

## **Title**

Practicing Information Literacy: Practicum students negotiating information practice in workplace settings.

## **Keywords:**

Information literacy  
Information literacy instruction  
Practicum students  
Field education  
Work placements  
Phenomenography

## **Abstract**

This study explores practicum students' experiences of information literacy (IL) in work placement settings and describes the various ways they experience IL while learning in these settings. Using phenomenography to conduct and analyze interviews with practicum students in health and community programs at an undergraduate university, this study finds that in practicum settings, learners understand and practice IL not only from their perspectives as students but also as employees and future professionals. This exploration of student IL experiences in learning contexts beyond the classroom presents insights that can inform and strengthen IL curriculum and pedagogy for students in professional programs.

## **Introduction**

This study explores the information literacy (IL) development of students preparing for professional roles in health and social care settings. Given that most students in undergraduate professional programs are likely to enter the workplace after graduation, rather than pursue

further academic study, the current lack of scholarly inquiry into preparing students for workplace and professional information literacy is noteworthy. The dearth of research into connections between IL and practice learning, especially in those types of professional and vocational programs where practice learning is foundational and fundamental pedagogy, suggests a significant gap in academic librarians' understanding of pre-professional students' IL development, and an opportunity to gather more research evidence to inform practice in this area. Existing research on IL instruction for these students has focused largely on assessing their use of information resources. However, students practicing IL “draw from the knowledge base of their setting as well as the material and social resources that they need to do so” (Hicks, 2018a, p. 196), so these settings, and student learning in these settings, deserve more attention in the literature. Hicks (2018a) also suggests that “when information literacy is explored *in terms of how it is shaped* rather than how it is taught, emphasis moves from the measurement and description of learner attributes to an examination of the ways in which a community engages with knowledge within a specific setting.” (p. 196) (emphasis added). This study aims to examine IL in these terms and demonstrate the value of this type of examination for teaching and learning.

This study employs phenomenography as a method to describe information literacy as a lived experience among students in order to reveal a variety of ways in which students experience IL in workplace learning contexts: as students, as employees, and as burgeoning professionals. Listening to how students describe their information practices in their own words helps LIS practitioners and researchers to set aside the heuristics and models we currently use to define, measure and assess IL, and uncover various ways that IL can be perceived, understood and experienced. This qualitative study aims to bridge the gap in practitioner research that tends

not to theorize the concept (Hicks, 2018b) and is prone to assess rather than explore IL (Lundh et al., p. 2013). The focus of the discourse in academic librarianship on information resources rather than the context of their use, and on cognitive, individual academic skills rather than socially and culturally informed lived experiences, leaves a gap to be explored with qualitative research methods. This study contributes to a deeper understanding of how some students develop information literacy and draws insights from some specific contexts where this development happens. To do this, this study asks: How do practicum students in health and human services programs describe their workplace information practices and behaviors during practicum placements? What can we learn from students' descriptions of information practices in a workplace setting that will help us design relevant IL instruction interventions and incorporate them effectively into their curriculum?

## **Literature Review**

### *Workplace and Professional Information Literacy*

There is a large body of research on workplace information literacy that examines the ways people acquire and apply information practices and behaviors in health and social service-related workplace settings. This research has established some significant features of workplace information literacy: it involves engagement and interaction with textual, social, and physical information sources; it is developed through a wide range of experiential, tacit, and embodied types of knowledge types that are developed through practice in a social setting; it is mediated and negotiated through social interaction with coworkers and professional communities; and it is developed through reflective practice (Abdi & Bruce, 2013; Bonner & Lloyd, 2011; Forster, 2016; French & Williamson, 2016; Lloyd, 2009, 2010 2011; Lloyd & Williamson, 2008).

While there has been some acknowledgement that this workplace research has improved post-secondary educators' understanding of the need for transferable IL instruction (Head, 2017), this literature on workplace IL has yet to be fully explored and applied in academic settings. In general, insights developed from this research about IL as a sociocultural practice have not been usefully applied in the literature of academic librarianship to provide librarians with evidence to inform instruction with these students (Julien & Williamson, 2011). More research is needed that can help academic librarians apply these insights to adapt and improve approaches to IL instruction to prepare students to be information literate in a variety of contexts outside the post-secondary setting.

