Community College Librarian Views of Student Information Literacy Needs

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This paper shares the results of semi-structured interviews with 30 community college librarians who have instruction duties. The interviews explored these librarians' perceptions of students' information literacy (IL) strengths and weaknesses as well as their views of students' self-perceptions. Participants believe that students are confident in their ability to find information and are proficient in using technology to find information. Participants consider students' overconfidence to be an IL weakness along with: not understanding the research process; being overwhelmed by information; and, in some cases, having poor reading comprehension skills. Views are mixed as to whether students' IL skills vary based on their program of study.

Introduction

The research reported in this paper represents part of a larger project that sought to investigate information literacy (IL) among community college students in Florida and New York. In Phase 1, a survey was used to collect data on the instructional practices of community college librarians in relation to the ACRL *Framework for Information Literacy for Higher Education*¹ (*Framework*) and these librarians' perceptions of students' IL needs. In Phase 2, semi-structured interviews were conducted with students in order to investigate their own views of their IL needs. In Phase 3, semi-structured interviews were conducted with community college librarians in order to explore more fully the responses collected through the survey in Phase 1. This report will focus on community college librarians' views of students' IL needs.

The community college context is a rich one to investigate for a variety of reasons. Although a wealth of research has been conducted on IL among college students in general, far less work focusing specifically on community college students has been done. In addition, community colleges enroll nearly half of the students pursuing higher education in the United States.² Community colleges offer open-access enrollment and, as a result, serve a wide variety of students in terms of age, socioeconomic status, educational background, job status, and parental/caregiver status.³ In addition, students who attend community college do so for a variety of reasons. Some are there to gain a certificate or associate of science degree to go into the workforce. Some are pursuing an associate of arts degree to transfer eventually to a four-year institution. And some are high school students who are dual enrolled in community college classes to get an early start on earning college-level credit. Not surprisingly, this rich

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diversity means that students arrive at community college with varying levels of experience with, and skills in, IL.

Success in teaching IL, regardless of the approach, depends on an understanding of the target audience for instruction. While research on community college students' perceptions of IL is growing, the understanding of how community college librarians think students see themselves in terms of their IL is important because this influences how IL instruction is approached. Research has reported on librarian views of student IL strengths and deficits but has paid less attention to librarian conceptions of how students see themselves in terms of their IL skills and needs. This topic requires further exploration as the implementation of the *Framework* is considered and undertaken in community colleges.

The overarching research question addressed in this study is: What are community college librarians' perceptions of students' IL needs? The specific research questions that guided data collection are:

- RQ1. What do community college librarians believe about how students view their strengths related to IL?
- RQ2. What do community college librarians believe about how students view their weaknesses related to IL?
- RQ3. How do community college librarians' beliefs about student views compare with their own perceptions of students' strengths and weaknesses related to IL?
- RQ4. To what extent do community college librarians believe that students' IL strengths and weaknesses vary depending on the program they are in and/or their goals beyond graduation?

A word about definitions is in order. By "IL skills" we mean the set of abilities related to finding, evaluating, using, and creating information effectively and ethically. By "IL concepts" we mean the threshold concepts (or frames) associated with the *Framework*, and their related knowledge practices and dispositions, namely: Authority Is Constructed and Contextual, Information Creation as a Process, Information Has Value, Research as Inquiry, Scholarship as Conversation, Searching as Strategic Exploration.⁴ And by "IL needs" we are referring to what students need in order to be successful creators and consumers of information in their academic, professional, and personal lives.

Literature Review

Several review articles published in the early 2000s conclude that the number of research articles addressing community college student information behaviors published up to that time was quite limited.⁵ Almost all of the articles reviewed describe librarians' professional assessment of student information seeking, and reveal concerns about student deficits in their technology and IL skills; however, they also caution that the conclusions in this literature "seem to lack concrete sources" and tend to make inferences based on studies of university students. A more recent review of the research concludes that: (a) community college students have a variety of IL needs and (b) research on community college students' IL needs is generally underrepresented in the literature.⁷ The literature that is available tends to focus on skills—the ability to find, evaluate, and use information—rather than higher level concepts, such as understanding how the research process works, how authority is constructed and contextual, etc.

