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Student perspectives: redesigning a research assignment handout through the academic literacies model

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Abstract

This study explores student responses to a research assignment handout that was redesigned in light of the recommendations from a 2010 Project Information Literacy report. Framed through Lea and Street's academic literacies model (2006), which positions information literacy as a social and situated practice rather than as a generic skill set or a process of socialisation, the author focuses on adding situational and informational context to the handout. This study uses a descriptive survey method (annotations and a questionnaire) to demonstrate that the addition of this disciplinary context helped to scaffold students' critical engagement with scholarly conventions as well as with the broader information landscape. The study concludes by calling for renewed librarian engagement with alternative theoretical frameworks of literacy as well as the inclusion of student perspectives into studies of academic learning.

Keywords

information literacy; academic literacies; research assignments; research support; higher education; academic libraries; US

1. Introduction

When Project Information Literacy (PIL) (Head and Eisenberg 2010) made recommendations about the redesign of the research assignment handout, they neglected to include one important factor: the perspective of students. Designed to provide "written guidelines about course-related assignments" (Head and Eisenberg 2010, p.2), the handout can serve as a valuable pedagogical tool that supplements one-shot seminars or face-to-face teaching. Yet, in excluding the reactions of students, whose voice is often surprisingly absent from studies into undergraduate research, it is hard to establish the potential of the handout to meet pedagogical needs. Accordingly, the primary aim of this paper is to expand research in the field by using student feedback to evaluate a handout that was implemented in a capstone, or final year, history seminar (see Appendix for the final version of the handout).

The secondary aim of this paper is to engage more broadly with scholarship that positions information literacy (IL) as a sociocultural practice (Tuominen et al 2005; Lloyd 2005) by exploring IL can be theorised through Lea and Street's academic literacies model (1998). Emerging from the field of new literacy studies and viewing literacy as a social and situated practice rather than as a generic skill set or as a process of socialisation, the academic literacies model has not been widely explored within IL, despite the impact of this work within the field of literacy studies. In redesigning the handout through the academic literacies framework, or as a support tool that explicitly scaffolds students' critical engagement with disciplinary conventions and processes, this paper thereby aims to deepen librarian engagement with alternative models of instructional theory and practice.

This paper will start by providing an overview of the academic literacies model before reviewing relevant literature from the field. It then employs survey and elicitation methods to solicit feedback and examine how students used the handout within two class sections. The author's analysis of these responses form the basis of an extended reflection on the design and use of handouts within librarian instructional practices today.

2. Academic Literacies

As an overarching concept, academic literacies refer to the scholarly conventions or the accepted reading and writing processes that guide ways of knowing within higher education (HE). Centring on the established methods of "talking, writing, thinking, and using literacy" within academia (Lea and Street 2006, p. 369), these conventions are made explicit through the literacy requirements and practices that constitute good (or bad) writing. They are also implicitly and explicitly embedded within academic documentation, including course handbooks, written feedback and assignment guidelines. Seen as helping students to "learn new subjects and develop their knowledge about new areas of study," an ability to navigate these academic conventions plays an important role in student success within HE (Lea and Street 1998, p. 158). Yet, as Lea and Street point out in their work that gave rise to the concept of academic literacies (1998, 2006), these general understandings often obscure a number of different interpretations and expectations about both the nature of literacy within HE, as well as how to teach it. This led to the creation of their academic literacies framework, in which they argue that approaches to literacy within HE could be characterised as forming either a study skills, an academic socialisation or an academic literacies model.

The study skills model positions academic literacy as the acquisition of generic and individual skills (for example, essay writing) that are transferable to other contexts. Informed by behaviourist theories of learning and constituting one of the most common approaches to academic literacy, the study skills model centres upon the transmission of what is assumed to be universally applicable knowledge from teacher to student (Lea and Street 2006). More recently, however, this focus on formal or technical features of literacy as well as the idea of "fixing" student learning problems means that the study skills model is starting to be seen as both crude, as well as unsuited to learner needs (Lea and Street 1998, p. 159). In contrast, the academic socialisation model positions academic literacy as the induction of students into the literacy practices of their disciplinary contexts (Lea and Street 1998). Associated with the rise in constructivist learning theories, the academic socialisation model has been praised for its sensitivity to learner needs, as well as for its recognition that different subject areas construct knowledge in different ways (Lea and Street 2006). Nonetheless, in assuming that students are unproblematically acculturated into scholarly cultures, the academic socialisation model can be critiqued for failing to take questions of identity and institutional power structures into account as well as neglecting to recognise that the meanings of these academic literacies are often contested between institutions, staff and students (Lea and Street 1998).