In health and social care disciplines specifically, studies of current students and recent graduates have helped identify information practices, behaviors, and learning needs of future practitioners (Diekema, 2019, Ivanitskaya et. al., 2012; Wadson et al., 2018; Wahoush & Banfield, 2014). This research has explored the idea of a research to practice gap (Bingham et al., 2016; Eyre, 2012; Wahoush & Banfield, 2014; Witek & Dalgin, 2019) suggesting that students and new graduates experience difficulty in transferring skills from school to the workplace and in perceiving the relevance of academic research skills to practice. From their research, Wadson et al. (2018) have concluded that “current information literacy training provided by libraries and educational institutions is either inadequate or not well- suited to the workplace contexts and practices” and that information formats, tools and processes “do not translate well” to workplace settings (p. 147-148).

### *Information literacy instruction in pre-professional programs*

Teaching IL either within, alongside, or in preparation for practicum or field courses has been studied in undergraduate programs including nutrition (Ingalls, 2018; Horseman, 2015), nursing (Kolstad, 2017, 2015), social work (Bingham et al., 2016; Doney, 2018; Plaice, Lloyd, & Shaw, 2017), and rehabilitation therapy (Witek & Dalgin, 2019). These studies demonstrate the value of authentic assignments and assessments based on students' workplace experiences that can be incorporated into online and in-person classroom settings. Other studies of IL instruction in practicum courses reveal the challenge and the value of these courses for describing, and demonstrating IL in a way that is relevant to the disciplines and professions, either through alignment with disciplinary methods like EBP (Bingham et al., 2016, 2017) or through disciplinary epistemologies and ways of knowing (Doney, 2018; Bingham et al., 2016).

Many of these studies refer to a research-to-practice connection but approaches to thinking about and applying this connection to the practice of IL instruction vary. Some researchers see this as an opportunity to seek out and use student evidence from practice to inform their teaching content and approach (Horseman, 2015; Ingalls, 2018; Kolstad, 2017), while others present IL skills as a preparation for practice but firmly rooted in an academic context and for academic purposes. (Bingham et al., 2016). Authors offer insight into the best way to integrate IL into the curriculum that best supports students for practice in terms of timing (Spring, 2018, Bingham et al., 2016), content (Doney, 2018; Ingalls, 2018) and curricular alignment (Doney, 2018). Overall, this research suggest that librarians working with these students are beginning to respond to Spring's (2018) suggestion to "look more broadly at where relevant learning can happen" (p. 82), and describe attempts to do this through relationship building (Kolstad, 2015, 2017), evidence gathering (Stevenson, 2012), and exploration of theory (Kolstad, 2017; Stevenson, 2012).

Like much of the IL literature from educational settings, these studies present IL as a predefined set of traits or abilities that can be measured or evaluated against established norms, signaling a library-centric approach to IL. However, as Lundh et al. (2013) suggest, there is potential to learn from an approach to studying IL in other contexts where librarian expertise and accepted wisdom do not influence how we identify and evaluate IL. In addition, the idea of a one-way trajectory for students from theory to practice, and its impact on teaching and learning IL, remains unexamined in much detail. Finally, a noteworthy gap to explore is the significance for teaching and learning of the specific contexts of the practicum placements where these students are learning IL and the sociocultural influences in those settings that mediate this learning. More research is needed to explore the role that authentic, situated practice in experiential learning environments plays in the formation and development of information literacy in students.

## **Methods**

### *Participants and Setting*

This study took place with students at an undergraduate university in Treaty 7 territory in Alberta, Canada. The study was approved by the researcher's institutional Human Research Ethics Board. In-depth, semi-structured interviews were conducted with six students from three programs in the faculty of Health, Community and Education, where practicum learning is a degree requirement: Social Work, Child Studies, and Nursing. The work placements where students completed their practicum included an out-of-school childcare program, two community resource centers, and several general hospital wards. Students were recruited through posters

around campus, in-class recruitment visits, and recruitment messages shared in the Learning Management System sites of relevant practicum courses.

### *Methodology*

“The object of phenomenography is the variation of human experience of the world” (Given, 2008, p. 2). This approach explores ways that people perceive, know, or understand a phenomenon, defined as “something that is shown, or revealed, or manifest in experience” (Blackburn, 2016). “The fundamental aim of [phenomenographic] studies is to determine through an analysis of the range of experiences of a sample of participants what IL means in practical terms, and to use this to construct more focused contextual interventions” (Forster, 2016, p. 354). The value of using this methodology in LIS research to provide rich details of the various ways groups of people experience and understand IL in context has been established (Bruce, 1999; Diehm & Lupton, 2012; Forster, 2016; Yates et al., 2012). Phenomenography helps us see that “an individual’s experience of a phenomenon is always embedded within a particular context, and a different context may bring different aspects of the phenomenon into awareness” (Akerland, 2005, p.106). Exploring how information literacy is experienced, demonstrated, and understood in workplace learning environments helps bring to light different aspects of this phenomenon experienced by post-secondary learners, beyond the ways that we observe it in academic environments.