Discourse on information literacy and learners tends to position IL as an empowering practice and learners as deficient,⁸ and indeed those two positions are evident in the research

literature on community college students and IL. Recent work has objectively demonstrated that many community college students do not have proficient IL skills, though they are largely unaware of it and, in fact, report their skills to be "above average." Their self-assessments reveal a common misperception of social comparisons, the "better-than-average effect," established in psychology, also known as the Dunning-Kruger effect. Of course, it is a mathematical impossibility that everyone can be "above average."

How well one performs is also related to how the skill is defined. Interviews with community college students have revealed that they are more concerned with whether or not they can find the information they seek, and are less concerned about the process of finding it or how long that process takes.¹¹ These students did not see IL as a set of skills, but rather something they were naturally good at. People are preferred sources, as is Google when they are looking for information online. In addition, the quality of information is not a big concern as most information is seen as "good enough."

Kocevar-Weidinger, instead of focusing on students' IL deficits, examined their strengths. She and her collaborators used a phenomenographic approach based on 40 interviews with first-year students from four institutions of higher learning, one of which was a community college. They asked students about how they search for information relevant to their everyday lives, thinking that students' everyday information seeking might inform how students approach academic research. They concluded that first-year students easily manage and prioritize information, prefer people as resources, and use information intentionally to solve problems. These authors recommend using these findings to develop a strengths-based approach to IL instruction (ILI). Their suggestion is in line with concerns in the literature that a deficit approach to educating community college students is far too common.

A recent study performed semi-structured interviews with 34 students from five community colleges in Florida and New York to explore their self-perceptions of their IL needs, as well as how these perceptions relate to their educational and career goals and to the type of ILI they have experienced (i.e., skills-based instruction versus threshold concepts). ¹⁴ These students voiced more comfort in seeking information for personal use than for schoolwork. They were interested in knowing more about finding resources, evaluating information, differentiating opinion from bias, and improving their writing skills. Conceptions of IL varied depending on context (i.e., personal, school, workplace), and for many participants, school and workplace IL were the most similar. Some students felt that in the workplace they would most likely rely on people for information, rather than published resources. The study found that all of the participants described IL in terms of skills; none of them described it in terms of the *Framework*'s threshold concepts, suggesting that none had received (or at least recalled) ILI based on the threshold concepts.

An online survey of the instructional practices of community college librarians in Florida and New York included questions about librarians' perceptions of student IL needs. ¹⁵ Respondents considered students' primary IL strengths to include awareness of technological innovations, and an understanding of general research strategies—especially among students who were career-oriented or planning to transfer to a four-year institution. The most-reported student IL weaknesses included critically evaluating information, understanding databases, and managing information. These participants rated knowing how to critically evaluate information, understanding general research strategies, and knowing how to find information

in various sources as the top three skills that are important for student success. The study reported here sought to further explore these findings with community college librarians.

Methodology

Librarians with instructional responsibilities were recruited from community colleges in Florida and New York as participants. Both states have large, longstanding community college systems that serve urban, suburban, and rural populations that are diverse in terms of age, race, ethnicity, socioeconomic status, and military status. 16 Participants were recruited via an email invitation to participate in an online semi-structured interview. These invitations were sent directly to all community college librarians in both states. The interview schedule was pretested with four librarians at Florida State University before it was deployed. The interview schedule provided a general guide that ensured certain information was collected, such as years of professional experience, while allowing participants some autonomy in determining the scope and direction of their comments. The portion of the interview schedule related to this study is provided in the Appendix. The interviews ranged from 15 to 74 minutes in length and were recorded, transcribed, and then entered into NVivo for coding and qualitative data analysis. A subset of transcripts was coded by one of the primary investigators and a research assistant, who achieved a high Kappa of 0.77 agreement. After that, the coding was completed by the research assistant. Thematic coding was employed, and a grounded theory approach was used for data analysis.¹⁷ Participants received a \$50 gift card as an incentive for participation. Ethics approval was obtained from the Institutional Review Board at Florida State University in agreement with the University at Buffalo, and the project was determined to be exempt. Interviews were completed during the spring of 2021.