The academic literacies approach acknowledges and extends these two models by foregrounding "the relationships of power, authority, meaning making, and identity that are implicit in the use of literacy practices" (Lea and Street 2006, p. 370). In other words, the academic literacies framework differs from other models by positioning literacy as a dynamic practice that emerges and is legitimised within a community. These ideas are in direct contrast to the understanding that literacy forms a generic study skill. They also contradict the understanding that the "conventions of academia can be taken as given" (Lea and Street 1998, p. 158) by positioning learning as the ability to switch between and to question the practices of each setting rather than as a process of memorisation or socialisation. Building upon theories from the field of New Literacy Studies, which sees literacy as both situated within a specific social context, as well as social, or shaped by the "values, attitudes, feelings, and social relationships" of a particular community (Perry 2012, p. 54), these concepts foreground the sociocultural practices that surround a text, rather than the text itself. This means that literacy is seen to emerge from the broader local context (for example,

government policy) as well as from the disciplinary context. It also implies that the concept of literacy must always be intricately entwined with questions of authority and control because the institutions, or the settings in which literacy practices emerge, are sites of discourse and power (Lea and Street 2006; Lea and Street 1998). In further recognising that learners may face a number of ideological and affective challenges in the process of working with these ideas (Lea and Street 1998), the academic literacies model is both dynamic and nuanced, as well as suited to today's academic interdisciplinarity.

Surprisingly, neither academic literacies nor new literacy studies has received much attention within library and information science research to date, despite both the growing importance of sociocultural theories to IL (Tuominen et al. 2005; Lloyd, 2005) and, as Nicholson (2014) points out in one of the few examinations of these theories, the obvious points of synergy between IL and academic literacies. While Nicholson's argument (2014) that stand alone IL classes resemble the study skills model, and that course-related instruction aligns with the academic socialisation model could be seen as slightly simplistic, it is clear that when we treat IL as getting the "right knowledge into students' heads" (Elmborg 2006, p. 193), or when we fail to help students understand what they are becoming when they engage with and adopt disciplinary knowledge (Elmborg 2003), we risk facilitating some of the more problematic aspects of the study skills or the socialisation model of academic literacies. In addition, and as Nicholson's claim that IL is shaped by higher education's neoliberal agenda demonstrates so well, the current emphasis on embedded or situated learning may inhibit our ability to take a critical approach to disciplinary culture, or to see the broader local context. In effect, while underexplored, these ideas show that academic literacies form a useful framework through which research assignment handouts can be theorised. They also demonstrate that this approach can form a constructive way to reflect more concretely on the way that we conceptualise and create research support materials within academic contexts.

3. Literature Review

3.1 Assignment scaffolding

Recognising that students often need assistance as they develop the academic understandings and practices required to complete an assignment, researchers from the field of writing across the curriculum have long called for more structured scaffolding of assignments (Horning 2010). One of the most common problems that students face relates to their difficulty in interpreting the instructor's expectations. These difficulties could be connected to the fact that assignments are becoming more varied, ranging from essays or reports to multimedia productions and beyond (Gilbert 2012). Alternatively, difficulties could be linked to the idea that students, who are becoming less homogenous, may be unfamiliar with certain assignments (Gilbert 2012). Problems may also be related to the number of differences that exist across disciplines, universities, courses and professors (Gilbert 2012). Regardless of the cause, it is clear that structured scaffolding of assignments can make the assignment process more transparent and more equitable: matters of vital importance within higher education today. The need for contextualised support can also be seen to mirror many of the findings from academic literacies research.

3.2 Research assignment handouts

The handout is one way that educators can support students as they engage in research assignments. As a relatively established support mechanism it is perhaps surprising that the handout has received little attention in the literature to date. Although the research assignment itself has long been critiqued (Larson 1982; Schwegler and Shamoon 1982; Bizzell and Herzberg 1987; Fister 1992; Nelson 1990; 1994) and, more recently, redesigned (Blackwell-Starnes 2011; Deitering and Gronemyer 2011; Sinkinson and Hicks 2013; Mihailidis and Cohen 2013; Hicks and Howkins 2015), the handout has been largely ignored in research literature. PIL provides one of the few empirical studies on the topic. Carried out in 2010, this study analyses 191 handouts from 28 US universities and colleges in terms of their ability to steer students "through the research