Phenomenographic data is normally gathered through semi-structured interviews, a method well suited for descriptive, exploratory studies where research questions are what and how, rather than why or how much (Johnson & Rowlands, 2012), and a useful way for researchers to gather rich data representative of diverse understandings of IL. There is no firmly

established sample size for phenomenological studies, and it has been argued that the number of participants is not significant as long as “thematic redundancy” is reached (Beitin, 2012). This can be reached via long, in-depth interviews that produce relatively large amounts rich data from fewer participants. In this study, interviews lasted approximately one hour and were audio recorded (see Appendix for the interview script). While the researcher’s existing conceptualization of information literacy informed the construction of the interview questions and the interpretation of responses, the interview questions were designed to be open to all possible experiences with information that might be described by participants (Given, 2008).

A phenomenographic approach to analyzing the transcripts meant identifying concepts drawn from both the data collected and the researcher’s understanding of and experience with IL-related concepts, and then grouping and regrouping those concepts to develop categories of description that reveal differences in the ways that participants experience the phenomenon of information literacy (Forster, 2016; Given, 2008). The analysis uncovered three related categories that describe increasingly complex ways learners experience this phenomenon in their practicum placements: as students, as workers, and as helping professionals.

## **Results**

### *Categories of information literacy experience*

**Student** - IL is experienced with the awareness of learning skills, meeting program requirements, and being assessed. This category demonstrates developing IL in terms of decision making, information seeking strategies, selecting sources, gathering information, and attempting to apply it in an unfamiliar and dynamic environment. Descriptions of IL focus on developing individual skills and knowledge.



**Employee** - IL is experienced with awareness of the self as part of an information ecosystem whose nature is specific to the workplace (for example, collaborative or hierarchical). IL here is expressed as building awareness of the context in which information can be used, sought, and applied, and developing contextually relevant information seeking strategies. IL practices are applied externally, beyond individual needs for coworkers and clients or patients.

**Professional** - IL is practiced through the lens of professional identity and awareness of actions regarding scope of practice and professional issues and ethics. IL demonstrates awareness of the ethical implications of information practice with clients or patients as well as the social and cultural influences on professional information use.

### *Student Information Literacy*

The nature and scope of information seeking and use was greatly influenced by students' awareness of being assessed by instructors and supervisors. Students articulated struggles with the limitations of their own knowledge, the uncertainty of what and how much they were expected to know, and when and how they were expected to apply that information. Student #5 described the work of preparing for a shift during their clinical course:

“So typically it would take you four or five hours [to prepare for the next shift] because sometimes there wasn't enough information that you needed to know about the medications. So typically you write it on cue cards, or you write it on paper, and like, you talk about everything because you don't necessarily know what your clinical instructor is going to ask.”

Students described the transition from academic to professional information use as they learned to assess the practical value of their trusted and familiar information sources, like

textbooks, while navigating either the lack or abundance of new information sources available to them in practice. Student #5's comments describe the challenges of using course textbooks to solve a specific clinical problem:

“So I think specifically the information is just so much that you are pulling it from all your nursing textbooks. It seems crazy, but you are going through every single textbook because I think I had one patient, I had and I could not find one thing about this one aspect, so I had to go through ... every possible resource possible, and if I couldn't find it there I went to Google, because some of these medications are so new that sometimes the release of our publications don't match up to the information given to us.”