Participants

A total of 30 participants were recruited via the email solicitation: twenty-three females and seven males. Seventeen were from Florida and 13 from New York. Their experience ranged from three to 40 years (M = 13.5; SD = 8.95). The community college systems in which they were employed had estimated student enrollments that ranged from 600 to 160,000 (Mdn = 10,000).

The forms of ILI they offer include one-shot sessions, credit courses, library orientations, embedded instruction, workshops, and one-on-one instruction provided as part of reference service transactions. Instruction is provided in classrooms, the library, computer labs, and online. In the sections that follow, participants' names have been replaced with pseudonyms.

Findings

Findings presented in this section are arranged according to the interview questions that relate to the overarching research question: "What are community college librarians' perceptions of students' IL needs?"

Aspects of IL Considered Most Important

To provide context for responses to questions about students' strengths and weaknesses, participants were first asked: "What aspects of information literacy do you think are most important for students' success"? Several dominant themes emerged. One is the importance of understanding research as a process and scholarship as conversation, two of the frames in the *Framework*. Lily expressed the belief that librarians need to focus on "changing [students']

conception so that they think about research as a process that requires time and persistence and flexibility. Those are things I think they struggle with the most." Jade offered a similar view: "I explain to people, particularly if I don't get the results that I want, that it's a process, you know, you have to be a little patient... and you gotta play with the databases, you got to play with your search strategy." Lucy explained the importance of students' "understanding from the beginning that this is more of a circular process than a linear one." Both Samantha and Teresa noted the need to impress upon students that research is an "iterative process." Stella described it like this: "[R]eally understanding how to do research and what it consists of is something that takes some of them a real significant amount of time to grasp."

Related to understanding the research process is developing an awareness of how scholarly communication works. Eleanor, for example, stated that she felt it was important "for students to understand just how scholarship works, how information is created... the communication." Kim reflected a similar viewpoint:

I like to talk with the students about how scholarship is really a conversation and how, whenever they're reading these journal articles... why they're written the way they are, why they refer to other people's works, and how they themselves are participating in that conversation by using other people's works.

Such understanding is not necessarily intuitive and often hinges on learning a new way to read scholarly literature. Chuck stated, "[Students] need us to model how to read a scholarly journal, which is different than reading a newspaper article, which is different than reading a popular magazine article, or reading a blog or, for goodness sake Facebook or Twitter."

Another key theme that emerged was the need for students to be aware of, and be able to evaluate, different types of sources. Allan, for instance, said, "I want students to identify the difference between what is real news, fake news, and satire. Oh yeah, I mean that's a big issue now." Chuck echoed this sentiment, explaining that what he thought was crucial was, "the idea of students being able to, first and foremost, judge information, evaluate information, critique information, question the source." As Carol noted, this issue of evaluation is closely connected to an understanding of who created the information:

And that goes back to authority. You know, who's behind the information, how accurate is the information?... we really want our students to have a grounded understanding of there are so many different types of sources out there, what's published and what's actually not published, especially on the internet.

Several participants alluded to this issue of authority when they stated that they want students to become aware of the myriad resources available to them through the library, especially through library databases, as opposed to their default reliance on Google. Lauren, for example, said that, "I'm trying to teach them about getting good sources and good authority. I think for the community college level [that] is really the crux of how to get them moving and helping them forward." In order for that to happen, students need "just being exposed to what is available to them" (Penny), and they need help "in being able to identify what makes a source credible within the different types of sources that are out there" (Rhiannon).

Other aspects of IL that were deemed most important included asking focused research questions, developing effective search strategies, and understanding how to search databases. Not surprisingly, the term "critical thinking" was mentioned by several participants as being a crucial skill. Jasmine summed it up like this: "We really have to foster critical thinking, and we try to use as many techniques and methods as we can to get students to not be passive receivers of information."

Librarians' Perceptions of How Students See Their IL Strengths

Participants were asked to consider how community college students might describe their strengths and weaknesses related to IL. One strong theme that surfaced was a high level of confidence, especially about students' ability with technology and finding information online. Participants felt that many students see themselves as "expert researchers" (Allan) who have an innate curiosity. Participants also noted that students, in their personal lives, tend to recognize when they need information, and that this often motivates their search for and use of information for personal needs. Cathy said:

So they know that there's a lot that they don't know, but what they also know... and they perceive as a strength is that they know that they have always been able to get the answers to questions that have pestered them.

