

INFORMATION LITERACY: A CRITICAL DISCOURSE ANALYSIS  
OF DEFINITIONS IN LIBRARY AND INFORMATION SCIENCE  
UNDERGRADUATE EDUCATION IN THE UNITED STATES

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In Partial Fulfillment  
of the Requirements for the Degree  
Doctor of Philosophy

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The undersigned, appointed by the dean of the Graduate School, have examined the dissertation entitled

INFORMATION LITERACY: A CRITICAL DISCOURSE ANALYSIS OF  
DEFINITIONS IN LIBRARY AND INFORMATION SCIENCE UNDERGRADUATE  
EDUCATION IN THE UNITED STATES

presented by Angela Sample,

a candidate for the degree of Doctor of Philosophy,

and hereby certify that, in their opinion, it is worthy of acceptance.

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## DEDICATION

*Everything I've accomplished I owe to my God, and His wonderful gift of my family, who never stopped believing in me, even when I sometimes did. This work is dedicated to:*

*My husband, David,      We made it, hon.*

*My children, Erin and Michael,    You are my inspiration.*

*My grandchildren: Noah, Brandyn, and Izabella,      I love you all.*

*My father, Roy Asher,      Thank you, Dad. I am done.*

*My mother, Mary Mears, and*

*My sisters: Alisia Asher, Annette Henry, April Asher-Sadahiro, and Amy McBride.*

*I am finally 'out of school'.*

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## TABLE OF CONTENTS

ACKNOWLEDGEMENTS .....	ii
LIST OF TABLES AND FIGURES.....	viii
Tables .....	viii
Figures.....	viii
LIST OF ACRONYMS AND ABBREVIATIONS .....	ix
ABSTRACT.....	x
CHAPTER 1: INTRODUCTION .....	1
Overview.....	1
Information Literacy Instruction in Library and Information Science in Higher Education .....	4
Background and Issues Related to Information Literacy.....	6
Definitions and significance to higher education.....	6
Legitimate endeavor or legitimation.....	8
Origination of concept in Library and Information Science.....	9
Ambiguities in the term.....	10
Difficulties of assessment and teaching.....	11
Other similarly defined terms.....	13
Critiques and opponents.....	16
Metaliteracy and threshold concepts.....	18
Framework for Information Literacy for Higher Education.....	18
Research Questions.....	20
Research assumptions and interest in information literacy.....	20
Delineation of the scope of project.....	22
Research Methods.....	23

Definitions.....	23
Conclusion .....	25
CHAPTER 2: LITERATURE REVIEW .....	27
Introduction.....	27
Background of Information Literacy in Library and Information Science.....	28
Definitions and Context of Information Literacy .....	31
Information literacy defined as a set of skills. ....	36
Information literacy defined as a way of thinking. ....	43
Information literacy defined as a social practice. ....	45
Critical Theory and Information Literacy in Library and Information Science ...	49
Conclusion .....	52
Limitation of Addison’s and Meyers’ framework of information literacy definitions. ....	52
CHAPTER 3: THEORETICAL FRAMEWORK AND METHODOLOGY .....	54
Introduction.....	54
Theoretical Framework.....	54
Definitions.....	54
Frankfurt school theorists’ and Habermas’ approach to Critical Theory. ....	56
Frankfurt school theorists’ approach to Critical Theory in regards to philosophy of history. ....	59
Bourdieu’s habitus. ....	62
Application to this project.....	62
Addison’s and Meyers’ framework of information literacy definitions. ..	64
Limitations. ....	65
Methodology. ....	66

Definitions.....	66
Critical Discourse Analysis in Library and Information Science. ....	68
Application to this project.....	71
Data collection and method of text selection.....	74
Rationale and explanation of texts and methods of analysis. ....	76
Conclusion. ....	82
CHAPTER 4: DISCUSSION AND FINDINGS .....	83
Introduction.....	83
Findings.....	83
Analysis of the social practice. ....	84
Analysis of discourse practice. ....	85
Analysis of texts.....	93
Reflection on the analysis. ....	140
Limitations to this study.....	141
CHAPTER 5: CONCLUSION .....	142
Introduction.....	142
Summary of Findings.....	142
Definitions.....	144
Modality and overwording.....	150
Social practice.....	150
Overview of current Library and Information Science discourse on the Framework .....	152
Implications.....	153
Next steps for Library and Information Science based on the findings of this project. ....	154

APPENDIX A: LIST OF ARTICLES .....	159
List of Articles Used in Analysis Arranged by Author Role and by Year .....	159
APPENDIX B: LIST OF PHRASES .....	165
List of Phrases and Number of Occurrences in Each Article .....	165
APPENDIX C: CONCEPTS .....	167
References to Standards, Framework, Critical Thinking, Synthesis, and Evaluation of Information.....	167
APPENDIX D: SECOND ROUND LIST OF PHRASES .....	169
Second Round: List of Phrases and Number of Occurrences in Each Article....	169
APPENDIX E: PRESUPPOSITIONS AND IL CONCEPTS .....	171
Presuppositions, IL Concepts Taught or Discussed, ILI Responsibility .....	171
APPENDIX F: CONTEXT AND STYLE.....	176
Context of Article and Style Elements.....	176
APPENDIX G: MODALITY .....	181
Occurrences of Modal Auxiliary Verbs by Role of Author.....	181
APPENDIX H: DEFINITIONAL CATEGORY .....	183
Information Literacy Definitional Category by Year and Role of Authorship...	183
ENDNOTES .....	185
REFERENCES .....	186
VITA.....	210

## LIST OF TABLES AND FIGURES

### Tables

Table 1. Breakdown of Sample Size on Role of Author and Year .....	79
Table 2. Highest number of occurrences of the phrase information literacy or information literate in librarian-authored articles .....	80
Table 3. Number of occurrences of the phrase information literacy or information literate in all other authorship role categories .....	81
Table 4. Number of references to <i>Standards</i> and <i>Framework</i> by role of authorship – all others .....	88
Table 5. Number of references to <i>Standards</i> and <i>Framework</i> by role of authorship-librarians .....	89
Table 6. Common examples of modality: Nouns and adjectives.....	94
Table 7. Common examples of modality: Verbs .....	95
Table 8. Common examples of modality: Adverbs .....	96

### Figures

Figure 1. Breakdown of IL categories of 2011 librarian-authored articles.....	144
Figure 2. Breakdown of IL categories of 2015 librarian-authored articles.....	145
Figure 3. Breakdown of IL categories of 2015 professor-authored or co-authored articles.....	146
Figure 4. Breakdown of IL categories of all librarian only authored articles.....	146
Figure 5. Breakdown of all articles authored or co-authored by professors.....	147

## LIST OF ACRONYMS AND ABBREVIATIONS

ACRL	Association of College and Research Libraries
ALA	American Library Association
BI	Bibliographic Instruction
CDA	Critical Discourse Analysis
CIL	Critical Information Literacy
CT	Critical Theory
DA	Discourse Analysis
ETS	Educational Testing Service
<i>Draft Framework</i>	Draft Framework for Information Literacy for Higher Education
<i>Final Report</i>	<i>Presidential Committee on Information Literacy: Final Report</i>
<i>Framework</i>	Framework for Information Literacy for Higher Education
ICT	Information and Communication Technology(ies)
IL	Information Literacy
ILI	Information Literacy Instruction
LIS	Library and Information Science
<i>Open Letter</i>	Open Letter Regarding the Framework for Information Literacy for Higher Education
PBL	Problem-Based Learning
POGIL	Process-Oriented Guided-Inquiry Learning
<i>Standards</i>	Information Literacy Competency Standards for Higher Education
Task Force	ACRL's Information Literacy Competency Standards for Higher Education Task Force

## ABSTRACT

In early 2015, the Association of College and Research Libraries (ACRL, a division of the American Library Association (ALA) released the final version of the Framework for Information Literacy for Higher Education (*Framework*). With the *Framework*, the ACRL sought to conciliate and address long-standing contentions of varying conceptualizations of information literacy (IL) based on the Information Literacy Competency Standards for Higher Education (*Standards*) which had been critiqued since its adoption in 2000. The purpose of this work is to explore the existence of, in the context of Library and Information Sciences (LIS) undergraduate education in the United States, differences in definitions of information literacy (IL) by academic librarians, scholars, and the ACRL. Differing definitions in LIS by these three groups hold significant importance, not the least for pedagogy, practice, and the IL skills of undergraduate students.