process and finding and using information and research materials" (Head and Eisenberg 2010, p. 4). While recognising that teaching faculty may use other channels of communication with their students, researchers discovered that many handouts neglect to provide students with adequate situational and informational context for the assignment. In effect, handouts tend to focus on listing formulaic parameters, such as citation style or margin width, rather than giving guidance or details about the assignment process, for example source evaluation. Similarly, handouts generally fail to provide adequate detail about information sources, with a number still attempting to send students to the stacks rather than to online resources. While these findings were based on textual analysis rather than usage data, they led PIL researchers to suggest that most handouts do not support student research practices and needs adequately.

Handouts tend to be absent from everyday librarian practice too. Librarian web pages, as well as manuals and guides that are dedicated to the design of research opportunities, typically focus on the mechanics of assignments rather than on supplementary pedagogical material (MiraCosta College n.d.; Queen's University n.d.). One of the few exceptions is Bean (2011), who cautions teaching faculty to make disciplinary conventions clear as well as to minimise the use of questions when designing a handout. However, while this advice seems useful, it is based on his personal experience rather than research in the area. Another reason for the lack of attention to the handout may be the impression that it falls under the purview of the teaching faculty rather than the librarian. Yet, as Barbara Fister (2013) points out, collaborative pedagogical design between librarians and faculty may contribute far more significantly to student success than the class time between librarians and students. Furthermore, it is clear that librarian instructional materials are not always designed well. As Pendell and Armstrong point out in their survey of psychology research quides, there is often a "surprising lack of instructional content on quides to accompany lists of resources" (2014, p. 300). These findings demonstrate that there is considerable scope for this research, which explores both the construction and the communicative effectiveness of the handout. The lack of research in the area also means that academic literacies form both a useful theoretical and a practical framework for this study.

3.3 Syllabus design

The scarcity of literature on the topic of handouts meant that the author also examined research into syllabus design, a genre that shares certain similarities with the handout. Also known as a course plan, the syllabus is seen to serve three major roles within higher education: a contract, or a guide to the behaviour that is expected from students; a permanent record, or a list of credit hours and learning objectives; and a learning tool, or information about recommended study strategies and campus resources (Parkes and Harris 2002). While no study has been framed through the lens of academic literacies, literature that focuses on the syllabus as a learning tool will provide helpful insight for this paper.

A significant number of studies have focused on providing a textual analysis of current course documents. While these studies provide limited information about student syllabus usage, they reveal that typical learning-focused syllabi tend to include elements such as contact details, which demonstrate the faculty member's engagement in student success, or course rationale, which helps the student to understand why the class or an assignment is important (Parkes and Harris 2002; Slattery and Carlson 2005). Researchers also consider that the inclusion of information about support services can benefit non-traditional students, who may not be aware of people who can help them achieve academic or personal goals (Slattery and Carlson 2005; Sulik and Keys 2014). Notwithstanding, and somewhat disappointingly, the library and librarians are rarely mentioned in this section of the syllabus. Wording is another aspect of the syllabus that researchers see as important, with the use of positive rather than punishing language shown to have a concrete effect on younger students' educational progress (Ishiyama and Hartlaub 2002; Perrine et al 1995). Studies also highlight the importance of tone to help establish the class, with warm, clear and friendly syllabi being more encouraging to students (Slattery and Carlson 2005;

Habanek 2005). In effect, details such as these are understood to reduce student anxieties considerably (Slattery and Carlson 2005).

Other studies centre on the students' opinions of the course syllabus (Smith and Razzouk 1993; Perrine et al 1995; Ishiyama and Hartlaub 2002; Calhoon and Becker 2008; Davis and Schrader 2009). Although these studies provide useful insight into the basic mechanics of syllabus use, such as when students look at a syllabus, they rarely focus on how students use the document, or what is missing. An exception is Davis and Schrader's 2009 study, which compares faculty and student expectations of the syllabus. Interestingly, while faculty felt that the syllabus should focus on student behaviour such as attendance rules, students preferred a syllabus that "provided a greater focus on telling them what needed to be accomplished and less on how to behave" (Davis and Schrader 2009, p. 130). These findings, which provide evidence of student confusion when they are confronted with the implicit or unstated goals of research assignments, directly mirror research from both academic literacies as well as the PIL report. They also provide a number of practical recommendations that were incorporated into the redesign of the assignment handout.

