution, a statistical principle posting that 80% of uses result from 30 to 50 percent of journal titles. Their findings indicated that while usage statistics are somewhat reflective of the long tail distribution, the model was ineffective as a prediction tool (Schöpfel & Leduc, 2012).

Several other factors mentioned in the literature are worth noting. Participants in the panel discussion, "Serials Industry: Truth or Dare" (Schoen et al., 2006) identified factors including the reputation of the publisher or editorial board, interlibrary loan (ILL) requests, and how resources would support academic programs. Banks (2006) employed search retrieval analysis by using controlled subject headings and keyword queries for a sample of four social sciences-related questions and examining the search results, to determine a measure of quality. While no one factor or combination has proven to be most effective in evaluating Big Deal subscriptions, the literature offers valuable insight into the efficacy of a range of options, both quantitative and qualitative. Collection librarians must choose the factors that best suit the context of their analysis, according to the nature of the subscription in question, available research time, and timeline for the decision.

Strategies

Besides identifying the various factors that informed their decisions regarding e-journal subscriptions, most authors discussed the strategies they employed to choose their data points and analyze the resulting data. The most commonly used strategy was the rubric or *decision grid*. The decision grid may be used by researchers to weigh criteria or tally scores, or simply as a way to aggregate data in a suitable format for comparison. A decision grid is an effective method of approaching a complex issue involving multiple criteria. Blackburn, McFarland, and Reed (2013) used a 27-point decision grid of quantitative and qualitative factors to evaluate journal subscription packages at Vancouver Island University. Juznic (2009) presented a quantitative decision grid process to determine collection and e-journal funding issued by the Slovenian Research Agency for the approximately 100 research libraries in Slovenia. The process described in Juznic's study produced an important tool to help libraries better match their resources to users' needs, incentivize libraries to create consortia, and design and implement better collection development policies. Dawson's (2015) *triangulation model* could be considered a variation of the decision grid. It aggregated three distinct types of weighted evaluation data – full-text downloads, citation analysis of faculty publications, and user feedback – to present a holistic view of a Big Deal subscription.

Juznic (2009), Enoch and Harker (2015), and Chilton and Zhao (2012) cited as a model the decision grid process outlined by Foudy and McManus in their 2005 article, "Using a Decision Grid Process to Build Consensus in Electronic Resources Cancellation Decisions." Foudy and McManus described developing the model, based on Bens' book, *Facilitation at a Glance!*, to create a tool for identifying 25% of their electronic resources for possible cancellation due to budget shortfalls. Although they ultimately suggested some improvements to the model for future use, Foudy and McManus found the process very successful overall based on the positive feedback they received from faculty. They noted that it was particularly effective in reducing anxiety for decision-makers.

Chilton and Zhao (2012) employed Foudy and McManus' (2005) decision grid process as part of an e-resource management framework built on the Analyze, Design, Develop, Implement, Evaluation (ADDIE) model for instructional design. Chilton and Zhao chose the ADDIE model for e-resource management as a means to systematically analyze users and systems, design and modify services, and evaluate the results—an ongoing process that reflects the "ever-shifting [and] constantly evolving" landscape of e-resources (p. 22). In the ADDIE model, "analyze," refers to understanding users and stakeholders, as well as existing systems and processes for e-resource management. This analysis informs the "design" of improvements to systems and communication. Systems and processes are built during the "develop" stage, and then "implemented." Finally, "evaluation" occurs throughout all stages, and changes are enacted based on user feedback, workflow analysis, and management input. Chilton and Zhao appreciated the ADDIE model, as it provided a framework to help focus their efforts, exposed shortcomings in the system, and enabled them to apply a user-centered and evidence-based strategy to their e-resource management.

Sutton (2013) advocated using a two-stage analysis process to determine renewal or cancellation of e-journal subscriptions. The first stage consisted of examining COUNTER usage data and comparing them against baseline data derived from the most frequently used resources. If the results did not indicate a clear decision, the second stage provided more in-depth analysis, including overlap analysis, citation analysis, journal usage, and impact factor (Sutton, 2013). The advantage of Sutton's two-part method was efficiency. The strongest and weakest-performing resources were quickly revealed, and then additional time and effort were applied in further analysis of the remaining subscriptions (Sutton, 2013).