Other IL strengths students may see in themselves include the ability to determine keywords for searches, having an awareness of the vast number of resources they have easy access to, and knowledge of reliable sources. Participants said students are aware that bad information exists and that there is reason to be skeptical, but they ultimately consider finding an answer to be more important than the quality of the information. Participants stated they think students generally believe that the information they find is "good enough." Maureen said that students "think that they're good at knowing what's believable and what's not… because I feel like that's, everybody feels that whatever they think is the best."

Participants also think that students see themselves as on top of popular culture, and abreast of cultural trends through the use of social media. Amy, for instance, stated "they are on the cutting edge of where information comes from in terms of social media, which is really an increasingly valid form of information with a really big asterisk." Participants described students as feeling well informed, as well as proud of being socially conscious, culturally tolerant, and knowledgeable about cultures other than their own. Several participants added the caveat that these generalizations mainly describe younger students, noting that there are many students, even younger ones, who struggle with technology. They describe older students as being less tech-savvy, less social media-oriented, more open to developing IL skills and knowledge, and more understanding of the importance of widening their exposure to technology and IL as part of their education.

Librarians' Perceptions of How Students See Their IL Weaknesses

In working with students, participants observed that the uncertainties students experienced started with not understanding what they are being asked to do when given a research assignment. Participants stated that students express a lack of understanding of research terminology, experience difficulty synthesizing information, and have questions about cit-

ing resources and disentangling how plagiarism differs from paraphrasing. Kayla noted the problems many students encounter in developing effective database searches: "Students often come to me saying they have trouble finding the right keywords and search terms to use.... when you're searching, you know, databases and, you know, academic journals, you have to be very specific and targeted with your search and they just don't have those skills yet." Barbara offered a similar observation, stating that while students may feel comfortable performing a Google search, "once they have these library resources in front of them, they're not really too sure."

Participants reported that another problem students vocalize to them is feeling overwhelmed by the amount of information they are confronted with. There is just too much information, and they do not know how to narrow it down. Likewise, students voice concerns about recognizing scholarly information and reliable information:

That's the biggest follow-up question I get from students is how do I make sure this is a peer-reviewed source, but even if it's not a peer-reviewed source, you know, how do I make sure this is a good source...that's the thing they would recognize as being a weakness (Rhiannon).

Additional challenges that students have expressed to participants include language skills—especially among students for whom English is not their first language—and technology skills, especially among students who enrolled in college later in life.

Librarian Perceptions of Student IL Strengths

In addition to being asked about their perceptions of students' self-views, librarians were asked about their own views of students' IL strengths and weaknesses. In terms of strengths, participants felt that students were curious, motivated, eager to learn, flexible and adaptable, and aware that not all information is reliable. Not surprisingly, participants reported that students, especially younger students, have good technology skills; they are "good at formulating research questions" (Eleanor), "know how to get around the web" (Amy), and overall are "very tech savvy" (Lauren). They are particularly adept at using Google and social media. More than one participant noted that their students are digital natives, having "grown up in an online atmosphere" (Matthew).

One participant noted that students also know "what it means to be a citizen in the online world," and "are able to code-switch between the way that they should behave in an academic digital setting versus a social digital setting" (Samantha). Another reported that students sometimes use technology to seek information from a more "traditional" source, i.e., librarians: "It's amazing the different ways that they're able to find us, but they do seem to have a strong ability to find a way to ask us questions either through email or chat or just randomly coming into the library as well" (Matthew). Students' technology skills, according to one participant, represent an opportunity for librarians to help them build on existing knowledge: "[Google] is a good platform, but we have to take those skills that they've self-learned and, you know, kind of hone them so that they can learn how to use the tools that the library has available for them" (Amy). While the vast majority of participants agreed that students have some IL strengths, particularly in using technology and performing searches, one offered a different perspective, stating, "I feel like there aren't a lot of strengths there" (Stella).

