

VOICES OF THE FUTURE

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The New Information Poor: How Limited Access to Digital Scholarly Resources Impacts Higher Education

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The “new” information poor are the individuals and communities who have computer and Internet connectivity, but cannot access scholarly information due to prohibitive costs. Pratt Institute’s School of Information and Library Science (SILS) represents such a community and is the subject of this case study. Three measures were analyzed: SILS’ four “core” classes were surveyed to determine how many required readings were available via the library; a survey was sent to 31 SILS instructors; and we conducted in-depth interviews with two SILS instructors. While “information poor,” the data suggest our respondents are resourceful in finding ways to cope with their disadvantage.

KEYWORDS *information poor; LIS education, access, higher education, electronic resources, subscription databases*

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INTRODUCTION

As technology changes our world, it too changes the shape of higher education and scholarly communication. As students and scholars begin favoring electronic resources, so demand grows for access to these resources. But how does a lack of access impact education for students and their professors?

The term “information poor” typically refers to communities who have lack of access to digital information because of a lack of computers, Internet connection, and/or poor computer literacy skills. What we are calling the *new* information poor refers to communities that have computer and Internet access as well as good or very good computer skills, but cannot access scholarly information due to the cost and licensing restrictions.

Pratt Institute’s School of Information and Library Science (SILS) is in an interesting position—although the school is training future library and information professionals who will be expected to have a thorough knowledge of how to use electronic subscriptions and e-journals, the rest of the Institute’s art and design programs have no need, or perceived need, for these resources and thus the institute does not provide many of the standard electronic resources traditionally found in Library Information Science (LIS) programs and at institutions of higher education.

In this case study of Pratt SILS, we were interested to know how many of the required readings that SILS students were expected to read in their core classes were actually available through the Pratt Library.

LITERATURE REVIEW

Much of the available literature examines the traditional definition of “information poor”—institutions of learning that either have poor access to computers and/or the Internet, have a student body that is highly illiterate in computer usage, or both. Many of these articles look at specific student bodies in Africa and India. Constant’s “O. M. U. K. U. E. M. M. U. K. U” (2008) surveys LIS students in Uganda and how the lack of computer literacy impacts their education. However, some international communities are benefiting from a recent increase of access due to better technology and computer skills in their country. “Trends, Challenges and Future of Library and Information Science Education in India” by Ramesha and Babu (2007) looks at positive changes in India’s LIS education and measures how increased access has boosted the quality of education there.

Another theme in this body of scholarship is lack of access or unequal access for distance learners. Gopkumar and Baradol (2009) expresses concern about this unequal distribution of resources of distance learners in India. Lillard, Wilson, and Baird (2004) agree that the same problem exists here in the United States. They found that librarians in this country are

actively trying to expand library services for distance learners by partnering with other departments of the university. Their article relies heavily on a 2002 study published by OCLC Online Computer Library Center, Inc. (OCLC).

The OCLC study is a particularly enlightening work about students and access to electronic resources. Entitled, "How Academic Librarians Can Influence Students' Web-Based Information Choices," it examines how students interact with the Internet and how Web-based services impact their education. The 2002 study find that over 90% of students access the library's subscription databases remotely from their home computer, and 78% prefer this point of access (as opposed to accessing the database onsite or from another location).

Jong-Ae Kim's (2006) study examined how undergraduates use subscription databases. Students' habits were considering several factors such as which databases are accessed onsite versus remotely (and how often). Kim reaches interesting conclusions, mainly that undergraduates value accessibility of information over all other things, including quality of information. Even more interesting, Kim found that students who had received bibliographic instruction on how to use databases did not use the databases more or less than their peers who had received no instruction. The study found overall that the single most important factor for database usage was both accessibility of databases and awareness of this accessibility.

Literature on the subject of how limited digital access to the scholarly record can affect the curriculum and instruction of classes at institutions of higher education remains somewhat limited. Previous research on how digital collections and access are utilized have focused mainly on usability and searching behavior, not "adoption or adaption of materials for teaching, or other professional purposes" (McMartin et al. 2008, 66).

In a recent study, McMartin et al. (2008) examined how digital resources were used in scholarly activities, including "specific teaching and educational situations." They summarized the results of a national survey of 4,678 respondents from 119 higher education institutions. While the study was mainly focused on why existing and accessible institutional digital resources were underutilized in these activities, it has great relevancy to our topic. Among the findings, it was discovered that survey respondents who "valued digital resources" and were comfortable with their use still faced barriers in incorporating them into their instructional and scholarly activities. Lack of access to "useful materials" was seen as a major barrier and the authors suggest "instructors' use [of digital resources] would increase if they had more flexibility in the choice of content . . ." (McMartin et al. 2008, 73). Additional relevant survey results showed that respondents preferred search engines (overwhelmingly Google) to searching within digital library collections when selecting materials for their classes (McMartin et al. 2008, 73–74). This was found to be uniform across different types of institutions and instructor types.