# CHAPTER 1: INTRODUCTION

## Overview

Information literacy is a popular topic in higher education. Since the adoption of the *Information Literacy Competency Standards for Higher Education (Standards)* in 2000 by the Association of College and Research Libraries (ACRL), a division of the American Library Association (ALA), there has been a steady increase in the number of articles published in Library and Information Science (LIS) journals on information literacy (IL), with academic librarians writing about IL and information literacy instruction (ILI), scholars and faculty of Library Science programs discussing their research on IL and ILI, and national LIS organizations publishing guidelines, standards, and other literature regarding IL. Currently more attention to IL has arisen due to the recent work of the ACRL's Information Literacy Competency Standards for Higher Education Task Force (Task Force) in revamping the *Standards* with the Task Force's release of the final *Framework for Information Literacy for Higher Education (Framework)* in early 2015.

With so many people with various interests talking about IL in LIS, it can be expected that differing conceptualizations of IL exist. Although more detail on conflicting definitions of IL is provided in the review of the literature in Chapter 2 and is also examined in the discussion of the research undertaken in this project, a brief introduction to some of the major divergent definitions is provided here. As early in the IL movement as 1985, Breivik presented IL as a set of skills combined with a knowledge

of tools and resources, a view which the ALA supported (Grassian & Kaplowitz, 2009). Doyle (1994) expanded the ALA's definition of IL and described a list of attributes of an information literate individual. Bruce's (1997) research into how higher educators conceived IL found seven different conceptions of information literacy. While many see IL as a set of skills, others such as Wiebe (2016) see IL encompassing a much broader realm, and have even described IL as a liberal art. Still others have advocated redefining the basis of libraries' instruction efforts from the "skill and competency-oriented foundations" (Budd, 2009, p. 34) of IL and proposed alternative approaches to instruction, such as Budd's phenomenological cognitive action. Others have explored the theoretical underpinnings of IL, such as the findings of O'Connor (2009a) who found both liberal-pluralist and economic-functionalist assumptions within the LIS discourse on information literacy. Although some even debate whether differing definitions of IL do exist, as Owusu-Ansah concluded, "these debates often create impressions of potential conflict when there are truly none" (2005, p. 367), it seems clear that differences in definitions exist as demonstrated by the uproar on the *ILI-L Listserv* over the decision of the ACRL to rescind the *Standards* in late June 2016. Much of the discussion over the decision to rescind the *Standards* centers on questions of how to adapt the *Framework* to *Standards*-based instruction programs and assessment efforts already in place. The opponents' concerns appear to echo previous differences in definitions of "IL as a set of skills, a way of thinking or a social phenomenon" (Foasberg, 2015, p. 699).

If such differences in definitions of IL exist, what factors could explain the differences? One pre-assumption in embarking upon this research project is that the

differences may reflect the roles of the participants. As Budd (2009) suggested, differences in conceptions of learning and thinking can exist between faculty and librarians. While research on IL in LIS within the context of higher education (and indeed in relation to virtually every context) is voluminous, to date there has been little or no research published comparing how LIS academe and librarians define IL in the discourse on IL. Are academic librarians, LIS researchers, and national LIS organizations talking about the same thing when using the term IL? Is there consensus or disagreement in the definition of IL among these various participants in the LIS IL discourse? Furthermore, do the definitions of either or both groups reflect the published discourse of national LIS organizations, namely the ALA and the higher education division, the ACRL? The focus of this analysis is to explore in-depth how the concept of IL is discussed in the United States by academic librarians, LIS academe, and at the national level through statements published by the ACRL and ALA. Although IL in K-12 is a topic of great interest in the United States, this analysis is limited to U.S. higher education IL. The release of the *Framework* was preceded by the beginning of work by the Task Force in March 2013, with three drafts published before the final version was filed by the ACRL in February 2015. Many respondents to released drafts of the *Framework* appeared to see the *Framework* as “a step in the right direction,” but voiced concerns including how to convince stakeholders to replace the *Standards* and potential harm to the acceptance of existing IL programs based on the *Standards* (Wilkinson, 2014, para. 3). With the latest decision of the ACRL to rescind the *Standards*, addressing the lack of studies on this

topic becomes even more significant as LIS professionals seek to apply the new *Framework's* Threshold Concepts to their praxis.

Bridging this gap will provide valuable insight for the profession in a number of ways: a foundation for future research, assistance for IL curricula development aligning instruction to the *Framework's* Threshold Concepts, and also a basis for future comparisons of the discourse of these participants on topics other than IL, as well as any number of aspects related to pedagogy and praxis within the field of LIS.

### **Information Literacy Instruction in Library and Information Science in Higher Education**

Libraries of every sort, and especially academic libraries, have a long history of providing instruction to users. Salony noted:

Bibliographic instruction dates back to the 1800s in the United States ... The United States was not unique or first in providing library instruction. For example, there is evidence that library instruction was given at German universities in the 17<sup>th</sup> century in the form of lectures about reference books, study techniques, and how to use the library. (1995, pp. 32-33)

In the United States, Helen E. Haines is known as one of the earliest influential library instructors (Crawford, 1997).

This instruction has been performed under many names, including library orientation, library skills instruction, bibliographic instruction (BI), research skills instruction, information use instruction, and in various formats, such as tutorials, one-shot sessions, and semester-long courses, face-to-face and online, synchronous and

asynchronous, to name a few. With the advent of the Internet and digital technologies, a new term, *information literacy* (IL), began to appear in the LIS discourse beginning in the late 1970s with the origination of the term by Paul Zurkowski, followed by the definition by the ALA in its 1989 *Final Report*. Soon, academic libraries incorporated IL into their pedagogic offerings as another form of instruction.

The teaching of IL skills at the undergraduate level can take a variety of formats. Most often ILI is done through one-shot sessions taught by librarians rather than by faculty. As Oakleaf noted, “virtually all academic library reference and instruction departments provide some level of education for students in the form of face-to-face teaching, tutorials, subject guides, tip sheets, tool kits, reference interactions, online course support, and so forth” (2011, p. 63). Although librarian-taught one-shot sessions are the most common method of ILI, the number of for-credit IL classes offered has increased. The amount of credit offered in for-credit IL classes ranges from one to three credit hours. Some credit classes are offered as stand-alone courses, while others are designed and offered, at times as a requirement, to be taken with other freshman level courses, such as freshman English or History classes. The level of education and expertise of the instructors of these IL courses may vary as well. For-credit IL courses are taught by librarians or Master’s level graduate students; or more rarely, by LIS faculty holding Master’s or doctorate degrees. Although no estimates of the number of for-credit IL courses offered in U.S. universities and colleges were found in the review of the literature for this project, the Primary Research Group 2014 survey of 110 institutions in the U.S. and Canada found that of the slightly over 43% of respondents who reported

their institutions required formal IL training to graduate, only 13.64% offered a one- or two-credit IL course (Primary Research Group, 2014, pp. 137, 139).

## **Background and Issues Related to Information Literacy**

**Definitions and significance to higher education.** In the 1989 *Presidential Committee on Information Literacy: Final Report (Final Report)*, the ALA defined IL as the ability to “to recognize when information is needed and ... the ability to locate, evaluate, and use effectively the needed information” (American Library Association, 1989). Eleven years later, in 2000, the ACRL, a division of ALA, created and approved the *Information Literacy Competency Standards for Higher Education (Standards)*. In the *Standards*, the ACRL emphasized the significance of IL to higher education with the assertion that “information literacy forms the basis for lifelong learning. It is common to all disciplines, to all learning environments, and to all levels of education. It enables learners to master content and extend their investigations, become more self-directed, and assume greater control over their own learning” (American Library Association, 2006, p. 2). Also, within the *Standards*, the organization asserted that:

Developing lifelong learners is central to the mission of higher education institutions. By ensuring that individuals have the intellectual abilities of reasoning and critical thinking, and by helping them construct a framework for learning how to learn, colleges and universities provide the foundation for continued growth throughout their careers, as well as in their roles as informed citizens and members of communities. (American Library Association, 2006, p. 4)

Although the question remains whether this is achievable, for the ACRL, IL skills are not merely important for successful academic achievement, but are transferrable and important to all aspects of life.

The *Standards* are seen by the ACRL as highly significant to the acceptance of IL throughout higher education. In the second *Draft Framework for Information Literacy for Higher Education (Draft Framework)*, the Task Force stated, “The Information Literacy Competency Standards for Higher Education, adopted by the Association of College and Research Libraries (ACRL) in 2000, have [sic] become an essential document related to the emergence of information literacy as a recognized learning outcome at many institutions of higher education.” (ACRL Information Literacy Competency Standards Review Task Force, 2014, June 17, para. 1). The *Standards* were approved by the Board of Directors of the ACRL on January 18, 2000 and endorsed by both the American Association for Higher Education in October 1999 and the Council of Independent Colleges in February 2004 (American Library Association, 2006).