4. Methods

4.1 Context

This study centres on the design of the research assignment handout for HIST 492: History of the Antarctic Treaty System, a capstone seminar in the undergraduate history curriculum at Colorado State University. As an advanced history class, the course focuses on the teaching of historical research methods through an exploration of the intersections among science, politics and the environment in Antarctica. This course culminates in the writing of a 25-page paper on a topic of the student's choosing. Within this class, IL is especially important; even if students are proficient in traditional historical methods, the interdisciplinary and scattered nature of Antarctic research means that students may have to develop a number of new research techniques. To this end, the professor and the librarian decided that a handout could form a useful form of support for student development in the area. Although the ultimate goal of this class was the completion of the final paper, the research assignment handout referred, in this case, to a librarian-created intermediary assignment that asked students to find and analyse an expert or knowledgeable person, a journal, a blog or informal source and an organisation that relates to the student's topic. These exercises were designed to encourage student thinking about the nature of primary and secondary sources in the context of Antarctic and historical research and have been reported on at length elsewhere (Hicks and Howkins 2015). As the librarian was located at a distance from the Colorado State University campus, the handout was complemented by four professors rather than librarian-led IL class discussions that covered finding, using and accessing sources.

4.2 Research assignment handout

The design of the handout drew from the author's research into academic literacies and syllabus design as well as from the recommendations of the 2010 Project Information Literacy report. (See Table 1 for a summary of these features.) This research influenced both the guiding principles of the handout as well as providing specific practical details.

Most importantly, academic literacies research underscores the rationale for the handout. Whether it is because students are just starting to work within scholarly conventions, or whether it is because they are juggling many different writing requirements at once, Lea and Street's research reveals that disciplinary instructions and ways of thinking can prove to be highly opaque for students. This means that a handout can form a useful way to scaffold student understanding within a subject area. In addition, by highlighting that learning objects should be seen as neither generic nor as merely providing neutral directions, academic literacies research also provides the guiding structure for the handout design. If assignments represent specific, disciplinarily influenced "ways of writing knowledge" (Lea and Street 1998, p. 163) then the research assignment handout

must either tacitly or overtly embody these conventions through the directives that are included and excluded as guidance. These ideas demonstrate both the importance of situating instructions within disciplinary contexts as well as the need for extended reflection about the way that we present research to students. At the same time, and just as academic literacies research points out, these disciplinary conventions should be seen as neither fixed, nor static. This means that the handout should facilitate student critical engagement with these scholarly communicative practices, rather than just presenting them as a given. Together, these ideas indicate that if librarians wish to design research learning objects that go beyond generic or acculturative models of literacy, there is a need to both recognise and engage far more deeply with the complexity of knowledge construction.

In that light, the inclusion of situational context, or what research means and looks like within a specific academic environment and for a specific disciplinary setting, was particularly important for the redesign of this handout. This is because, and as PIL points out, an understanding of the "whys of the research processes" facilitates a more reflective and thoughtful approach to research. From an academic literacies lens, however, a frame for the assignment is important both because the purpose of research differs from discipline to discipline as well as because this information is rarely made explicit, even though faculty expectations are guided almost entirely by disciplinary conventions (Lea and Street 1998). The inclusion of research context can thereby help to force faculty to articulate, to clarify and also to expose these underlying, disciplinary assumptions about what constitutes good research in their field. These ideas meant that the handout for this history class was designed to include considerable extra detail about both the role and purpose of the research assignment within the field of history, as well as information about the disciplinary context and expectations. At the same time, by framing these ideas in terms of the contested and underdeveloped nature of Antarctic history, students are directly engaged with the underlying questions of power and meaning-making within Antarctic history itself as well as related to the broader field of history. These ideas further position research as a process of active enquiry rather than as passive socialisation or the fulfilment of linear and mechanical requirements.

Disciplinary context was also integrated into this handout through the inclusion of what PIL refers to as informational context. As PIL notes, most assignments fail to scaffold student engagement with research resources available to them. Yet, from an academic literacies context, and just as with the situational context, accepted knowledge sources and the methods of evaluating the authority of a given text vary by discipline. Informational context can therefore help to reveal these underlying knowledge structures and engage students directly with the nature of information sources from a disciplinary perspective. These ideas meant that while the handout included considerable informational detail, sources were situated contextually, or within broader historical and environmental communication paradigms. At the same time, and drawing directly from the academic literacies model, the author wanted to make clear that these disciplinary conventions should be seen as neither fixed nor as immutable. This meant that she framed both information sources and methods of evaluation through guiding questions rather than as a checklist of fixed instructions or authorised sources in order to encourage a more contextually driven approach to research.