Saying Farewell

Once libraries make the difficult decision to cancel e-journal subscriptions, what happens next? The process that follows e-journal cancellations is less clearly addressed in the literature. There have been few studies describing how librarians communicate with faculty, negotiate with vendors, or assess the impact of cancellation on users. Authors who described receiving feedback from faculty and subject librarians following cancellations generally reported a positive outcome when those users were involved in the decision-making process (Enoch & Harker, 2015; Foudy & McManus, 2005). Fostering communication with faculty, subject librarians, and other stakeholders in advance of cancellations helped to inform users of the situation and allowed for possible input in the decision (Chilton & Zhao, 2012; Dawson, 2015). It also provided opportunities to raise awareness of interdisciplinary e-journal titles (Enoch & Harker, 2015) and engage in conversations about e-resource access and pricing trends (Dawson, 2015).

Rogers and Wesley's 2015 article, "Reaching New Horizons: Gathering the Resources Librarians Need to Make Hard Decisions," discusses using soft skills to successfully implement decisions that disrupt the status quo. Rogers and Wesley summarize a lecture by J. P. Rogers, a librarian who made the controversial decision not to renew the American Chemical Society online journal package at The State University of New York at Potsdam. Rogers' lecture detailed the skills, resources, and strategies that lay the groundwork for the cancellation. Rogers advised librarians, "Plant your flag in the values you've identified, and use them to scaffold your actions and your presence in your community and to build your credibility" (Rogers & Wesley, 2015, p. 70). Further, Rogers emphasized the importance of cultivating an authoritative and trust-worthy reputation and developing strong professional relationships built on good communication as a foundation for implementing change.

The importance of good communication is the prevailing theme of Emery and Stone's 2013 article, "Cancellation and Replacement Review." Emery and Stone suggested strategies for working with faculty before cancellation, and for communicating with users and vendors after decisions have been made. For users, Emery and Stone recommended focusing on any positive aspects of the changes and giving enough notice so that saved lists and other data can be transferred. Chilton and Zhao (2012) noted that offering three month's notice before making decisions is appreciated. For vendors, Emery and Stone advocated being honest about the reasons for cancellation. Emery and Stone also reminded librarians that working relationships extend into the future if post-cancellation access is available, as when perpetual access to the backfiles or the content from previously subscribed years is maintained. Good communication between collection librarians and stakeholders may not change the outcome of cancellation decisions, but it creates a more positive environment moving forward.

Since librarians are less likely to publish articles describing the negative impacts of their cancellation decisions, it is difficult to ascertain the impacts libraries have experienced after cancelling Big Deals. Jones et al. (2013) expressed a significant negative impact on content access following the cancellation of Springer and Wiley-Blackwell Big Deals. Nabe and Fowler (2015), however, considered their Big Deal cancellations a success, as they resulted in significant cost savings and stable budgets without undue hardship for library users.

Alternatives to the Big Deal

Options are increasing for providing just-in-time content at lower costs. When considering Big Deal cancellations, or in their aftermath, it is worthwhile for librarians to examine various models for e-resource provision. Enoch and Harker (2015) cited Pay-Per-View (PPV), Copyright Clearance Center's Get it Now service, and interlibrary loan (ILL) as alternatives to their Big Deals. In addition to Copyright Clearance Center's Get it Now service, Bosch and Henderson (2015) listed DeepDyve and ReadCube as additional examples of individual article access services.

Fought (2014) described the Pay-Per-View (PPV) model as a "viable alternative to the traditional journal subscription model" (p. 195). In a pilot project at a small health sciences library, Fought found that the PPV model generated a higher number of downloads from a greater number of journals, while remaining budget-neutral. Fears of misuse, such as systematic downloads or accessing articles already available in print, were not realized, but Fought cautioned larger institutions to examine their own risks carefully (p. 195). Brenneise (2015) outlined some advantages and disadvantages of renting articles and bulk purchase. Advantages included users' ability to vet article contents before purchase and discounted prices due to bulk purchasing. Disadvantages involved content limitations, content changes, printing restricting, and possible abuse of the service.

The University of Utah Marriott Library partnered with Labtiva, Inc. to pilot a Demand Driven Access (DDA) service using ReadCube software (England & Jones, 2014). When installed on users' computers, ReadCube Access allowed researchers to view articles at a lower cost than PPV or purchase. The library offered two tiers of access: a 48-hour rental (billing the library $2.99 per article) or unlimited cloud access for $7.99 per article. Neither option allowed for printing or sharing. The results of the pilot revealed that ReadCube Access was more economical than both ILL and subscriptions for high cost, low-use titles. Users appreciated the easy-to-use interface and immediate access, but they desired access to broader content, search options beyond Google Scholar and PubMed, and the option to print and share content (England & Jones, 2014).