For LIS, the *Standards* “cited thousands of times ... are the de facto definition of information literacy (Bell, 2013, para. 1). Drabinski concurred and further described the influence of the *Standards* on IL within American higher education and on the work of academic librarians:

This set of performance indicators and measurable outcomes, first adopted in 2000 ..., structures the way information literacy programs are organized, delivered, and assessed in American colleges and universities. The Standards have productively enabled librarians to define for themselves a teaching location within

the academy: librarians define and take pedagogical responsibility for information literacy learning outcomes and their assessment. (2014, p. 480)

Indeed, as Drabinski pointed out, since the adoption of the *Standards*, LIS higher education and academic libraries have increasingly assumed the responsibility of developing students' IL skills with many seeing IL as a natural extension of the library use or BI skills that have long been taught by academic librarians. As early in the IL movement as 1984, Oberman, an academic librarian, noted the relevance and significance of skills taught by librarians to learning: "The concepts which are needed for effective information gathering replicate the cognitive concepts essential to learning: knowledge, analysis, and synthesis. Library instruction can provide students with the conceptual framework for applying these concepts to research" (Fisher, Morton, Oberman, & Schwartz, 1984, p. 61).

**Legitimate endeavor or legitimation.** Proponents of ILI have maintained that "Librarians have a particular responsibility to produce students who understand the importance of information and have the competence to locate, evaluate, and manage it" (National LOEX Library Instruction Conference, Mensching, & Mensching, 1989, p. 9). Whether ILI is a legitimate endeavor of librarians or a legitimation of the profession was a question O'Connor explored through her discourse analysis of the emergence of the concept in LIS, in which she found evidence of legitimation, while she also noted that her investigation did "not suggest that the historical context of its emergence nullifies its value or relevance" (O'Connor, 2009b, p. 506; see also O'Connor, 2009a, 2009c). Researchers such as Bruce have explored the perceptions of higher education regarding

IL. Bruce's research of higher educators at an Australian university found seven conceptualizations or faces of IL (1997). Many scholars have noted other aspects of the unique historical contexts contributing to the emergence of the concept in LIS, including the rise of information technologies, the move from an industrial society to that of information as a commodity, calls for education reforms, and the fiscal constraints resulting from economic downturns as factors in the rise of IL in LIS (American Library Association, 1989; Behrens, 1994; Foster, 1993; O'Connor, 2009a, 2009b, 2009c; Ridgeway, 1990).

Even relatively early in the IL movement in LIS, proponents asserted that "people who do not educate themselves – and keep educating themselves – to participate in the new knowledge environment will be the peasants of the information society" (Cleveland, 1985, p. 21). Those involved in the IL movement in LIS have maintained that academic libraries are in a unique position to assist the development of IL skills of their students (American Library Association, 1989; MacDonald, Rathemacher, & Burkhardt, 2000; Palmer & Ford, 2000; Cowan, 2014).

**Origination of concept in Library and Information Science.** The origin of the term *information literacy* has been attributed to Paul Zurkowski in 1974 (Behrens, 1994; Grassian & Kaplowitz, 2009). Zurkowski defined IL as the competency of an individual to use information sources in problem-solving in the setting of a work environment (Zurkowski, 1975). Owusu-Ansah described the adoption of the term in LIS as the result of "an ensuing preoccupation [with] and commitment" to the phrase which "culminated in the American Library Association's seminal definition of the concept" in 1989 (2005,

p. 367). According to the ALA in comparison to Zurkowski's definition, the definition of an information literate person is one who has the ability to:

- Determine the extent of information needed
- Access the needed information effectively and efficiently
- Evaluate information and its sources critically
- Incorporate selected information into one's knowledge base
- Use information effectively to accomplish a specific purpose
- Understand the economic, legal, and social issues surrounding the use of information, and access and use information ethically and legally. (American Library Association, 2006, pp. 2-3)

Since the ALA's definition of IL in 1989, the concept in LIS has become, for many in academia, synonymous with any activity related to instruction (Snaveley & Cooper, 1997b), including reference transactions both in person and via chat and email (Avery & Ward, 2010).

**Ambiguities in the term.** This conflation of IL with other library instructional activity is one reason that many scholars in LIS have blamed for the confusions and ambiguities in the term (Ariew, 2014; Budd, 2009; Snaveley & Cooper, 1997b). Others have argued that confusions over the meaning of IL are due to the ambiguity integral within the phrase itself (Foster, 1993; Isaacson, 2003; Purdue, 2003; Snaveley & Cooper, 1997b; Stahura, 2014; Verdesca, 2008) or have asserted that the perplexities and obscurities with IL that have been often voiced in the literature of the discipline are the result of the numerous published definitions (Snaveley & Cooper, 1997b). Others have

argued that no discrepancies in meaning are inherent in the discussions of IL, but contentions over the meaning of IL point to deeper issues within the profession:

There exists a sufficient enough mass of understanding on what constitutes information literacy. The controversies and uncertainties surrounding the conceptual delineation of information literacy therefore suggest a deeper professional dilemma, one that concise definitions and elaborate standards have failed to resolve. That dilemma involves not definitional uncertainties but rather difficulties of execution, arising within the dynamics of the educational environment, the deliberations of its power brokers, and the influence and results the relative image and power of the participating interests allows disagreement. (Owusu-Ansah, 2003, p. 226)

Thus, with the disputes over what IL means, or over the question of whether there are differing definitions, it is no surprise that other challenges related to teaching and assessing IL have arisen.

**Difficulties of assessment and teaching.** A working definition of IL might include “both the directly observable behavior and those less directly observable,” as Grassian and Kaplowitz noted, but as they also pointed out, some aspects of IL are difficult to measure; one difficulty of which would be due to the “less directly observable” nature of the attributes associated with IL (2001, p. 8). Later, Grassian and Kaplowitz revised this stance by stating that it is up to individual librarians “to reach out to others in your communities in order to formulate a definition of IL that is personally meaningful and that works in your specific environment” (2009, p. 8).

However, others have suggested the difficulties academic librarians face in teaching and assessing IL are due to the lack of formal training in pedagogical practices in LIS graduate programs (Montgomery, 2015; Moreton & Conklin, 2015; Mullins, 2014). Indeed, there is a wide variety in the level of experience and education of instructors of IL courses. Furthermore, few if any LIS graduate programs require coursework in ILI or general instruction pedagogies for program completion or rarely offer such courses as electives, leaving most ILI instructors with no background or training in best instructional practices (Montgomery, 2015; Nutefall, 2012). However, a recent review of 51 ALA accredited LIS programs found 47 offered such courses. While some have pointed out the negative aspects of the lack of pedagogical training for Master's degree holding ILI instructors, others have countered that few professors holding doctorate degrees have formal pedagogical education (Austin, 2002; Gardiner, et al., 1994). For example, Austin reported findings from a study of graduate students in a variety of disciplines who reported the lack of preparation for teaching; noting such issues as the lack of required teaching experience in many PhD programs, the lack of progressive development of instructional activities (e.g., "moving from grading for a faculty member, to managing a lab section under guidance, to running a course alone") (2002, p. 105), and even the "mixed messages about teaching – the most obvious being public statements by institutional leaders about the importance of teaching contradicted by institutional policies and faculty behaviors emphasizing research" (p. 108). Yet, while this may be the case for many graduate and post-graduate students in other disciplines, and while perhaps in LIS programs required coursework in pedagogical preparation may

be limited, as noted above a recent review of ALA accredited LIS programs found that 47 of 51 offered pedagogical IL courses.

Although the training and preparation of ILI instructors is not the topic under consideration in this work, this inconsistency can help to illustrate the variety in perspectives that currently exist in the participants of LIS IL discourse in the United States. Another difficulty in measuring aspects of IL, however, would inevitably arise as an outcome of the ambiguity in the definition of the term.

**Other similarly defined terms.** Indeed, not only does assessment of some aspects of IL present challenges, along with possible differences in how it is defined, but other issues appear to further complicate the matter. For instance, there are other terms in use that appear to describe the similar cognitive processes. Additionally, there is a further difficulty with distinguishing between what is meant by IL that could not be described as learning, or skills, or knowledge acquisition. As previously mentioned, “The concepts which are needed for effective information gathering replicate the cognitive concepts essential to learning: knowledge, analysis, and synthesis” (Fisher, Morton, Oberman, & Schwartz, 1984, p. 61). In addition to replicating the “cognitive concepts essential to learning,” other terms are also similarly defined. For instance, in her 2011 book, *Envisioning Knowledge: Building Literacy in the Academic Disciplines*, Langer described a cognitive process she called *academic literacy* as “the kind we learn at school” (p. 2).