Schonfeld and Housewright's results from Ithaka's 2009 Faculty Survey provide a wealth of insight into our topic. In support of McMartin et al., the survey found that the scholars continue to favor Web searching over searches in digital library systems as a method of discovery (Schonfeld and Housewright 2010, 8). Across disciplines, Faculty increasingly view the value of the library not as a "gateway" to discovering information and resources, but more as their "purchasing agent"—purchasing resources and clearing copyright restrictions for their research and use as course materials (Schonfeld and Housewright 2010, 9). Of respondents, 90% viewed this "buyer" role as very important—trumping all other library roles (Schonfeld and Housewright 2010, 9–10). While there remains some trepidation and concern, faculty attitudes across disciplines suggest that they are now overwhelmingly prepared for a complete transition of scholarly journals from print to electronic form (Schonfeld and Housewright 2010, 15). These shifting attitudes place tremendous importance on academic libraries' access to e-journals.

Another relevant finding was the importance of discipline-specific e-resources to research or teaching. More than 80% of respondents claimed "E-resources specific to [their] discipline" were "very important," a higher percentage than any other type of resources, digital or print (Schonfeld and Housewright 2010, 23). This was followed by "databases of academic journals" at about 75% (Schonfeld and Housewright 2010, 15).

Moghaddam and Moballeghi (2007) offer a paper defining different types of content aggregators, their importance to libraries in the digital era, and their advantages and disadvantages for libraries. The paper provides an overview of three of the largest aggregators (EBSCO, ProQuest, and Dialog). Relevant to our discussion, the paper addresses how aggregators can create information-poor libraries—mainly due to the fact that content bundles can be cost prohibitive and that librarians do not have control over the titles in a subscribed database. Access to certain resources can come and go based on what arrangements the aggregator has with content publishers—whom are rarely dealt with directly by librarians.

While direct scholarly literature on our subject remains scarce, grey literature advocating for the new information poor can commonly be found. In its position statement in support of the Federal Research Public Access Act of 2009 (S. 1373/H.R. 5037), the Right to Research Coalition sees students at "institutions with more limited resources at a distinct disadvantage to their peers at more well-endowed colleges and universities" (Right to Research Coalition 2009, 1). In terms of instruction, the Coalition holds the position that "professors' ability to educate their students suffers when they do not have access to the most up-to-date scholarly information" (Right to Research Coalition 2009, 1).

Discussion among librarians is also commonly found on the Web. Meredith Farkas, an LIS scholar and academic librarian at Norwich

University, recently published a brief article on her blog (2010) demonstrating how content aggregators can suddenly cut off an institution of higher education's access to vital scholarly communication—demonstrating a downward slide in information wealth. Her institution, which offers a highly specialized Master's degree in military history, lost access to the *Journal of Military History* due to an exclusive deal reached between the journal and EBSCO. Without a subscription to a newly announced EBSCO full-text bundle, America: History and Life and Historical Abstracts Full-Text, the academic library would be unable to provide access to future issues of this important journal. Such a subscription posed a significant cost to the small academic library. Farkas warns that “anti-competitive” moves such as this one negatively impact the e-resource landscape for libraries and “severely decrease the amount of choice that librarians have in making subscription decisions.” The conversational aspect of this topic suggests that it is due for more formal scholarly study.

METHODOLOGY

We evaluated the impact that the lack of access has on the Pratt SILS community via several different measures. First, we wanted to know how many required readings were available from the Pratt Library. We gathered the syllabuses for all the four core courses of the SILS program and compared the total number of required readings to the number actually available from Pratt. The scope of this measure was limited to core courses, because all students must take these classes and often they are large classes with multiple sections, which are offered every semester. We did not want to include highly specialized courses in our survey, since those classes tend to be smaller, offered less frequently, and sometimes require extremely specialized sources. It seemed more reasonable to expect the library to have resources for a course that has many sections and many students every semester, as opposed to a course that has a few students and is only offered once a year (or even less frequently) or that might be experimental special topic.