Students also described the experience of progressing from “officially” sanctioned or endorsed sources like textbooks and research articles to “unofficial” ones that they recognized as more appropriate and valuable to their work. They described their experience of negotiating the different values that they, their colleagues and coworkers assigned to different sources. As Student #2 described the process of preparing to lead a group at a women's resource center, they made connections between their information use and the social work value of empathy:

“[If] I am developing a program I am not going to go for the research articles, I am going to go for the people who have developed programs, who have found activities that work. But even when you are looking into those when developing a program - like I did in my groups class - yeah, you do all that official research and read through all the official articles, but the resources are sometimes those unofficial resources! When it comes to activities that you are going to do you may do that independent research that is not using those main sites or things, and then justify it through your official research. So I think if you are creating a program or trying to introduce a new practice you need those articles

that have best practice behind them, but if you are gaining a better general life understanding of your clients, working on gaining more perspective, more understanding, working towards empathy, if you are working with a clientele that you find it really hard to connect to, I feel like the unofficial things, like The Mighty or Ted Talks, etcetera, that kind of come from that side of things, that speak to the other side of things in a more general way are incredibly useful.”

These comments indicate that learners experience growth in their critical thinking and their ability to determine the value of information in different contexts. Immersed in a practice environment working for and with other people, they were able to make authentic evaluations of relevance, significance, authority and value of the information they need that was quite different from the way they used information in other, more formal learning contexts.

### *Employee Information Literacy*

The significance of practicum placement contexts for developing IL through practice is clear in the experiences learners have as employees in a workplace. In this category of experience they developed their understanding of the impact of their information practices and behaviors beyond their individual course or program learning outcomes. They took advantage of the information resources they had available to them as students and used them in the workplace for the benefit of others, both clients and coworkers. Student #1 described a challenging situation with problematic behavior in a child under their care:

“So we went to our supervisor and ... we went to that professor as well because she is teaching us how to guide behaviors, so we asked her for her input!... We also have a seminar for practicum ... so there are about twelve students and my supervisor. Her and I

brought it up because we were like, “does anyone have any idea? We are trying pretty much anything and everything we can,” and it is not necessarily put on us [as students], but we do want to help the staff because you can see how much it stresses them out.”

This same student described doing extra research on topics that arose during their work experience for the benefit of the organization and their coworkers:

“Pretty often during the week I just do my own research to get any kind of extra information that I am interested in or that I would find helpful based on a kid, or that I think some of the staff would enjoy. For example, I am really passionate about the topic of physical literacy and the girl who runs the physical literacy activities in the center is as well so her and I share articles and research fairly often.”

As employees, learners also described their developing awareness of their workplace information environment and how that environment impacts the type, amount, and nature of information that is required, available and usable. Student comments reflect how this awareness of the sociocultural context of the workplace, and its limits and opportunities, helped them decide when existing information will suffice and when they must dig deeper. Student #4 identified the limitations of the training materials available to them at a community resource center, hinting at an awareness of practical reasons for these limitations:

“Yeah, so their manual was about which SOPs, that are standard procedures, and they had a few other things in there too, like showing a few of their online systems a bit, but not everything was up to date - I think that is the hard part about case work. And then really it was about job shadowing and I had a notebook and I would just write things down because they gave a lot of processes that you did that just weren’t in the manual, so I just wrote them down in my notebook and then could refer back to them.”

Similarly, Student #5 articulated their feelings about a work environment where the availability of information needed to do their job was dependent on other people:

“If it is our patient then we typically are looking deeper into their file and we are looking at what the surgeon is talking about. Definitely the one thing I thought was very ... annoying, is that we had some doctors that didn’t write in the client’s charts. So we have them electronically and then we also have them handwritten and we had a surgeon that wouldn’t compute them into the computer, and they would only do it handwritten, or they just would forget. So often some of that information would be lost because there are some of us that just look at solely just the computer. But then I think with practice and with the clinical instructor, part of that is taking that initiative to look into the files to see what information is going around, and then looking and contrasting what is missing from the file that we have to know.”

Students described how they learned to recognize that there is sometimes no clear authority to be found in any form, whether a document, a coworker or personal experience. Their comments reflect a growing understanding that authority in the workplace is mediated by the context of professional hierarchies, interpersonal relationships, and workplace culture. In describing a case of an information need at work, Student #4 commented on their frustration at having no authoritative or reliable source for information, even though they had the research skills to find it.

“That is where the biggest struggle was, not knowing where they [clients] could get the help and feeling like it was there and not being able to find it, even through Google searches or knowing how to search it. Like even people needing winter coats - that is one example - people really needing winter coats and there wasn’t a lot this year. ... I know

there was a firehouse place where they collect the coats, but I couldn't find any information about that, or a response, like from other agencies that offer them. Whether they don't put that on their website because there is too much demand, I don't know, but that was tough to find. ... So some very specific resources and not having a place - and that would be so hard to do, I have been thinking about it - like how would you maintain a list of that? No matter what someone has to maintain the agency list and description of it and there is no way to keep up."