How do we learn to build academic literacy? .... Through informational experiences – be they oral, written, electronic, or kinesthetic, ... – people learn to focus on a topic, to narrow in on what is relevant as they search for and consider

ideas and evidence pertaining to that topic. They make judgments about what is critical to weave together a conceptual construct that they can fine-tune, build upon, or even disagree with at a later time. Through this process of focusing, narrowing, searching, considering, questioning, judging, tuning, and rejecting, they learn not merely to receive knowledge, but to own it. They make sense. And if they probe deeply enough and connect wisely enough, they create knowledge. That knowledge is theirs, available to them for whatever purposes they wish in whatever experiences they encounter. If they are students, they become the literate thinkers we need to shape the knowledge and world of tomorrow – young people who think clearly and learn well. They can seek answers, ask probing questions about things as they are, and construct new ideas and paradigms.

(Langer, 2011, p. 2)

As this excerpt shows, many of the themes and behaviors that Langer attributed to *academic literacy* appear to be synonymous with the definitions of IL by the ALA and Grassian and Kaplowitz discussed above. Indeed, as Langer said, “Each field involves multiple acts of knowledge building as we seek data and use them to go beyond the information given in ways that are appropriate to the field. In this sense, knowledge is much deeper than simply getting information. Information counts, of course, but what you do with it and to what end creates knowledge” (p. 2).

Contrasting this definition of *academic literacy* by Langer with the characteristics of an information literate person as defined by the ALA raises the question of just what is the difference between *learning*, *academic literacy*, *knowledge*, or the ability to “use

information effectively to accomplish a specific purpose” (American Library Association, 2006, p. 3). Indeed, the ACRL stated, “information literacy forms the basis for lifelong learning” (American Library Association, 2006, p. 2). A few opponents of IL have raised similar contentions that IL, as Langer’s description of academic literacy, is an iterative process and one that can vary depending on “disciplinary traditions and conventions” (2011, p. 2). One disciplinary context-specific example is the difference in what constitutes a primary source, which varies widely depending on whether the context is history, biology, or psychology (Townsend, Brunetti, & Hofer, 2011, p. 864). Similar concerns with the widespread acceptance of IL in the discourse of LIS have been raised virtually since the inception of the concept.

In addition, the majority of studies base definitions of IL and *academic success* on the meanings assigned by the researchers and/or instructors of IL courses. Within many of these studies, evaluations of the claims that the IL skills taught in support of academic success are limited to the outcomes of students’ assignments. Often, the bases of these claims are limited to a single assignment or a single course; claims based on the results of longitudinal research are rare. It is hard to understand how claims that IL curriculum supports academic success, much less critical thinking or lifelong learning, can be substantiated from such limited evidence.

This leads us to the conclusion that there are currently significant issues regarding instruction in IL skills. Because the discipline is relatively small and close-knit, it may be that there is consensus in the field regarding what is taught in IL courses despite discrepancies in defining the term. However, at the heart of all scholarly inquiry is the

need to establish, empirically if possible, all assertions. Thus, it is important to establish what common aspects of IL skills such classes purport to teach. Prior to this is the need to distill what is meant by the term itself by looking at the uses of IL by three of the dominant participant groups in the LIS discourse.

**Critiques and opponents.** Notwithstanding the widespread acceptance of both LIS academe and academic librarians of the importance of IL skills to lifelong learning and academic performance and the discipline's assumption of responsibility for ILI, there have been some critics of IL within the profession. One of the more famous criticisms was the 2005 *Chronicle of Higher Education* piece by Stanley Wilder, entitled "Information Literacy Makes All the Wrong Assumptions," which generated much discussion among LIS professionals. Although many respondents agreed with some of his criticisms, the overall consensus seemed to be most were under institutional mandates to teach IL. Wilder's main criticism of the IL movement within LIS was that IL is a response to an imaginary problem; that students are overwhelmed with information when in fact, they are quite content with the information they can find online. One UK librarian disagreed with the premise of Wilder's article that students are not overwhelmed. However, this librarian expressed much dissatisfaction with the IL movement, including disapproval for the claims in the UK and Europe which tout IL as a panacea for many social ills, and charged that such claims

conflate information literacy with lifelong learning and appropriate the rhetoric leading to the sort of statements ... endemic throughout the literature. This is not

the only problem with the discourse of IL. It is an article of faith amongst its advocates that information-seeking is a generic skill. (Williams, 2006, para. 5) Although Williams was referring to the conditions in LIS within the UK and Europe, many critics from the United States have voiced similar concerns.

Aside from Wilder's objection that IL is based on misguided efforts to solve a non-existent problem, most of the criticisms and objections that have been raised center around two major themes: objections to the term and what IL should include. Most criticisms in LIS leveled towards the IL movement raised various objections with the term. In their overview of the then to-date disagreements over the term, Snaveley and Cooper proposed that due to the lack of "a perfectly descriptive, unambiguous" (1997b, p. 12) alternative, LIS should accept the use of IL, "using it carefully and with clarity" (p. 13). Budd (2009) offered phenomenological cognitive action as an alternative approach for libraries' instruction efforts, citing his objections to skills-based IL as deficient in many regards including lacking relevancy and meaning for students.

A much smaller group of critics questioned whether IL should reside within the purview of professional LIS responsibilities. Snaveley and Cooper suggested, in one of the earlier discussions over where the responsibility for teaching IL should lie, that "an information literacy program should be integrated into existing courses in an across-the-curriculum fashion" (1997a, p. 53). Cowan voiced the opinion that IL is no longer a valid programmatic aim of academic libraries and ILI librarians, but should be redirected to "how do we hand the keys over, as it were, to the faculty and administration?" (2014, p. 29). Others have published their contention that ILI is not instruction, but rather is

marketing (Ardis, 2005; Stover, 2007). An earlier article posed the view that librarians should not teach IL skills, but focus on their traditional work of collection development and management (Isaacson, 2003). A very recent article noted that IL “has gained ascendancy in the reference world to the detriment of the practice of reference librarianship itself” (Verdesca, 2015a, p. 67; see also Verdesca, 2015b). In perhaps the most succinct summation of the problems with teaching IL, Walker and Pearce stated “Indeed, the notion that information literacy can be taught in one session is preposterous for most librarians” (2014, p. 281).

**Metaliteracy and threshold concepts.** In more recent years, some in LIS have proposed an expansion of the concept of IL to metaliteracy. In this section, only a brief introduction on metaliteracy and threshold concepts is covered, with a more in-depth review provided in the following chapter’s literature review. These scholars view metaliteracy as a broader framing, building from the concept of IL with inclusion of multiple literacies that the expansion of online technologies have brought. Thus, these scholars see metaliteracy as a broad framework encompassing IL, digital literacy, media literacy, visual literacy, and information technology fluency. Proponents of metaliteracy, including the ACRL, view metaliteracy as conceptualized by key components, or threshold concepts, rather than the former *Standards* as the crucial attributes and activities that meta-literate individuals would possess and exhibit. (Jacobson & Mackey, 2013; Jacobson & O’Keeffe, 2014; Mackey & Jacobson, 2011).

***Framework for Information Literacy for Higher Education.*** This section introduces the *Framework*; a more detailed discussion is provided in the literature review.

One of the stated reasons for the *Framework* was that the ACRL sought to address concerns and critics of the *Standards*, which the Task Force noted in the first *Draft Framework*, as “limitations of this skill- and individual-attribute-based conception” (ACRL Information Literacy Competency Standards Review Task Force, 2014, February 2, p. 4). The Task Force built the new *Framework* incorporating threshold concepts by drawing “significantly upon the concept of metaliteracy” (American Library Association, 2015, p. 2). However, if the ACRL sought to engender consensus within the profession with the *Framework*, their efforts were unsuccessful as with each release of the drafts and the publication of the final version, LIS professionals voiced their dissent to the new re-framing of IL. In one of the more notable critiques, a group of New Jersey LIS professionals in an “Open Letter Regarding the Framework for Information Literacy for Higher Education” (*Open Letter*) voiced their concerns that the *Standards* should not be supplanted by the *Framework*, but should be revised, viewing the *Framework* as a

document that establishes a theoretical basis for information literacy ... [which although] filled with jargon ... can provide a catalyst for instruction programs to have a more cohesive approach to curriculum mapping or scaffolding yet, because of the jargon and the removal of the standards, it actually sets librarians back to square one where we will need to re-educate our faculty with new terminologies and thus lose the momentum that was gained with the standards. (Berg et al., 2015, para. 2)

The criticisms charged by the authors of the *Open Letter* illustrate the dissensions within LIS regarding definitions of IL. It is these differences in definitions that this study explores.