Table 1: recommendations that were implemented on the handout

PIL recommendation	Handout features
Add situational context:	An introductory paragraph sets research in its disciplinary contexts (Head and Eisenberg 2010)

e.g. "Why were students being asked to engage in a pedagogical research exercise in a certain course in the first place?"	A section entitled "Things to think about" describes and sparks thinking about the purpose of research (Head and Eisenberg 2010)	
	Librarian contact details (Parkes and Harris 2002)	
	Grading rubric (Gilbert 2012)	
	Warm and friendly tone (Slattery and Carlson 2005)	
Add informational context: e.g. how and where to find research resources	Guiding questions about how non-traditional sources can be used in a research assignment (Head and Eisenberg 2010)	
	Guiding questions about source evaluation (Meola 2004)	
	Guiding questions about sources rather than source titles (Fister 2013)	

4.3 Methods

This study employed a descriptive survey method to gather feedback from students about their use of the handout (Pickard 2007). Data collection consisted of a short, written questionnaire with open-ended questions that was designed to record student thoughts about the handout. These questions asked students to indicate the most useful part of the research assignment instructions, as well as to consider what other information or assistance would have helped them to complete this assignment well. Data collection also comprised elicitation techniques, asking students to annotate a clean copy of the handout. Specifically, students were instructed to circle the parts of the handout that were unclear as well as to underline the parts that they did not use. The questionnaire and the annotated handouts were anonymous. These documents were collected by a volunteer and analysed by the librarian in conjunction with the course instructor after the semester had ended and grades had been entered. Nominal data from questionnaire answers was coded into categories or broad themes using an emergent coding process, where codes emerged from a close reading of student answers. Handout annotations (circles and underlines) were counted by hand and then integrated into the broader coding process.

4.4. Participants

Participants were drawn from the two sections that took this class and who were given the option of joining this research at the beginning of semester. In the end, 19 students from a total potential sample of 24 (Fall Semester: 66%; Spring Semester: 87%) participated in this research. As the class was a seminar class, enrolment was limited each time to 15 students. Students enrolled in this class were all History majors at Colorado State University and were either Juniors (3rd year undergraduates) or Seniors (4th year undergraduates).

5. Findings

Student annotations and survey responses revealed that, for the most part, the handout was fairly clear. Where students indicated that they had encountered issues, their confusion centred on their difficulties in understanding the assignment requirements rather than on the handout itself. Responses showed that the information about finding blogs (5/19; 26%) or an organisation appeared to be particularly problematic (6/19; 32%), and students requested considerable further detail about these requirements. One student (5%) also commented that the section about author

citation trails was confusing, probably because the handout did not define this action further. In terms of handout usage, students indicated that they used almost all of the handout. In fact, the section that the students mentioned that they used the least frequently was the librarian email address (4/19; 21%). Two students also criticised the part of the handout that asked why a source was worth their reader's attention (2/19; 11%).

The questionnaire then used a free-text response question to ask students to indicate the most useful parts of the research assignment handout. Coding revealed that students overwhelmingly found that the inclusion of informational context was helpful for their papers. The guiding questions or prompts were seen to be particularly useful as students sought to think more closely about different sources and why they might include them. More specifically, students found that questions about the connections between sources were helpful because they helped "to think of other possible places to look for sources or things I could go back to." Another student remarked that the handout facilitated thinking "outside the box" as well as to consider unusual sources rhetorically and historically. Students also indicated that they found the assignment's situational context helpful. For one student, "the explanations of what to look for in a good assignment" proved to be especially useful, while for another the "things to think about" section, which aimed to scaffold the purpose and context of research, was seen to help to guide thought processes. Students indicated that the breakdown of the assignment into parts or steps was a helpful way to direct their efforts and reflection too.

The final free-text question asked the students to include detail about what was missing from the assignment handout. Answers to this question consistently requested examples to complement written instructions because this assignment was so different from other history papers. Other responses to this question indicated that students wanted the handout to break the assignment down even further. In terms of the specific requirements of this assignment, students mentioned that they would have appreciated a definition of a group or an expert as well as information about how to follow the connections between the two.