A recurring theme in the literature about e-journal cancellations is Interlibrary Loan (ILL). There are two primary concerns: the impact of cancellations on ILL demand and the cost comparison of ILL service to other methods of providing journal content. England and Jones (2014) determined that ILL is cost effective for titles with low demand, but that cost per use rises significantly as demand for a title increases. Leon and Kress determined the average cost of ILL at $7.93 per article (as cited in England & Jones, 2014, p. 102). Pedersen, Arcand, and Forbis (2014) used an average cost of $17.50 per article, derived from the Association of Research Libraries' 2012 ILL cost study, as a threshold for acceptable cost per use. Pedersen et al. also used ILL data to inform selection of new journal titles. Knowlton, Kristanciuk, and Jabaily (2015) posited that compared to the cost of an e-journal subscription, any increase in ILL costs is unlikely to exceed the subscription cost.

Many researchers expected that cancellations would cause a corresponding spike in ILL demand (Knowlton et al., 2015; Pedersen et al., 2014). On the contrary, studies demonstrated no correlation between cancellations and an increase in ILL demand (Knowlton et al., 2015). In fact, Pedersen et al. (2014) found a decline in ILL usage continued even after cancelling a Springer Big Deal. Nabe and Fowler's (2015) analysis of ILL data also showed that the demand indicated by download statistics does not translate into ILL requests after cancellation. Nabe and Fowler termed this "authentic demand" (p. 21): that usage statistics are deceptive, since the demand does not carry over into ILL requests. Knowlton et al. (2015) presented a more nuanced perspective by using web analytics to study user behavior, determining that for every ILL request, there are at least two articles of interest that patrons have chosen not to pursue. They suggested that ILL is not an effective alternative to journal subscriptions (Knowlton et al., 2015).

Conclusion

There is no one-size-fits-all approach to the evaluation of e-journal subscriptions. Many factors can be used to determine usefulness and quality, including usage statistics, overlap analysis, and input from subject specialists. Various strategies can help guide the decision-making process and assist in the aggregation of data to draw meaningful conclusions. The decision grid is the most popular approach. When libraries make the decision to cancel Big Deal subscriptions, communication is an important factor in creating a positive outcome. Involving stakeholders in the decision-making process and communicating openly with both users and vendors improves the end result.

The e-journal landscape is complex and includes many models of access to meet the needs of users. Big Deals continue to be a widely used approach for obtaining broad access, but recent trends point to dwindling support as costs climb and budgets fall. Individual, or *à la carte*, title subscriptions are one of many other options currently available, including rental and cloud access models that trade lower cost for restricted use. Despite arguments that it cannot replace access to content lost through cancellations, ILL remains an important support service to supplement library holdings.

Rapidly changing technologies have enabled a transformation in serials delivery models. Since the advent of electronic access, changes appear to be largely reactionary: when the current model becomes untenable, stakeholders react, resulting in new directions. It is an interesting time to be involved with e-journals.

Research in this area will certainly continue; future directions could further explore the impacts of e-journal cancellations on users, the effects of increasing open access content, and address the advantages and disadvantages of various delivery models with the perspective of longer-term hindsight.

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SLIS Student Research Journal

Volume 6 | Issue 2 Article 5

January 2017

Book Review: Overcoming Information Poverty: Investigating the Role of Public Libraries in the Twenty-First Century, Anthony McKeown

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McKeown, A. (2016). ***Overcoming information poverty: Investigating the role of public libraries in the twenty-first century*****. Cambridge, MA: Chandos Publishing.**

McKeown's *Overcoming Information Poverty: Investigating the Role of Public Libraries in the Twenty-First Century* contributes a well-researched, compelling discussion of information poverty and how public libraries might respond given 21st century challenges. He specifically addresses the question of how libraries can meet the information needs of their diverse communities given the significant changes in their structures while they grapple both with technological shifts and the larger role they are expected to play in addressing information literacy. McKeown proposes a three-level framework to explore gaps and deficiencies in how libraries currently address information poverty. He concludes with suggestions of how libraries might improve their approaches across these three levels. McKeown brings to the topic both experience as a public librarian and research and theoretical experience as a graduate student at Ulster University, having left his public library career in 2008 to get his Ph.D. at Ulster University.

This book is a reworking of McKeown's dissertation and includes his own firsthand experiences as a Public Librarian in Northern Ireland. McKeown conducted both qualitative and quantitative research on information poverty to establish a three-level theoretical framework: the macro (strategic), meso (community), and micro (individual). Those familiar with information poverty research will recognize this framework from the work of Yu (2006) and Thompson (2006) who have influenced McKeown's work. While McKeown borrows from earlier models, his work is exceptional because he applies it to public libraries but also because of the diverse scope of his research population: he includes library employees, managers, policymakers, users and nonusers in his research population. He aptly identifies the exclusion of nonusers from previous research and discussion, and he attempts to alleviate that absence in his work.