## **Research Questions**

**Research assumptions and interest in information literacy.** The basic assumption in beginning this study is that there are discrepancies in how LIS professionals (namely, academic librarian IL instructors of undergraduate IL), LIS scholars and academe (researchers and professors), and national organizational statements (by the ALA and ACRL) define IL. Initially, this researcher was intrigued by O'Connor's 2009 contention that the emergence of the term was the result of attempts on the part of the LIS to legitimize the profession (O'Connor, 2009a, 2009b, 2009c) and her explanations as to why that might have occurred. In this researcher's observations of academic librarians and LIS academe and in readings of ACRL and ALA IL policy statements, it appeared there are discrepancies in definitions or in the ways of describing IL that could well be related to the roles of the participants in the discourse. In addition, this study is aimed at exploring how the discourse on IL contributes to reinforcing the hierarchy of roles of these three participant-groups.

Therefore, in order to address the need for understanding IL, this study investigates the discourse within LIS regarding IL in higher education. Specifically, this work focuses on exploring texts in the hopes of answering three specific questions:

1) What are the content and contexts of the definition(s) of IL in LIS in higher education? In terms of content, the intent of this project is to discover whether definitions

of IL differ in what is included in those definitions, including the type of skills or whether the definitions significantly differ on philosophical bases. For instance, is there evidence for the view that IL is conceptualized in a variety of philosophical approaches to IL as noted in Addison's and Meyers's framework of IL definitions as skills-based, attitudinal, or social constructions? (2013; see also Foasberg, 2015)

2) In which definitional category from Addison's and Meyers framework of IL definitions do authors' definitions and discussions of IL fit, compared with whether authors' definitions and discussions of IL aligned with the *Standards* or the *Framework*? It is hoped that the alignment of authors' definitions and discussions with the ACRL's IL policy documents in comparison to IL definitional category will shed light on the reproduction of ACRL's IL policies in the context of the authors' professional work.

3) What factors lie behind any discrepancies in definitions of IL in LIS? By examining discrepancies, this project looks at the differences in skills and philosophical distinctions, and if found, seeks to determine if these variances are in any way related to the contexts in which the concept of IL is discussed. Thus, one aim of this project to learn if either or both IL skills taught and philosophical contexts can be linked to the roles the discourse participants fill in their professional work.

In other words, is there evidence of discrepancies and/or ambiguities in the definitions of IL and what is taught as IL skills, and if so, are these differences related to the roles of the participants? Does the discourse further stratify the roles of the participant groups and what effect does this have for students? The hope is that the findings of this study will provide some assistance for LIS in higher education to clarify its position on

IL in order to frame ongoing discussions on IL, particularly in view of the recent release of the new *Framework*.

**Delineation of the scope of project.** This project is an examination of the LIS discourse on IL, and is confined to that discourse within the scope of higher education at private and public four-year degree-granting institutions within the United States. This study does not include published work regarding elementary or secondary school libraries, community colleges, special libraries, or academic contexts outside of the United States. The published literature on these contexts is quite voluminous, particularly within the United Kingdom, especially in Australia, and increasingly recently within Asian and Middle Eastern countries. This study is also confined to undergraduate ILI and does not include the numerous studies of ILI to graduate and post-graduate students. In addition, this study includes only a small number of articles discussing IL in disciplinary contexts, with the bulk of these confined to general education or first-year seminar courses.

Another restriction on the scope of this project is that articles from two years only are examined. Using Fairclough's selection strategy, moments of crises, defined as "moments in the discourse where there is evidence that things are going wrong" (1992, p. 192), the articles examined were published in 2011 and 2015. In July 2011, the ACRL Information Literacy Competency Standards Review Task Force began work on revision of the *Standards*, and in January 2015, the new *Framework* was filed by the ACRL. Because the *Standards* has been the basis of IL definitions and ILI efforts for much of U.S. higher education (Bell, 2013, para. 1), these two years can be seen as moments of

crisis within LIS. More detailed explanation regarding the application of Fairclough's principles of Critical Discourse Analysis (CDA) is provided in Chapters 3 and 4.

### **Research Methods**

A brief introduction on the methods used in the analysis of this project is provided here. Articles from 2011 and 2015 will be analyzed using Fairclough's (1992) CDA methodologies. Fairclough's (1992) CDA provides analysis of texts in three dimensions, analysis of the social practice, analysis of the discourse practice, and analysis of texts. After categorizing articles by the role of the author or authors, texts will be examined in these three areas. Textual analysis will be directed to discovery of the authors' IL definitions and the contexts of IL discussions. Further details regarding research methods are covered in Chapter 4, with discussion of CDA and CT in Chapter 3.

### **Definitions**

At this point, it is helpful to define terms as used in CDA prior to further discussion. This section also includes explanations as to the relation of these terms to aspects of this project. Although alternate definitions have been provided by other discourse analysts, only those used in this project are included here.

Discourse has been defined as "an institutionalized way of talking that regulates and reinforces action and thereby exerts power" (Link, 1983, p. 60, as cited by Jäger & Maier in Wodak & Meyer, 2010, p. 35). Discourses can take any form of semiosis, including language, body language, or visual images (Fairclough, 2003, p. 207). Fairclough also noted three ways discourses are enacted in social practices: 1) "as a part of a social activity within a practice," 2) as "representations of other practices," and 3)

“in the constitution of identities” (p. 206). Within this project, each of these enactments of discourse is examined. As Jäger & Maier point out, discourses do not merely function as social practices, but also exercise power as they “institutionalize and regulate ways of talking, thinking, and acting” (in Wodak & Meyer, 2010, p. 35).

Ideologies are defined by Fairclough as societal ideals which a society uses as “ways of representing aspects of the world ... that contribute to establishing or sustaining unequal relations of power” (2013, p. 7). CDA is focused on the ways ideologies are employed in the “service of power ... [or] on the grounds that they represent or explain aspects of the world inadequately” (p. 8). There are many ideologies which may be present in any social environment. Several critical theorists, including Paulo Freire, have noted the tendency of education to reproduce society’s dominant ideologies. Freire stated, “the main task of systematic education is the reproduction of the ideology of the dominant class” (Escobar Guerrero & Freire, 1994, p. 31). According to Fairclough (2013), in Western societies such as the United States, a theory which describes power, class, and state is needed. Fairclough followed Gramsci’s theory in which capitalist societies base power on domination and hegemony (p. 128). Domination refers to the power of “control over the forces of repression and the capacity to use coercion,” and hegemony refers to “intellectual or moral leadership” (p. 128). Budd defined ideology as “being grounded in efforts at domination – the ascendance of some ideas over others” (2001, p. 498), which “raises the question of whose interests are being expressed, and to what end” (p. 499). Budd also noted the importance “that any investigation of discursive

practice be based in the language and the motivations that are identified as ideological” (p. 504).

Fairclough defined a method of text selection based on the use of “‘cruces’ or ‘moments of crises,’” which he defined as “moments in the discourse where there is evidence that things are going wrong” (1992, p. 192). In the LIS IL movement in U.S. higher education, two years can be viewed as moments of crisis, 2011 and 2015. In July 2011, the Task Force convened to work on revision of the *Standards*, and in January 2015, the new *Framework* was filed by the ACRL. Because the *Standards* has been the basis of IL definitions and ILI efforts for much of U.S. higher education (Bell, 2013, para. 1), these two years can be seen as moments of crisis within LIS.

## **Conclusion**

The IL movement within educational spheres in the United States can trace its origination from LIS, particularly in undergraduate education. The birth and development of IL has not been without challenges, difficulties, or opponents, but IL also has strong advocates. This project examines the discourse within LIS of ILI academic librarians, LIS academe, and compares the discourse of these two participant groups to the *Standards* in order to determine variances in definitions between these three groups. This project attempts to add some clarity to the definition of IL within LIS, which should be of interest to the discipline, particularly with the recent release and formal adoption of the *Framework*.

The content of the following chapters roughly follows the general sections of published journal articles. A literature review is provided in Chapter 2. Theoretical

frameworks and the methodology that guide this study are covered in Chapter 3. Chapter 4 discusses data collection and analysis. Chapter 5 covers a discussion of the findings, an overview of current LIS discussions on the *Framework*, and concludes with recommendations based on the findings of this project.