When asked about how the resources for clients at the workplace are evaluated, collected, and shared, Student #1 described the selection process:

"From what I have heard it is either based on interest, or observed behavior, or it is mandated, like they have some articles where they are supposed to show the parents based on what management has told them, or something, for example, physical literacy or literacy one and how it has declined within young kids due to screen time -- that one is more situated to society today so they would make sure that is in circulation somewhere. ... Whatever management gives them has to be on there [the parent resource board], but with regards to extra resources I think they pick and choose based on the kids they see and their behaviors that they document, and the families and the background that they know of. Instead of it being kind of generic it is more situated toward a number of the kids that they work with."

These comments reflect awareness of the realities not only of their workplaces, but also the larger social systems and structures that impacted their abilities as practitioners to find and apply needed information to help their clients.

*Professional Information Literacy*

The way that learners in practicum settings interact with information reflects their ability to apply discipline-specific ways of knowing to professional practice. For students learning to become helping professionals, this meant that they experienced information literacy in the context of relationship-based, client-centered practice. Student #4's statement describes this idea well:

"I guess the thing I would share in human services or social services it is really about people and not everyone can have all the knowledge on everything, and that is what I saw too. I like the idea of people having different skill sets or knowledge or places that they access information from."

This statement implies that information is seen as organic, moving, and embodied in people rather than documents, and suggests an awareness that "having" information looks different and can change between and among people. This student also expressed her awareness of how situation, privilege, access, background impacts information literacy, both for themselves and for their clients when they said, "because the client doesn't know the language that we use. [...] They might say they need something, but they don't know that what they need is a food bank referral. They might say, "I need something for my kids' lunches."

Related to this professional awareness of how they and their clients or patients recognize, articulate and act on information needs, these students were also aware of how information behaviors were bound up in professional ethics. In describing their work with clients as a community resource center, Student #2 articulated a strong sense of ethical information practice at a community resource center:

“We are not necessarily the ones with the professional information and we may not be able to deliver that information without bias, which is why places like the sexual health center, or SCOPE, they have trained professionals to deliver information without bias.”

Scope of practice was another concept that came up in Student #2’s discussions of their experiences with information:

“So when it comes to helping with math skills, reading comprehension, food safety handling and things like that that we either have something to work off of, workshop wise, or is fairly clear put, we can do that. But when it comes to more opinion-based subjects, or subjects that may have a lot of value conflicts those are where those boundaries are drawn, because we get into the more complicated grey areas and we don’t want to cross a boundary, and we also don’t want to cross a boundary with a parent and their kind of teaching side of things.”

Other learners were not so confident and expressed practice boundaries as a source of anxiety.

Student #6 described such an experience:

“One time I remember I was talking to a patient I just got to know and then he was asking me questions that should be for the doctor, and then just to give him some reassurance I tried to answer it from like, also going on the internet, and my instructor told me that is not in my scope of practice about patient education. So that is why ... that is another reason why I became really hesitant to teach patients because I am not sure when it comes to my scope, and also when it comes to the accuracy of it all.”

As they identified with their profession, these students’ comments reflected awareness of the sociocultural context of their information practices, especially perceptions of their role as



experts. Student #1 reflected on how the nature of information sharing with clients and the impact this might have on them:

“In our profession we are not supposed to give advice based on kids, so usually if we see negative behaviors for one child we will write it down in that observation book and then we will post something, either in the weekly newsletter or on the board that is associated with that behavior, but not calling anyone out. Parents already have enough stress and we don’t want them to feel targeted or like it is their fault.”

This student’s comments also reflected an awareness of the larger culture in which they used information in a professional capacity. They noted experiencing the challenges around the public’s understanding of the role of early childhood educators which impact their ability to act as an information resource for clients:

“So because there is a lot of stigmatism [sic] around educators, and parents versus educators and both the positive and negative side of things. ... So instead of giving advice we try and have an open dialogue, ask questions, or maybe if they come to us for resources, that is why we try and build that connection because we have people come to us at my practicum and ask for resources for like, speech therapists, or [child psychologists] and stuff like that. ... Unfortunately I think it is kind of sad because there are some very good resources out there for parents, and you can see when the parents start to get stressed out or burnt out and it would be like, we would be able to help you so much if you would just tell us what is going on!”