While looking through the syllabuses, we only considered scholarly journal articles that were required readings. Books, professional organization literature (such as the American Library Association (ALA) Code of Ethics), and papers originally published in open access journals were not counted in this survey. Readings listed as “suggested reading” were not counted either. We looked up the citations in the databases that Pratt offers. If we could not readily find it, we also searched the journal title in the Ulrich's Guide to Periodicals to verify that it was not indexed in another database that Pratt subscribes to. If an electronic index listed a citation only and Pratt owned the print version of that particular journal, the reading was counted as being

available. If the index listed a citation but Pratt did not own the print version or it was not accessible through a Pratt resource, the reading was counted as not being available. Finally we limited our scope to the syllabuses of sections taught during the Fall 2010 semester because presumably these would be the most up-to-date syllabuses.

Another measure of impact was to survey the SILS teaching community to try to discover their own perceptions of how Pratt's access impacted their teaching decisions. We created a 10 question survey that asked professors about designing assigned readings and how access figures into that. We were most interested in learning how professors select readings to put on their syllabuses as well as how professors cope when items are not available. We e-mailed thirty-one SILS professors this survey and had 12 responses for a response rate of 39%.

The last measure of our study was a qualitative in-depth interview with two professors conducted both face-to-face and via e-mail. These interviews lasted 15–20 minutes and had open-ended questions to allow professors to expand on their answers. As we wanted to observe the role of teaching experience and type of professorial appointment, one adjunct professor and one full-time professor were interviewed.

FINDINGS

The syllabi study revealed that 126 journal articles were listed as required across all sections of the four core SILS classes in Fall 2010. Of these, 97 (77%) were accessible via Pratt Library's resources, while 29 (23%) were inaccessible. This data would seem to suggest that SILS instructors favor using readings that are accessible via the library. This may not be accurate, as the syllabi rarely provided a wholly accurate picture of the full load of journal articles assigned for the courses. Thirty-eight percent made reference to additional readings not detailed on the syllabus, which would be provided to students via other means (such as printed handouts or digitally on Pratt's learning management system, or another Internet group). Four of the surveyed syllabi (30%) did not detail any required journal articles.

Of the SILS professor respondents to the online survey, 60% identified themselves as having access to additional databases via another school or library with which they were also associated (as a student or employee). Thirty percent said they relied solely on the resources offered by Pratt. The e-mail survey supports the syllabi study's finding that library access appears to be a consideration for instructors when choosing what to include in their classes. Of respondents, 72.7% said that students' ability to access materials via Pratt Library resources was very important when selecting scholarly articles for use in their classes. Of respondents, 18.2% said it was important and the remaining 9.1% said it was somewhat important (see Figure 1).

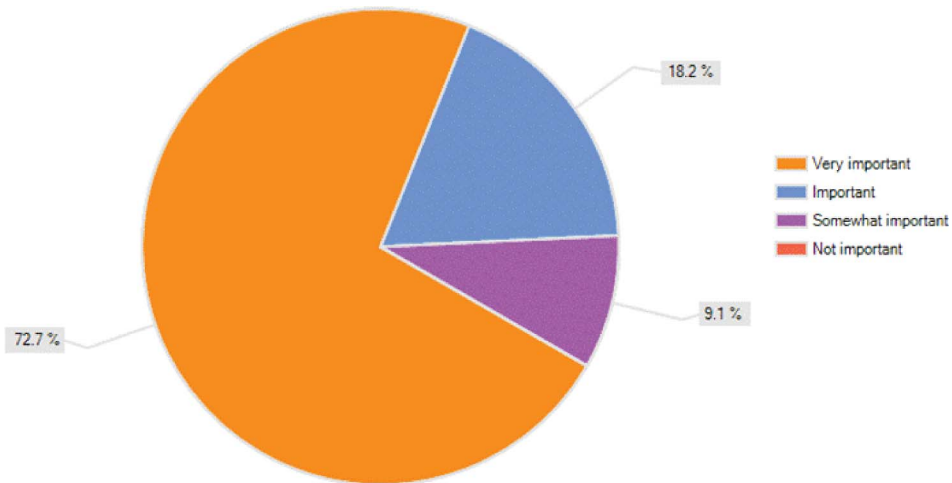


FIGURE 1 When selecting scholarly articles for your classes, how important is it that students can access the material via Pratt Library resources? (color figure available online).

Of respondents, 60% said that the limited resources of the Pratt Library had affected their reading selections for their courses and 55.5% said that they had assigned an inferior reading because their first choice was unavailable via the Library. Of respondents, 11.1% said this was a frequent occurrence. All respondents saw the benefit that an expansion in library resources would have and 80% said that an expansion of database resources would be very beneficial to the design and teaching of their courses, while the remaining 20% said it would be beneficial.