## CHAPTER 2: LITERATURE REVIEW

### Introduction

This chapter provides a selective review of the LIS published literature on information literacy in United States undergraduate education. Following a brief look at the background of IL in LIS, the review follows a chronological development of three major IL definitions based on Addison's and Meyers' (2013) framework of IL definitions. Next the use of critical theory in the LIS literature is covered, with an overview of the use of critical discourse analysis in LIS in Chapter 3. The chapter concludes with a discussion of the limitations to use of Addison's and Meyers' (2013) framework of IL definitions.

During the selection process for this review (and texts for analysis), this researcher found an article by Addison and Meyers that presented a categorization of IL definitions which they stated was "concerned with the interpretations of information literacy that stem from the library and information science field... We are using this organizing schema not to set up binaries or oppositional arrangements but to illustrate how values, goals and institutional priorities play a part in defining (and reifying) who is "information literate" (2013, para. 2, 3). This paralleled what this researcher was already seeing in the categorization of articles into varying definitions so their categories were used as the means of grouping articles.

A combined search of LIS and education databases was limited to undergraduate IL education in the United States between 2000 to 2015. This initial pool of over 2,300

articles was further narrowed to first-year seminar and freshman general education IL instruction. Of the remaining 322 texts, representative articles were selected to review the literature using Addison's and Meyers' categories.

### **Background of Information Literacy in Library and Information Science**

In early 2015, the release of the final version of the *Framework* prompted a flurry of activity on LIS discussion forums and weblogs. The release of the final version of the *Framework* was the culmination of the efforts of the ACRL Task Force's reassessment of the ACRL's *Standards*. The Task Force was established in July 2011. In 2013, the Task Force was comprised of 17 members; 12 academic librarians, one LIS professor, one member of the Middle States Commission on Higher Education, and three others in various information professional roles (ACRL Information Literacy Competency Standards Review Task Force, 2013). The Task Force sought with the *Framework* to address increasingly raised concerns within LIS regarding ambiguities and varied definitions of IL, as well as dissensions with the *Standards* (ACRL Information Literacy Competency Standards Review Task Force, 2012; American Library Association, 2012). However, throughout 2014, with the release of each draft version of the *Framework*, new criticisms were posted online. At least one member resigned from the Task Force because of misgivings over the *Framework* (Wilkinson, 2014), and in January 2015, a group of librarians from New Jersey voiced their disagreements regarding the new *Framework* in their *Open Letter* (Berg et al., 2015). Most recently, in apparent disregard for the charges of many librarians regarding the inadequacies of the *Framework*, on June 25, 2016, the

ACRL Board of Directors rescinded the *Standards* in favor of the *Framework* (ACRL Board of Directors, 2016).

Discussions and debates over the definition of IL are not new, having been raised, although infrequently, virtually since the term first entered the LIS discourse. Paul Zurkowski is credited with coining the term in 1974 when he used the phrase to describe the information use skills of individuals in their work environments (Owusu-Ansah, 2005; Zurkowski, 1975). It was not long until the term took hold in LIS as scholars and professionals assimilated the term into the jargon of the field. Although tacitly acknowledged within the LIS community to include information use skills in work environments and in normal daily life, since the concept first began to appear in LIS literature on IL in higher education, LIS scholars in academe have extended the meaning and typically discuss IL as information use skills in academic and research contexts. The majority of works on IL in higher education in the literature published prior to 2015 refer to the ACRL's *Standards* which delineated guidelines built off the ALA's 1989 definition of IL (Bell, 2013).

In addition to critiques that have appeared throughout the years in the LIS literature, IL has been studied in relation to a number of topics. Because the investigation in this study explores definitions of IL in the discourse of LIS within the context of undergraduate higher education in the United States, the following literature review covers professional LIS journal articles that have discussed IL in higher education in four-year degree-granting institutions in the United States. While IL has also entered the LIS discourse in other contexts of ILI for undergraduates within higher education,

including community colleges, as well as internationally, those settings are beyond the scope of this study, and the literature investigating IL in these environments is not included in this review.

This study seeks to explore definitions of IL in LIS used by academic librarians and LIS scholars in comparison with the *Standards*, within the context of higher education in the United States. The number of articles discussing IL that have been published in LIS journals is voluminous; a keyword search for “information literacy” in three library science databases (*Library Literature & Information Science Full Text (H.W. Wilson)*; *Library, Information Science & Technology Abstracts*, and *Library, Information Science & Technology Abstracts with Full Text*) resulted in over 13,000 articles<sup>1</sup> published since the year 2000. Limiting the scope to undergraduate education in four-year institutions in the United States, the volume of articles is still immense, numbering over 2,300. Because the focus of this work is a comparison of how academic librarians and LIS academe in the United States conceptualize IL in the context of first-year and freshmen undergraduate ILI in comparison to the *Standards* released by the ACRL in 2000, this literature review focuses on definitions in LIS literature since 2000, with some dated prior to 2000, dealing with undergraduate IL education in the United States as related to the first of the three research questions of this project, specific definitions of IL discussed in the literature. The other two research questions regarding alignment of IL definition with ACRL policy documents in comparison to IL definitional category from Addison’s and Meyers’ (2013) framework of IL definitions, and any

discernable factors behind the variations and discrepancies of IL definitions are addressed in the following chapters' discussions of the analysis and findings of this project.

This review not only includes published research studies, but also covers theoretical articles and, in a few cases, opinion pieces, that discuss IL and ILI regarding undergraduate higher education. While many authors from around the world have discussed IL within LIS in higher education and have influenced thought on IL in U.S. higher education, including such well-known LIS scholars as William Badke and Christine Bruce, it is beyond the scope of this review to include these authors' works outside of a brief discussion of significance to U.S. thought, unless directly discussing IL in United States higher education, since the objective in this study is to compare IL definitions of LIS faculty and librarians in relation to the definitions of the ALA and ACRL.

### **Definitions and Context of Information Literacy**

As noted previously, questions regarding how to define IL have been often discussed within the LIS literature. The *1989 ALA Presidential Committee on Information Literacy: Final Report* formally defined IL as attributes of an individual, "To be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information" (para. 3). Soon after, in 1990 Arp asked:

Are information literacy instruction and bibliographic instruction the same? In some ways. Neither term is particularly well defined by theoreticians or

practitioners in the field, and so a great deal of confusion will occur unless we continue to articulate the parameters of this question. (p. 49)

Perhaps ambiguities in the term arise due to the inherent nature of IL as situated and contextual, as many scholars have now recognized (Farrell, 2013; Farrell & Badke, 2015; Jastram, Leebaw, & Tompkins, 2014; Nichols, 2009; Roldan & Wu, 2004; Seeber, 2015). In addition, as many have observed, there have been various influences on definitions of IL. Behrens noted the effects of societal and technological factors on the term; "... by the middle of the 1980s the advancing information technology (IT) had begun to affect the information handling requirements for information literacy" (1994, p. 312). In addition to the influence of advances in technology, Behrens also described the introduction of the belief in a democratic, productive society to the term. As early as the late 1970s, IL was seen as necessary to promote an egalitarian society.

Information literacy differs from context to context. All men are created equal but voters with information resources are in a position to make more intelligent decisions than citizens who are information illiterates. The application of information resources to the process of decision-making to fulfill civic responsibilities is a vital necessity. (Owens, 1976, p. 27; see also Behrens, 1994)

In order to deal with the proliferation of the information available in the new digital technologies at use with information production and access, in conjunction with the literacy movement of the early 1990s, following publications such as *A Nation at Risk: The Imperative for Educational Reform. A Report to the Nation and the Secretary of Education* in 1983, discussions of IL continued to include ideological contexts, including

lifelong learning (Behrens, 1994, p. 312). For example, the ideologies of IL and democracy helped shaped early events in the IL movement:

Information literacy was one of the issues focused on at the Second White House Conference on Libraries and Information Services (WHCLIS) in 1991, where national attention was drawn to the contribution made by libraries and information services to a literate, productive and democratic society. One of the recommendations of the second WHCLIS calls for the U.S. government to establish a National Coalition for Information Literacy (including schools, libraries, labor and industry, government, parents and the general public), with the intention of developing a strategic plan for the general development of skills required for information literacy. (Behrens, 1994, p. 319)

International models of IL have also significantly influenced conceptualizations of IL in the United States. As Gibson (2007) noted, one of the most influential has been Christine Bruce's 1997 book, *The Seven Faces of Information Literacy*, which took a phenomenographic approach to a study of the information experiences of academics, rather than relying on experts to create normative conceptions of the information literate student or individual.... Bruce organized this relational model around seven faces or aspects of information literacy: information technology; information sources; information process; the information control; knowledge construction; knowledge extension; and wisdom. This model has enriched the understanding of information literacy for librarians as a construct that transcends

traditional computer literacy or library literacy into a far more pervasive, knowledge-building, creativity-fused aspect of learning. (Gibson, 2007, p. 24)