Taking a complex and multifaceted approach to defining information poverty, McKeown builds on the work of Chatman (1991, 1996, 1999) and Britz (2007) in moving our understanding of this contested term into a broad and multidimensional framework. Quoting a variety of researchers in the field, McKeown explains that the information divide is not only that which exists between the haves and the have nots but also between those who know where to find information and those who do not, and perhaps most importantly because so often ignored, those who recognize how information can help them and those who do not. McKeown argues that looking at information poverty in binary terms ignores the complexity of the concept: we must also include access, skills, capacity and use. Information poverty, according to McKeown, is the result of social, political, economic, cultural, personal, historical, educational and cognitive factors; each of which McKeown discusses. He also spends several pages looking at barriers to information access that move past simple factors of geography or the inability to get to a library. Survey data is used to examine the important question of how people's attitudes about libraries also get in the way of their access. This focus on attitudes as barrier is a needed move beyond the more usual barriers of physical and economic access.

McKeown establishes the extensive history of libraries fulfilling a social services role as a foundational reason for why libraries today should be interested and involved in alleviating information poverty. He connects the discussion of information poverty and its consequences with interviews and quotes from his research materials, giving what could be a dry discussion a human perspective.

McKeown describes his three-dimensional framework for information poverty. At the macro level, information poverty is an ethical issue that should be addressed by social institutions, in this case by library services; at the meso level he focuses on community attitudes and behaviors towards and about information that constrain local access; and at the micro level, he focuses on the intellectual, educational and attitudinal behaviors and skills that increase information poverty.

McKeown first examines the history and extensive discussion of information poverty in the literature, then develops indicators to measure information poverty in a community, and, finally, explores how public libraries use strategic policies, community engagement and literacy initiatives to address these issues. McKeown documents the importance of measuring information poverty to provide a baseline from which future programs can be evaluated. He suggests both a qualitative and quantitative approach to measuring information poverty that focuses on his three-factor model: measurements should look at personal, community and system wide factors. His framework explores these factors across each category. This framework could be useful to any public library attempting to define and measure information poverty, and it was satisfying to see a copy of the framework in the appendix.

McKeown discusses his data collection for each level of his model, explaining how he used a variety of measures including questionnaires, surveys, focus groups and interviews. McKeown weaves this data throughout the book's chapters to demonstrate how information poverty is created and maintained and which library services can address these issues. McKeown concludes the study with potential solutions for each level of the framework. A couple of solutions stand out: people need to be engaged by the library over and above providing "information services" that most people can access at home. Also, people need to feel like the library is there for them; McKeown's research suggests that many simply do not feel welcome or that the library meets their particular information needs. Attending to this barrier of access is apt given the limited focus user (and nonuser) attitudes have received as a reason people do not use their libraries.

Unfortunately, while McKeown's recommendation sections address multiple areas of deficit, he does not identify specifically how libraries might solve them. McKeown only suggests macro level strategies, such as: libraries need to understand communities better, do better marketing and promotion, and increase outreach. However, the real question is, how do libraries incorporate outreach to address the needs of the nonuser that McKeown so adeptly identifies? An interested reader might seek out some of the outreach research coming out of Canada for more specific suggestions including Campbell (2005) and Williment (2009) and the recent book, *Linking Literacy and Libraries in Global Communities* that includes chapters on outreach ideas (Asselin & Doiron, 2016).

McKeown's book is an excellent look at the three-level model of information literacy in an actual diverse, underfunded public library system though some will find the details of Northern Ireland a distraction. McKeown does spend extensive time on establishing the economic and information poverty of Northern Ireland and why the government has a responsibility to fund library literacy programs. Northern Ireland has high unemployment and a low overall use of the library rate, characteristics that might not fit many public library systems. McKeown notes that in Great Britain in general, library use rates are decreasing. However, a recent North American report suggests the contrary in the United States and Canada where library use is either increasing or remains stable (Reid, 2016). Clearly, every library system will not resemble that of Northern Ireland's, but McKeown's discussion is interesting and insightful for those looking for an understanding of information poverty.

McKeown's wide ranging discussion is accessible and useful for librarians in the public library system grappling with issues of information poverty. Students and librarians will both benefit from McKeown's excellent historic look at libraries and their relationship to information poverty. The early chapters are a concise introduction to information poverty. McKeown also includes an appendix of his interviews, survey questions, Information Poverty Indicators, and how these indicators fit with his three-level framework.

For library professionals and students hoping to develop a broad based understanding of information poverty, McKeown's book is an excellent introduction. The author's source material provides a full and contemporary overview on the theoretical and research background on this topic, particularly for sources outside of North America. One only wishes that McKeown might have provided more practical, battle-tested ideas for how to accomplish his long list of recommendations.

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