While the Pratt Library is an essential access point for the instructors, they overwhelmingly provide required readings to their students. Only 18.2% said they required students to access readings independently. Those remaining provided articles via traditional printed copies or digital copies via Pratt's Learning Management System (LMS), another private Internet group (such as Yahoo! or Google), or electronic reserve (see Figure 2).

Of respondents, 54.5% said that if an article is only available via a proprietary database that is inaccessible via Pratt Library, but accessible to them via another means, they will provide the article to students (#4). Seventy percent said they verify copyright status when providing articles.

Our data supported the findings of McMartin et al. (2008) about instructors' preference of Google over their institution's digital library resources when searching for course materials. All of the respondents said they used scholarly articles available via Web as assigned class materials, while only 63.6% said they used Library resources. While 100% of respondents said they assigned journal articles, 100% also said they assigned Web resources, such as websites, blogs, wikis, and so on (see Figure 3).

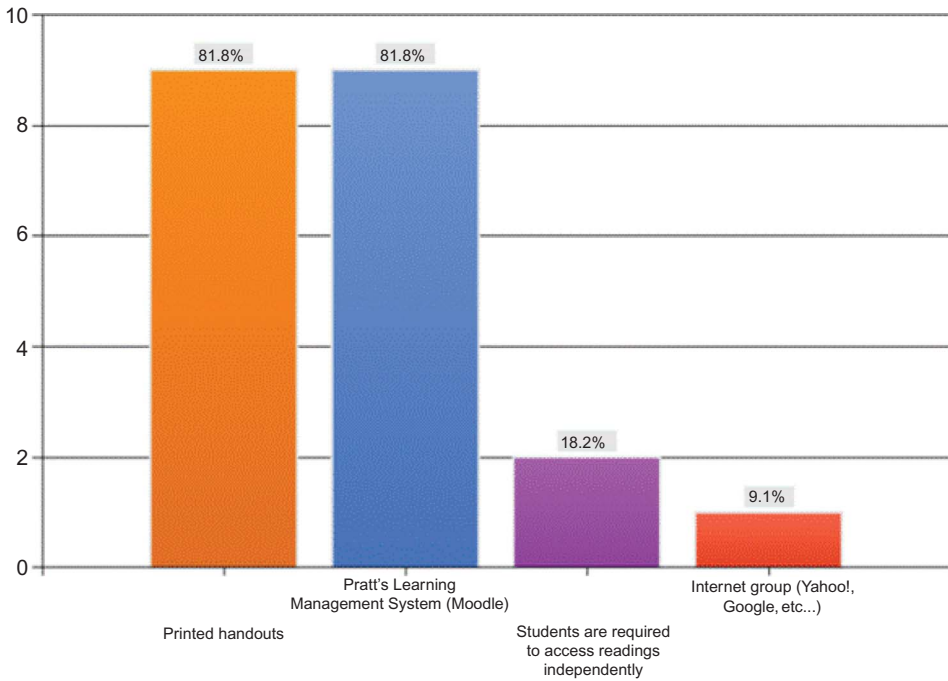


FIGURE 2 How do you provide readings to your class? (color figure available online).