Also influential on United States LIS' definitions of IL in higher education was SCONUL's Seven Pillars of Information Literacy published in their 1999 *Information Skills in Higher Education: A SCONUL Position Paper* which ordered

the major elements of information literacy into seven major strands: recognizing an information need; determining ways of addressing the information gap; constructing search strategies; locating and accessing information; comparing and evaluating it; organizing, applying, and communicating it; and finally, synthesizing and creating new products based on it. (Gibson, 2007, p. 24)

Gibson noted that while Bruce's Seven Faces model particularly resonated with LIS academe in the United States with "opportunities for deepening pedagogical engagement" (p. 24), SCONUL's Seven Pillars answered the call of the National Research Council's FITness report of 1999 for increased focus on education in IT in conjunction with the efforts of the National Forum on Information Literacy. Also, echoing the focus on information technology skills in combination with IL skills, the National Forum on Information Literacy and the Partnership for 21st Century Skills conceived Information and Communication Technology Skills (ICT), based on which the Educational Testing Service (ETS) developed the ICT Literacy Assessment for higher education. ICT literacy was similarly "organized into seven categories (define, access, manage, integrate, evaluate, create, and communicate)" (p. 24).

Recently other LIS scholars have conceptualized definitions of IL in terms of categories. Foasberg (2015) has cited Addison's and Meyers' (2013) conceptualizations of IL within the LIS discourse in largely three distinct ways; as a set of skills, a way of thinking, or a social phenomenon. However, as Addison and Meyers pointed out other ways of viewing IL have been described such as the three theoretical perspectives of Limberg, Sundin, and Talja (2012) or Lupton and Bruce's (2010) divisions of IL as generic, sociocultural, or critical (2013, para. 2). Addison's and Meyers' posited that their perspective offers a relevant

interpretation [that] is unique from these as it is more concerned with the interpretations of information literacy that stem from the library and information science field, and less about either the theoretical underpinnings (Limberg, Sundin, and Talja, 2012), or the relationship to information (Lupton and Bruce, 2010) that characterize these other views ....

We are using this organizing schema not to set up binaries or oppositional arrangements but to illustrate how values, goals and institutional priorities play a part in defining (and reifying) who is "information literate." (para. 2, 3)

Using these categories, the following provides an overview and discussion of definitions or conceptualizations of IL that have appeared within the published literature of the field. In addition, as will be shown in this chapter, Addison's and Meyers' framework of IL conceptualizations within LIS can be linked to a historical context of IL definitions within LIS and U.S. higher education.

Addison and Meyers saw IL definitions in use within LIS as fitting into one of three categories: 1) a set of skills, 2) a way of thinking, or 3) a social phenomenon or practice. Even prior to reading Addison's and Meyers' (2013) article or the Foasberg (2015) article that cited their framework of IL definitions, early during the course of this review of the literature, a pattern of the development of IL definitions in a historical context emerged. Addison's and Meyers' IL categories confirmed these early suspicions and provided a useful framework to review the historical context of the evolution of IL definitions within the profession. The earliest definitions were obviously predominantly skills-based, but were soon followed by the introduction of cognitive models which heavily influenced the shift from skills-based definitions to IL as a way of thinking. The more recent trend of inclusion of critical theory in conjunction with social constructivist theories in IL definitions can be seen in the definition of IL as a social practice. Each of the approaches has strengths and weaknesses which are detailed in the sections below. However, there are some limitations to using Addison's and Meyers' categories of IL definitions which are discussed at the end of this chapter.

**Information literacy defined as a set of skills.** The skills-based view holds that IL is a set of skills, abilities, or behaviors which are exhibited by individuals in their information seeking within digital environments (Addison & Meyers, 2013). A characteristic of this approach is the view that IL is quantifiable and can be measured based on the individual's performance in relation to the experts, i.e., information professionals such as librarians.

For much of ILI within the United States higher education, the primary definition of IL has been that of the ACRL's *Standards* which describes the information literate individual as able to successfully perform a set of skills:

- Determine the extent of information needed
- Access the needed information effectively and efficiently
- Evaluate information and its sources critically
- Incorporate selected information into one's knowledge base
- Use information effectively to accomplish a specific purpose
- Understand the economic, legal, and social issues surrounding the use of information, and access and use information ethically and legally. (American Library Association, 2006, pp. 2-3)

Given the background of the national discourse from which the *Standards* emerged, it is not surprising the *Standards* were developed as a set of skills. As the dominant skills-based definition for United States higher education, the *Standards* have shaped IL pedagogy in American undergraduate education since adoption in 2000. Although the *Standards* were rescinded June 25, 2016, adherents continue to base ILI on the competencies and outcomes provided within the document, which provides a readily available foundation for lesson content and assessment measures.

***Strengths, weaknesses, and challenges.*** One of the greatest advantages of the skills-based view is its facility of assessment. This ease of assessment affords libraries and ILI librarians a straightforward means of communicating value to various shareholders. In addition, skills-based definitions offer a clearly identifiable set of

outcomes for teaching. However, these strengths also represent weaknesses to the skills-based conceptualization of IL, which are discussed below.

A common approach to the *Standards*' skills has been to divide them into lower- and higher-order thinking skills based on Bloom's Taxonomy, with determining the extent of information needed and searching and accessing that information as lower-order cognitive skills, and positioning evaluation and incorporation of information as higher-order skills (Cameron, Wise, & Lottridge, 2007; Chalmers, 2008; Choinski, Mark, & Murphey, 2003; Gendron & Sclippa, 2014; Hayes-Bohanan & Spievak, 2008; Lacy & Chen, 2013; Maughan, 2001; Menchaca, 2014; Morgan, 2015; Nentl & Zietlow, 2008; Purdue, 2003; Saunders, 2008; Shane, 2004; Sharkey & O'Connor, 2013; Sonntag, 2008; Whitmire, 2001). However, the view that searching is a lower-order skill has been challenged by those who maintain that "the act of 'searching' is not the subordinate, lower-order operation or activity it is often reduced to" (Wiebe, 2015, p. 55; see also Bodemer, 2012; Morgan, 2014), but rather "is an integral, concurrent component of a situated whole" (Bodemer, 2012, p. 336).

Significant drawbacks stem in part from the conceptualization of IL as a linear sequence of acts based on the ordering of the *Standards*, but may also have roots in development of instruction by librarians from BI to ILI. The sequential view of the process of research based on the ordering of the *Standards* has been challenged by those who see research and writing as an iterative process. Bodemer pointed out that:

The ordering of the first four Standards suggests a temporal sequence that is simpler than the reality of research-writing. If one imagines these intellectual

operations unfolding in real time, it is easy to see how such delineations begin to fail. Determining “the extent of information needed,” accessing “the needed information,” evaluating “information and its sources critically,” and using “information effectively” are not discrete and sequential, but cyclical, often simultaneous, and mutually influencing. (2012, p. 338)

This view of research as a sequential and discrete set of steps further results in several negative effects.

When IL is viewed as a series of sequential steps, those steps are often taught in order. However, as Saunders (2008) noted, librarians seldom have time to teach IL concepts beyond searching and accessing information; thus, skills such as evaluation of resources and the ethical use of information are infrequently taught by ILI librarians in one-shot sessions, the most common venue of instruction. The application of information skills, including incorporation of information into the individual’s knowledge base, the effective use of information, and critical thinking skills are even more infrequently covered by ILI one-shot sessions (Cody, 2006; D’Angelo, 2001; Deitering & Jameson, 2008; Grafstein, 2007; McGuigan, 2002; Saunders, 2008; Simmons, 2005).

The fallacy that research can be accomplished by a set of sequential IL skills leads to other misconceptions and issues. Several have observed that conceptualizing IL as a set of generic skills that can be easily transferable to all other information-seeking contexts lacks solid basis. IL as a set of generic skills is a view which has not been fully supported by studies (Lloyd, 2010; Manuel, 2004), and is belied by the creation of subject-specific disciplinary standards (Foasberg, 2015). While Lacy and Chen (2013)

posit that the failure to transfer IL skills by students may be due to ILI librarians trying to cover as much material as possible in one-shot sessions, others contend the lack of transferability results from teaching IL skills as generic, rather than contextual or disciplinary (Crouse & Kasbohm, 2004; Grafstein, 2002; Head, Van Hoeck, Eschler, & Fullerton, 2013; Hicks, 2013; Hofer, Brunetti, & Townsend, 2013; Hunt & Birks, 2004; Macklin & Fosmire, 2004; Manuel, 2004). Gross & Latham (2013) suggested transfer is better supported by students' engagement in the research process; their study found IL skills were transferred more often by students' self-generated queries for their personal information seeking rather than imposed queries, such as assignments. Others, seeing the lack of instruction on higher-order skills, have proposed alternatives such as teaching the use of discovery tools in order to allow librarian instructions to "mov[e] beyond simply teaching techniques for retrieving information to teaching critical thinking skills" (Buck & Steffy, 2013, p. 77).