For these learners, professional IL was fundamentally a relational experience. Experiencing IL in this category means reflecting on the outcome of their information practice on the people they were helping.

## Discussion

### *Supporting Reflective Information Practice*

Learners' developing professional identities, and their clear identification with professional ethics and standards, influenced their information practices during their practicums. The ways that these students engaged with IL concepts specifically as employees and professionals offer clues librarians can use to incorporate workplace experiences into instruction practices to address IL concepts in meaningful, relevant ways that support future praxis.

The underlying theme that connects all these categories of experience is the learners' self-awareness of their different roles in workplace settings. Their comments show evidence of reflective information praxis, and suggest that they *negotiate* IL in workplace settings, rather than simply *apply* it, across all categories of experience. As students, they demonstrated awareness of their learning process and the related enablers and barriers to their learning; part of this metacognitive development was knowing that the student experience was temporary and constrained by specific factors related to their program. By contrast, when learners described their practices as professionals, they spoke in the present or future tense, as though the information practices they described were connected to the ongoing practice of *being* a nurse, early childhood educator, or social worker. In terms of implications for academic librarians, these findings suggest that if we want to teach "lifelong learning" skills and dispositions to learners, then the professional category of experience offers us clues as to how to do this.

Across categories of experience, learners described ways that their information literacy was tied to their work helping others. These learners' descriptions provide evidence that the practice of information literacy for helping professionals is significantly influenced by understanding not only of their own information needs but those of the clients or patients with

whom they work (Sharun, 2019). These learners' information practices were closely connected to their understanding of their professional roles and the impact of their practices on others in their environment. They described their experiences with a professional perspective, highlighting how the concepts of scope of practice, ethical boundaries, and client-focused practice impacted their use of information. This suggests that IL instruction must address the interpersonal, social and cultural aspect of information literacy wherever possible, rather than the purely cognitive and individual skills, and that learning activities for pre-professional students should address the fact that the practice of professional information literacy is entirely tied to work with clients. Teaching concepts like information authority, context, creation and access should incorporate their practice learning and be done in a way that helps them in their future work as information mediators, navigators, and purveyors of information about the health, education and social care systems.

Training in reflective practice is integral to the education of students in allied health and helping professions. There are opportunities for librarians to help students develop reflective information practice and metacognitive awareness of IL in professional practice by building on existing practicum assignments and assessments. IL assignments and assessments that are tied to professional practice learning, like reflective journals, can also provide evidence of student learning helpful for effectively describing and demonstrating IL not only in a disciplinary context but also in a vocational or professional context that makes the concept meaningful to instructors in these programs. Despite the practical challenges of doing so, librarians should look beyond the classroom to assess students' information literacy authentically in collaboration with faculty and field instructors. More formative assessment of IL in settings beyond the library classroom can provide for more meaningful and impactful involvement of IL in the curriculum.

### *Expanding the Framework*

These students' experiences of IL in practice reflect some of skills, practices and dispositions outlined in the *Framework for Information Literacy in Higher Education* (2016) and offer examples that could be used to illustrate these frames for students who may not relate to the academic context in which this framework is often taught. These students described how they internalized and applied concepts of information privilege, information value, strategic information seeking, and the contextual nature of information authority. The practicum experience provides authentic learning opportunities for educators to address IL knowledge practices and dispositions (ACRL, 2016) and relate them to practice; librarians can leverage examples from practicums in their demonstrations, class discussions, and activities to help students make connections in their information seeking, evaluation and use inside and outside the classroom. Seeking more examples of the Framework concepts in workplace learning environments can provide librarians with additional evidence to communicate the significance of IL concepts with faculty and help move IL instruction beyond the one-shot session. Rich and varied qualitative descriptions of workplace experiences can provide evidence not just of students' developing knowledge practices, but also the dispositions, values and mindsets that are both influenced by disciplinary cultures and more difficult for librarians to authentically observe and assess (Rutledge & LeMire, 2017).

### *Embedding IL into the Curriculum*

The idea of negotiating IL that was illustrated by these students may be useful in helping educators account for workplace and everyday life realities in teaching IL concepts, and equip students who are becoming practitioners rather than academics. These learners transferred their

IL skills and knowledge quite easily between the classroom and workplace, and applied experiences from one setting to help them learn in the other. Contrary to many of the IL instruction approaches described in the literature, these students' experiences suggest that this instruction should not culminate when practice begins but be connected to practice-related learning throughout the curriculum. The ways that learners described crossing boundaries as they sought and used information in the classroom and in the workplace provides hints for IL instruction that is integrated not just into practicum courses or research methods courses, but into other courses in these programs, such as policy, advocacy, interprofessional communication or other methods courses, that connect to and prepare students for practicum placements.