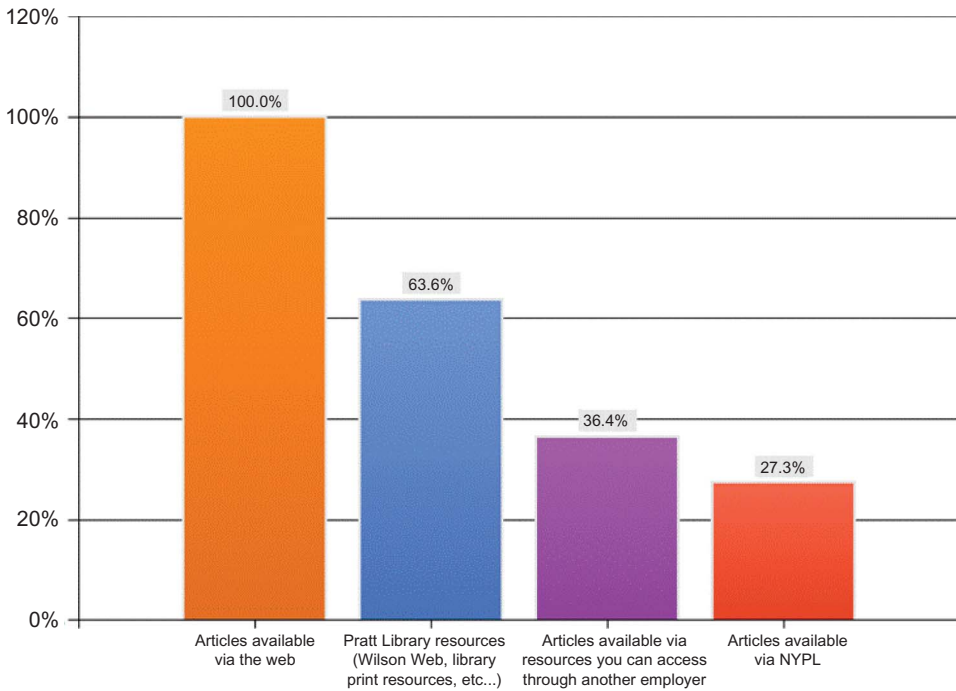


FIGURE 3 What resources do you use when selecting required readings? (color figure available online).

We interviewed two SILS professors to better understand their needs and how Pratt's resources impact their coursework. Professor A is an adjunct professor who comes from a background working with a major public library system. Professor B is a full-time faculty member who holds a PhD in Library Science. The two perspectives offered were very different and held interesting insights to this study.

Both professors agreed that access was not their top priority when assigning readings. Although both thought it was an important factor and considered it, excellence, cost, and relevance were thought to be the most important criteria. Both used a variety of means to distribute readings not available through Pratt including using the Learning Management System, assigning literature from professional organizations, distributing handouts, using resources available through the public library, utilizing open access journals, and sharing via GoogleDocs. While both professors took copyright into consideration when distributing these items, but admitted that they had a very "liberal" definition of fair use and one went as far as saying that she viewed copyright as something to work around.

Where their opinions really varied was on how the possibility of more access to resources would impact their courses. One professor said that it would dramatically change her courses. She would use the availability of more tools to teach students how to use these tools. Assignments would rely more heavily on using e-resources as a means to explore them. The other professor thought that her courses really would not change at all. She thought that the professional organization literature and open access materials were more appropriate for her classes than anything that could be found in a subscription database or journal.

CONCLUSIONS

Despite its highly information-literate population, the Pratt SILS community can be viewed as members of the new information poor. Our findings suggest that the library is a major access point (and a preferred one) for instructors when designing their courses. Instructors clearly see the Institute's lack of access to major academic databases and other scholarly resources as disadvantageous to their work as educators. It supports previous literature, such as the Right to Research Coalition's position (2009) and McMartin et al. (2008). Limiting access to the scholarly record puts students at a disadvantage by restraining what their instructors can freely expose them to via accessible course readings due to both cost and copyright restrictions.

The findings also suggest that our information-poor professors find ways to work around their limited access—often freely providing articles to students in various formats and from various other sources. Along with other data, the fact that only 11.1% said that they frequently assign lesser

readings while 60% said the library's limited resources affected their reading selections suggests this.

Our findings support the work of McMartin et al. (2008), which found that instructors in higher education from across different types of institutions and instructor types utilize Google when selecting course materials, with 100% of respondents saying that Web resources are used as assigned readings in their classes. The syllabi survey, online questionnaire, and interviews reveal that SILS instructors are likely to assign additional readings not detailed on their syllabi, and often hidden from public view on the LMS or another private Internet group. As described in Schonfeld and Housewright (2009), professors are increasingly viewing the library as their "purchasing agent," responsible for clearing copyright restrictions, and our instructors are clearly concerned about copyright. A majority (54%) said they would provide copywritten journal articles to students that were not obtained through the Institute's licensing agent—the library. These results raise several questions: Are instructors "hiding" some of the journal articles they use due to copyright concerns? Would instructors use less Web resources if the Pratt Library, their "purchasing agent," had a better scholarly collection?

Due to its specialty, SILS instructors are highly information literate and have a professional-level understanding of how to access the resources they want. They also understand copyright issues well. SILS employs a high number of working LIS professionals as adjunct professors. Of our respondents, 60% said they had access to non-Pratt databases via another school or employer. For these reasons, our results may be skewed and it would be advantageous to conduct a similar case study at a small specialty school of non-information professionals, such as a humanities or visual arts school.

The lack of direct literature on our subject suggests that more research should be done into how access affects teaching decisions. To get a more universal picture, it would be helpful to perform similar studies at other information-poor schools. A comparative study of how access to digital resources affects instructional decisions at an information wealthy institution (such as a Research 1 school) and information poor institution (such as small specialized schools like Pratt Institute) would be beneficial in better understanding these issues.

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