Librarian Perceptions of Student IL Weaknesses

Although participants reported that students have a high level of confidence in their ability to find information, they themselves saw this as a significant weakness among students. This confidence, participants said, actually reflects students' inflated sense of proficiency related to their belief that access to Google is all they need. One participant talked about administering a diagnostic test at the beginning of a required course that assessed both IL and confidence and reported, "Everyone who did poorly, like couldn't even answer half the questions, rated themselves as experts, you know? ...more adult students are very aware that they need a lot of help" (Peter). Another participant remarked, "I think if you pulled any student off the street, they would say, yeah, I know what I'm doing until they're confronted with perhaps, like an assignment" (Barbara). Participants felt that this is in part a result of students not knowing much about IL, libraries, and databases: "There's a whole area of expertise that they don't know is there. And once they become aware of it, that's when they realize that's their weakness" (Amy).

Participants reported that students do not understand that research is a process, that it takes time, and requires reading. Reading was mentioned as an issue by several participants. Chuck said that students "don't want to read. Reading has been demonized somewhere along the line in K–12." Eleanor offered a more nuanced view, suggesting that the problem is "reading comprehension of scholarly sources." Participants reported that reading is problematic for many English language learners, and for other students as well. For some students the issue is related to short attention span: "People are reading, but they don't have the endurance, let's say to read long-term and to kind of, you know, take it apart" (Inez).

This ability to "take it apart" is closely related to another weakness several participants identified: critical thinking skills. As a result, students have difficulty evaluating sources. As Chuck explained, "they're looking at stuff on Facebook and Instagram and they don't know to be skeptical. So I always try to get them to remember that before using a source for your research, you want to question its relevance, its accuracy, its appropriateness, who published it." Kayla lamented "the appeal of fake news and those types of sources that really catch your eye."

Somewhat surprisingly, many participants reported having students who lack technology skills. These were often identified as "older students" (Chuck), and "continuing education students or, you know, middle-aged students" (Teresa). These students with low technology skills are "pretty frustrated by technology …and just being bombarded by so much of it" (Jasmine), and "have difficulty navigating the website" (Neil). Peter reported, in extreme cases, "I have to help people turn on the computer." To be sure, some students are quite savvy with technology: "there is a divide, that digital divide, where overall there's, you know, certainly students who are really, really aware of how to use a computer and how to search the web and all that other stuff. But there's also students who really don't have that, those skills" (Rhiannon).

Librarian Perception of IL Skills by Program and/or Goals

On the question of whether they had noticed that students' IL skills vary depending on which program they are in and/or their post-graduation goals, participants were divided. A majority of participants said "yes." In general, participants reported that students who have been in college longer (as opposed to brand new freshmen) and students who are planning to pursue a

bachelor's degree have stronger IL skills. Nursing was singled out by a number of participants as a program that requires students to do research and, as a result, produces students with stronger IL skills: "their professors are making them look at, like, databases more. So they're in the catalog, they're in the databases" (Alfred). Several participants felt that the differences in IL skill levels among their students were tied more to high school experience: "If you have a student coming right out of high school, who hasn't done a lot of research, you know, all information literacy is brand new to them" (Amy). Interestingly, different participants reported different experiences with dual-enrolled students (i.e., high school students who are enrolled in community college courses). One said that, "dual enrollment students... would probably not be as good as the students, like, in a particular, if they're in a particular field" (Alfred). But another described a very different kind of experience: "I think there's a motivation piece there with those dual-enrolled students. And I also see them doing better and grasping the concepts more at an earlier place" (Carol).

Several participants stated that they felt the differences in IL skill levels had more to do with demographics than with individual programs or personal goals. Jasmine, for example, said:

...that's the challenge with dealing with a very diverse population. We have students who are very young, that are immigrants. We have students who were born here that don't have any problem with language. We have students that are older going back to school for the first time who have a wealth of life experience....You have all these streams of different people, kind of from different backgrounds, coming together and some need so much help.

Some participants who responded "no" to the question offered similar opinions. Cathy said, "what they bring in is more critical to their information literacy competencies or dispositions than any program that they're in or any goal that they've set for themselves." But she went on to say that she found IL skill levels to be similar "across the board," a phrase that was also used by two other participants. Other participants were not sure whether IL skills varied by program or goals. One noted that her instruction mostly focused on the general education curriculum as opposed to program-specific courses, while another admitted that she had not given the question of IL differences across programs a lot of thought.