6. Discussion

Findings from this study reveal a couple of interesting themes. One important theme centres on the confusion that students felt when asked to engage with popular sources in an academic context. While the handout expressly tried to scaffold this requirement by providing framing disciplinary context, some students still found it hard to reconcile their ideas about popular and scholarly sources, or the type of information that is appropriate to use in the classroom. This finding is interesting in itself. However, in this situation, it demonstrates that if we are to follow PIL's advice to engage students in a wide variety of information formats, we must provide more rather than less scaffolding in order to challenge student preconceptions about source types. This understanding is also particularly important given the tendency to credit students with an inherent ability to understand new technologies. Findings from this study further reiterate the importance of moving beyond this myth of the digital native.

A second theme that emerged from this research is the realisation that although these students are nearing the end of their undergraduate career, assignment requirements can still seem complicated or opaque. In this study, students requested examples to help them visualise assignment requirements, as well as further explanation of certain terms and understandings. Students also commented that they valued the handout for breaking the assignment into more manageable steps. These findings can therefore be taken to reinforce Lea and Street's assertions that assignments and associated handouts are products of disciplinary understandings rather than generic academic genres that students can 'master' in the first year of college. They also show that it takes students time to be able to navigate and to gain familiarity with these ideas. Most importantly, these ideas demonstrate that handouts are not neutral. Instead, academic conventions and practices can be explored through a variety of genres, including within the limited confines of the assignment handout.

In the future, the author will make a few specific changes to the handout. The inclusion of concrete examples of what could be used for this assignment will complement the existing handout design. It is clear that for many students, using popular or non-traditional sources within a historical context is both unusual and complex. Accordingly, incorporating a sample topic or a blog or organisation, which were the two sources with which students had the most trouble, should help to allay student fears. Similarly, consolidating the number of guiding questions will address student feelings of not knowing where to start. This recommendation complements Bean's advice to centre on one focusing question (2011, p. 104). Lastly, engaging further with the historical context will ensure that the handout makes disciplinary practices and understandings even more visible for students, many of whom still found these conventions to be confusing. While this may be complicated for the author, who is not an historian, to achieve on her own, these ideas demonstrate the importance of collaborating with faculty as we look to create meaningful learning opportunities.

7. Conclusion

The primary goal of this paper was to understand how students used a research assignment handout that was designed through an academic literacies framework. Questionnaire data and annotations demonstrated that students found that the inclusion of disciplinary context and information in the handout was particularly useful. More specifically, the inclusion of situational context helped learners to break down the research assignment into more manageable steps, while additional informational context helped them to make connections between formal and informal sources. At the same time, the use of guiding questions rather than rigid instructions meant that disciplinary context was presented as a starting point for the development of student research practices rather than as an all-encompassing acculturative goal. This study thereby succeeds in providing an initial snapshot of how students used the handout to complete an assignment in their capstone class.

Although the number of undergraduates who engaged in this research was limited, the nature of the capstone class means this participation represents a high percentage of the total number of potential participants. Similarly, although the librarian did not observe students using their handout, and could not follow up on or clarify details, the fact that she was not present while students annotated and answered questions about the handout could have helped to ensure honest answers. Furthermore, while the study does not compare and test the handout against another version, this paper did not set out to establish the 'best way' to design a handout. Instead, the study drew upon PIL research to explore student responses to their rationale and recommendations for handout design.

Future research should build upon these beginnings to continue examining the design of handouts. While one potential reason for the lack of research into handouts is that instructional materials often tend to be designed by teaching faculty rather than librarians, this division of labour represents a missed opportunity to create meaningful and appropriate learning tools and objects. Future research could therefore focus on redesigning a handout for a more traditional research assignment, as well as examining student experiences in other disciplinary contexts. This topic could be expanded further by exploring interesting research that is happening outside of the library and information science field, for example Bhatt's (2012) work into the digital practices that surround assignment completion. Studies could also build upon the questionnaire and elicitation methods used in this study in order to generate more qualitative data about student practices and experiences related to research assignments. Feedback shows that the inclusion of student voices and understandings is vital to any study of academic learning and it is only by recognising that students are experts about their own experiences that we can start to design useful support opportunities.