Practicing IL is not a straightforward application of theory, skills, or knowledge in a new environment, but a negotiation of the sociocultural context of that environment and an awareness of how that context constrains and shapes the way IL is demonstrated. For librarians, attempts to curriculum map or scaffold IL skills and concepts in a program without considering the significance of practicum experiences in students' learning and its relationship to the rest of the courses in a program may miss opportunities to address important learning outcomes, or worse, may neglect to effectively prepare students for information literate professional practice.

## **Conclusion**

In their examination of workplace and educational IL studies, Limburgh et al. (2013) concluded that librarians' role is *not* to "prescribe certain ways of conducting information seeking" (p. 11) beyond the classroom, in workplaces or everyday life. They note the differences between "real world" IL and that standardized idea of IL that many academic librarians teach to and suggest that this understanding of contextual information seeking can inform IL education efforts. This study has added a small piece to a body of empirical research that takes up their

suggestion and illuminates one way that investigating IL from a workplace perspective can inform IL teaching for post-secondary students in professional and vocational programs.

This study has also provided some preliminary thoughts on the value of exploring the various learning environments where students practice IL beyond the classroom and suggests that IL instruction can be more deeply embedded in experiential learning opportunities for students. Stevenson (2012) argues, “While it is important to show how the learner uses new knowledge and the impact the learning has on the work environment; it is also necessary to evaluate how the work environment influences the learner and identify potential and actual barriers to knowledge transferral” (p. 82). Qualitative studies of experiential learning in work environments allow us to learn *from* students by listening to their voices instead of simply learning *about* students by measuring their performance of defined tasks. There is an opportunity for future studies to validate and build on the ideas presented here by examining the nature of different types of practice environments where learners develop their information literacy.

As a key pedagogy in professional and vocational programs, practicum learning needs more attention from LIS scholars and academic librarians. More research is needed to show the teaching and learning implications of addressing practical learning in library instruction programs that aim to achieve learning outcomes by scaffolding or mapping IL in the curriculum of these programs.

The conclusions that can be made from this study are limited by the small number of participants and the limited range of workplace experiences they described. Future research can explore these categories of experience in other contexts or apply this methodology in studies of other student groups to uncover new categories of experience to help librarians understand a greater variety of ways that students understand and practice information literacy. More research

that provides evidence of the connection between workplace and classroom IL can help librarians communicate to instructors that IL “is not primarily about mastery of a discrete set of isolated skills but a way of gaining a better understanding of the world in which students find themselves and how information relates to their experiences” (Bingham et al., 2017, p. 438). With more evidence of how students practice IL, librarians can communicate effectively with faculty, demonstrate the significance of IL for professional students beyond academic research skills, and continue to make connections between IL, disciplinary ways of knowing and professional practice. The insight gained from more qualitative studies of students’ experiences can help librarians integrate IL with experiential or practice learning and develop teaching and learning opportunities that are relevant to how pre-professional students experience and engage with information in practice.

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## Appendix

### Interview Guide

1. Describe your experience of orientation or training during your practicum placement.
2. Describe how you use or interact with information sources in your practicum organization.
  - a. What/who are your go-to sources while on practicum?
  - b. What specific resources do you see being used to do the work of the agency/organization?

- c. What kind of information have you been asked to use or find during your practicum?
  - d. How do you decide what information to use or not to use in a given situation?
- 3. Describe a situation where you had to find an answer to a question or solve a problem, either for yourself or for a client.
  - a. What was the problem? What skills, knowledge or experience did you use to answer questions, solve the problem, or find information?
  - b. Describe your experience using information resources with or for clients.
  - c. How do you see information being used for clients and with clients?
- 4. How would you describe your approach to getting and using information at work?
  - a. What resources do you use? What strategies do you use?
  - b. What type of information do you have trouble finding?
  - c. How much time do you spend looking for or using information sources?
- 5. How is your previous learning, education or experience particularly helpful in learning at work?
- 6. What is one question you have, or one thing you would like to know more about, based on your practicum experience?
  - a. Where/to whom would you go to find answers to that question?
- 7. Is there anything else you would like to share?