Discussion

Participants were asked to consider their beliefs about student needs and perceptions related to IL. Two key and somewhat unusual findings are: (1) librarians' perceptions are not that different from students' perceptions of their own IL needs, and (2) librarians recognize that reading comprehension skills directly impact IL skills. The most important aspects of IL, according to participants, are the ability to understand research as a process and to understand how scholarly communication works. Closely related to these concepts is the ability to evaluate sources based on an understanding of authority. These findings are similar to those of previous research in which a survey was administered to community college librarians. In that study, librarians ranked critical evaluation of information as most important for student success, followed by understanding the research process, and knowing how to find information.¹⁹ In another study, interviews with community college students found that students themselves

consider technology skills to be important to IL along with the ability to evaluate information and to use it effectively.²⁰ In that respect, the findings from this study are somewhat unusual in that they suggest librarians' perceptions of students' IL needs are not that different from students' perceptions.

In terms of IL strengths, participants in the current study felt that students would consider their confidence in using technology and their confidence in finding information to be their greatest strength, although they themselves saw this inflated sense of confidence as a weakness. Indeed, as earlier studies have shown, community college students do tend to overestimate their IL abilities, with the lowest-performing students often having the most inflated view of their skills.²¹ In addition, students, especially younger students, consider themselves to be proficient in using social media as a source of information about popular culture and current events. The participants agreed that students—again, especially younger students—tend to have good technology skills and were particularly good at using Google and social media. Students overall are curious, flexible, and aware that not all information is reliable. These findings are similar to those of previous research in which community college librarians ranked technology awareness as being students' greatest strength related to IL.²²

In terms of IL weaknesses, participants believed that students would describe themselves as struggling with several issues: not understanding what they are being asked to do, lacking database search skills, and not understanding how to properly cite sources. Many students would admit to being overwhelmed by the sheer amount of information available to them. The participants themselves considered students' greatest IL weaknesses to be overconfidence in their ability to find information and their lack of understanding that research is a process. Related weaknesses, according to participants, are poor reading skills and lack of critical thinking skills, both of which negatively impact students' ability to evaluate sources effectively. These findings are different from those of a previous study in which community college librarians indicated that students' greatest weakness was the ability to critically evaluate information, followed by understanding how databases are organized.²³ In that study, understanding research strategies ranked fourth—tied with knowing how to find information—among students' IL weaknesses. In another study, community college students indicated they considered their greatest weaknesses to be the ability to find information, especially information in databases, and selecting relevant and reliable information.²⁴ Clearly, evaluation is considered to be an important skill—and also a weakness—across all three studies. However, only the current study found the perception that poor reading skills may have something to do with students' weakness in effectively evaluating information.

Many students begin college academically underprepared, especially in reading and math, and the issue is especially acute among community college students. ²⁵ As a result, as many as half of them take remedial courses, ²⁶ including courses in developmental reading. ²⁷ No doubt, as the librarians in our study reported, poor reading comprehension skills negatively affect students' information literacy, especially their ability to evaluate and use information effectively. And even students with generally good reading comprehension skills may struggle with the conventions of academic discourse.

While generalized statements about student IL strengths and weaknesses were offered by librarians in the current study, these were tempered by a recognition of the diversity of the population served. For example, older, returning students are less confident than younger ones; not all students have access to technology, nor are they necessarily adept in its use; students may be acquiring English language skills, and some may be struggling with basic literacy issues. In general, participants saw this diversity in backgrounds and situations as having more to do with individual students' IL strengths and weaknesses than the programs they are in or their ultimate goals beyond graduation. The diversity among community college students complicates understanding who they are, understanding their IL needs, and responding to those needs.