In framing this study through the academic literacies model, a secondary goal of this paper was to deepen librarian engagement with scholarship that positions IL as a sociocultural practice. This

study thereby contributes to ilL teaching by interrogating the way in which librarians support the development of student research practices. It also extends these concepts by showing the need to continue reflecting on the goals and the design of meaningful educational practice; in exploring the handout from a sociocultural perspective, it is clear that alternative tools such as the research guide (Hicks 2015) or the tutorial (Sundin 2008), are often designed equally problematically. Most importantly, though, and especially as librarians seek to base IL practice upon a "richer, more complex set of core ideas" (ACRL 2015), it is clear that this research illustrates the importance of continued engagement with IL scholarship. New literacy studies offers a useful alternative theoretical framework through which librarians can examine both their commonly accepted beliefs or assumptions (Hicks, 2016) as well as the nature and the implications of their pedagogical and instructional practice. Continued reflection on these ideas as well as how they translate into professional practice can only lead to more holistic and meaningful understandings of IL experiences.

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Appendix: Handout

HIST 492: Research assignment

Researching topics in the field of Antarctic Studies is often quite different than researching more established historical topics. The field is much newer, which means that much relevant information is available online; it's interdisciplinary, so information is found in a wide variety of places, including international organizations, national governments, data sets, legal docs, archives and blogs; it's ongoing in a variety of different countries; it's often contested and open for interpretation. It's also underdeveloped, which means that you can become the "expert" in your topic. This assignment is designed to help you start curating and sharing relevant information in your area, thereby actively contributing to the knowledge of the field.

Using the resources on the blog or your own research skills, please find:

- An expert or knowledgeable person about your topic
- A journal related to your topic
- A blog (or informal source) related to your topic
- An organization or community that works on or has contributed to your topic

On the class blog, link to and analyze each source briefly, considering:

- How did you find this source?
- Why did you pick it?
- How will this contribute to your paper?
- What connections between sources or ideas did you discover?

Things to think about:

- In this assignment, you're going to be writing about the big ideas in the field; what have other people already learned about your topic? Who are the key people or groups involved in your topic? Where are they publishing their work? Where does their information come from? How do you know who or what to pay attention to? Why is your source worth the reader's attention?
- When you find a potential source, ask yourself: what it is about? Who is the audience? How might it be useful? What are its drawbacks?
- Remember: you can ask a librarian for help! (alison.hicks@colorado.edu)

Grading Rubric

	Exemplary	Accomplished	Developing
Content added	Adds appropriate sources to class blog	Adds mostly appropriate sources to class blog	Adds a few appropriate sources to the blog
Content evaluation	Coherent, focused reflection that develops thoughtful connections between sources, topic and analysis. Shows indepth engagement with the topic.	Fairly focused reflection where connections are made between sources, topic and analysis; may remain undeveloped.	Descriptive reflection that displays some connection between sources, topic and analysis.

Resources

- Finding people
 - Think what clues you can draw from books or articles you have found: Who are some authors that keep getting cited? What are the key organizations involved in your topic and who works there? Think about interested parties- science, international orgs, governments, political scientists, "amateurs", explorers etc.
 - Do they have a research profile in Google Scholar, Mendeley or academia.edu, (academic social networks)? Do they have a blog? Twitter?
 - o Think how Google can help you: use the advanced search to limit and narrow.
 - What constitutes an expert? Openness? Publishing record? Where they work?
 Commitment? Clarity?
- Finding organizations
 - Think what clues you can draw from books or articles you have found: What are the key organizations involved in your topics? Where do researchers or authors work? Think about the different fields that may be involved- science, international orgs, governments, political scientists, "amateurs", explorers etc.
 - Think how Google/Wikipedia can help you: use the advanced search to narrow.
 - Also try: http://ucblibraries.colorado.edu/govpubs/int/internat.htm
- Finding journals
 - Where do some of your authors keep getting cited? Do the organizations publish any journals? Think about different keywords for your search: eg Antarctic, Polar, Antarctica; journal, periodical, serial. What journals have published the articles you're reading for class? What journals do big polar libraries hold? (E.g. Antarctic Treaty Secretariat, Byrd Polar Research Center)
 - The library has several tools such as Web of Science which can help you analyze publication records. Worldcat lists library holdings from all over the US. (Accessible from the library website: http://lib.colostate.edu/). Google Scholar Metrics can help (http://scholar.google.com/citations?view_op=top_venues)
- Finding blogs or informal sources
 - What is an informal source? Where else may people publish? Organization newsletters? Blogs? Twitter? Online magazines?
 - Use Google limiters or specialized blog search engines to narrow down your search. Think about timeliness and currency.