This study suggests several implications for the practice of IL instruction in community college libraries. A central concern is to meet the IL needs of students across extremely diverse subpopulations, which are a hallmark of community colleges. The old adage that instruction must begin with where students are is true. Thus, an important first step is for librarians to understand what community college students believe about their own IL needs, strengths, and weaknesses. While this may seem obvious, putting it into practice presents challenges. The constraints of the one-shot workshop (limited time, limited contact) make it difficult to provide in-depth instruction, never mind doing any real needs assessment. Librarians also need to interrogate their own beliefs about students' needs, strengths, and weaknesses; however, without meaningful data about students' perceptions, librarians have no way of knowing how their own perceptions compare. Given the diversity among community college students, the one-size-fits-all approach may not be the best strategy for addressing their needs. How, for example, should a librarian design instruction for a single class that includes both tech-savvy younger students and tech-phobic older ones? What about for a class that contains both overconfident students and students with low confidence in their abilities? These implications are important not only for practicing community college librarians, but also for those who educate pre-service librarians. Education for the instructional role must include an exploration of the various contexts in which librarians will work, including community college contexts, and the diverse needs of the students they will work with.

This study also suggests future directions for research. While the literature on IL is quite extensive, studies specific to community colleges are not. This means that there are many opportunities for researchers to contribute to the profession's understanding of this context and to improve IL instruction. The diversity of the student population requires extensive exploration of their IL needs, as well as how to support the transition of the population to a more sophisticated view of IL, thus defeating the problem of overconfidence among the non-proficient, and making the integration of IL concepts into information seeking, creation, and use second nature. Dual-enrolled high school students offer a unique opportunity for community college librarians to expand these students' thinking about information before they start college or enter the workforce. Collaborating with high school librarians might offer one way to achieve this goal. Gaining a greater understanding of community college librarians' own, sometimes hidden, assumptions about IL and students' needs can help identify ways in which those assumptions are advancing—and ways in which they are perhaps undermining—instructional effectiveness.

Opportunities exist for research on the relationship between reading and IL, and for developing effective instruction in how to read scholarly literature. As noted above, a large percentage of community college students enroll in developmental reading courses. One strategy for improving IL among these students would be to offer ILI within the context of these courses. A recent two-volume work, *Teaching Critical Reading Skills: Strategies for Academic Librarians*, offers a variety of approaches to librarians teaching reading at the college level,

and not just in the context of developmental reading courses.²⁹ One of these is the Peritextual Analysis and Critical Thinking (PACT) instructional model, in which students are taught to critically examine the peritextual elements (such as author biographies, supplementary materials, author's notes, and source lists) surrounding the main text of a book or an article and consider the relationship of these elements to the main text.³⁰

Limitations

The data collected in this study is from 30 community college librarians in two states in the U.S. and therefore does not necessarily reflect the views held by other community college librarians in those or other states. Participants were self-selected and thus may represent community college librarians who have particularly strong feelings, pro or con, about IL, IL instruction, and community college students' IL needs.

Conclusion

The community college environment is unlike that of other institutions of higher learning. The value of this study lies in the potential for identifying opportunities for improving IL instruction in community colleges, based on a better understanding of librarians' perceptions of students' IL needs, as well as their perceptions of students' self-views. Librarians consider the most important aspects of IL to be understanding the research process, including scholarly communication, and critically evaluating information. They believe that students are confident in their ability to find information that is "good enough," and are proficient in using technology, including social media, to find information. While librarians agree that students, especially younger ones, are proficient in using technology, they consider students' overconfidence to be an IL weakness. Other weaknesses include not understanding the research process, being overwhelmed by information, and in some cases having poor reading comprehension skills. Views are mixed as to whether students' IL skills vary based on their program of study. There is a bit of a disconnect between what librarians consider the most important aspect of IL—understanding the research process—and what they believe students consider to be their greatest strength—using technology to find information online. Understanding the similarities and differences between librarian views and student views is an important first step in helping effectively address students' IL needs.

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Appendix A. Interview Schedule

- 1. How long have you worked as a librarian?
- 2. What's the approximate size of the student body at your college?
- 3. What kind of information literacy instruction does your library offer to students? (one-shot workshop, academic classroom, credit course) and where (library, classroom, computer lab)
- 4. What aspects of information literacy do you think are most important for students' success?
- 5. What do you believe are students' information literacy strengths?
- 6. What do you believe are students' information literacy weaknesses?
- 7. What do you think students believe their information literacy strengths to be?
- 8. What do you think students believe their information literacy weaknesses to be?
- 9. Do you think that their information literacy strengths and weaknesses vary depending on individual students' goals for their college program?

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