Although many within the LIS higher education community may agree with academic librarian Rebecca Jackson's view of the importance of communicating to "students the authority of librarians with whom they may interact" (2007, p. 31), Addison and Meyers observed that teaching IL as a set of skills "both reinforces the authority of librarians and also undermines it" (2013, p. 4), as the main objection to librarians' authority is instruction librarians' lack of subject or disciplinary expertise which many perceive as critical to conducting research in subject-specific knowledge domains (Farrell, 2012; 2013; Farrell & Badke, 2015; Grafstein, 2002).

Wilder, in his contentious piece “Information Literacy Makes All the Wrong Assumptions”, also observed along outsiders’ views of librarians’ authority, the fallacy of teaching IL skills apart from disciplinary research:

information literacy would have librarians teach students to be more like them. The problem with that approach is that librarians are alone in harboring such aspirations for students. As Roy Tennant noted in the January 1, 2001, *Library Journal*, “only librarians like to search; everyone else likes to find.” Any educational philosophy is doomed to failure if it views students as information seekers in need of information-seeking training. Information-seeking skills are undeniably necessary. However, librarians should view them in the same way that students and faculty members do: as an important, but ultimately mechanical, means to a much more compelling end. Information literacy instead segregates those skills from disciplinary knowledge by creating separate classes and curricula for them. There is no better way to marginalize academic librarianship. (2005, para. 5)

In this piece, Wilder advocated his view that students are mistakenly perceived as information seekers in the IL-as-skills approach when the appropriate approach would be to see them as involved in subject-specific scholarly discourse. Although several of Wilder’s views in this piece were challenged, most of LIS concurred with his views on the error of separating IL skills from subject-specific contexts; this agreement can be seen by proponents of IL-as-a-way-of-thinking and IL-as-a-social-practice.

Another problem with the IL-as-skills approach is that the student is invariably seen as deficient in IL skills (Addison & Meyers, 2013, p. 5; see also Agee, 2005; Elmborg, 2006; Foasberg, 2015; Haider & Bawden, 2007; Harris, 2008; Isaacson, 2003; Lin, 2010; Mani, 2004; Peterson, 2010; Stahura, 2014). By ignoring the contextual, iterative nature of research, students may feel information illiterate when research is not accomplished easily on following the steps, and may have no idea how to remedy. At the very least, this view may be one culprit contributing to the superficial research conducted by students which has been often lamented in the literature, as students may well believe research is and should be completed upon one iteration of the steps. Addison and Meyers observed the perception of students as inherently deficient in IL skills arises from the view that IL is measurable, which in turn leads to a number of other problems. For example, when students are seen as deficient in IL skills, the natural progression is that the deficiency can only be remedied through instruction “from experts, namely librarians [...However,] because these experts’ skills are often based in bibliographic information systems...” (Addison & Meyers, 2013, para. 11), it is not surprising that the skills assessed and taught are most often limited to tests of Boolean logic, construction of search queries, and the like. Furthermore, Addison and Meyers pointed out:

skills instruction, particularly when it is rooted in specific behaviours rather than conceptual structures, may fail to account for the rapid changes in digital technologies. It may also lead to information literacy instruction as a series of platitudes in practice contexts, such as restrictions on the use of Wikipedia. (2013, para. 11)

Following up on this critique, Addison and Meyers also pointed out the tendency for proponents of skills-based definitions to conclude that students lack IL skills because “that they lack the drive to attain them or, in some cases, they overestimate their abilities” (Addison & Meyers, 2013, para. 11; see also Agee, 2005; Gross, 2005; Gross & Latham, 2007, 2009, 2011, 2012, 2013; Gross, Latham, & Armstrong, 2012; Latham & Gross, 2008, 2013).

**Information literacy defined as a way of thinking.** Addison and Meyers described this conceptualization of IL as “cultivating habits of mind” (2013, para. 12). Characteristic of this approach to IL is an emphasis on cognitive models and a focus on the individual’s mental processing of information, including reflective thought and motivation. Addison and Meyers placed process models, such as Kuhlthau’s Information Search Process and Dervin’s Sense Making, and learning models, such as problem-based learning (PBL) within this perspective. The definition of IL-as-a-way-of thinking quickly followed the adoption of the *Standards*, which in this review of the literature began to appear frequently in the LIS discourse in the mid-2000s, with a few references as early as the late 1990s (White, as cited in Snavely, 2012, p. 95; see also Day, 1998; Ercegovic, 1998; Kenney, 2008; Kim & Sin, 2007; MacMillan, 2009; Maybee, 2006; Nahl & Bilal, 2007; Pawley, 2003; Robinson, 2006; Schiller, 2008a, 2008b; Spackman & Camacho, 2009; Woodard, 2003; Xiaomei & Loomis, 2009). Although the user-centered approach in education has been dated to the 1980s (Fisher & Landry, as cited in Nahl & Bilal, 2007, p. 211; Kim & Sin, 2007), the shift from skills-based ILI to a constructivist approach gained momentum with Bruce’s *Seven Faces of Information Literacy*

(MacMillan, 2009). The rise of adherents to user-centered educational efforts and quantitatively measurable assessments can be linked to the marketization of education (Fairclough, 2013, p. 101).

*Strengths, weaknesses, and challenges.* Adherents of this view, particularly those who support the use of PBL techniques in ILI, claim that transferability of IL skills is supported by the ill-structured real-life problems used. The transferability of IL skills is particularly significant to claims that IL supports lifelong learning (Williams, 2006; see also Birmingham et al., 2008; Eisenberg, 2008; Hayes-Bohanan & Spievak, 2008; Orme, 2004; Ormsby & Williams, 2010; Owusu-Ansah, 2004a, 2004b; Pan, Ferrer-Vinent, & Bruehl, 2014; Stevens, 2007). However, Addison & Meyers noted this claim represents a weakness of this approach as assessment of IL is based on students' ability to "apply cognitive frameworks to academic and everyday situations ... A key challenge is that they rely on users to transfer knowledge and procedures among contexts and problems, something users are notoriously poor at doing" (2013, p. 7). Addison and Meyers further pointed out that while adherents of PBL claim the PBL approach scaffolds such transference, others have noted "the failure of such problem-based lessons to include the wide range of problems and behaviours found in schools and workplaces," as well as dissension within adherents regarding the "extent to which information literacy must be contextually situated" (p. 7).

While, indeed, the above-mentioned are issues with this definition, other issues with the IL-as-a-way-of-thinking approach also exist. The limited time most ILI librarians have to teach is further exacerbated under this approach by the depth of PBL

lessons, both in terms of preparation and in terms of how much can be covered in the one-shot sessions. While many see embedded IL and ILI as a means of addressing this concern, this entails both buy-in from and collaboration with instructors, which are not always easy to obtain. In cases where instructors are not willing to collaborate with ILI librarians, some or many students may not be reached. While advocates of disciplinary IL see the importance of context in teaching IL, librarians such as Farrell (2012, 2013) saw the importance of teaching both generic, transferable and disciplinary-specific IL skills. Finally, as early forerunners to the conceptualization of IL as a social practice pointed out, this approach focuses on an individual's cognitive processes and may omit the socio-cultural constructed aspects of IL (Montiel-Overall, 2007) and focus on peer-review and omit other information sources (Fountain, 2013) or other disciplinary sources (Dold, 2014; see also Doherty, 2007; Doherty & Ketchner, 2005; Elmborg, 2006; Leckie, Given, & Buschman, 2010; Simmons, 2005; Tewell, 2015).

**Information literacy defined as a social practice.** According to Addison and Meyers, adherents to IL as a social practice see IL as highly contextual and socially constructed. The focus of this perspective is on “general capabilities ... for living, learning, and working in an information-rich society ... [within] the constantly changing nature of technology and the evolving expectations we have of citizens” (2013, para. 19). Multiliteracies are placed within this perspective. This view arose in popularity following continued voiced concerns with students' failure to transfer IL skills and has gained momentum in relation to the Open Access movement in response to criticisms of peer review and the rise of critical thought within LIS. Representing the latest iteration of

conceptualizations of IL within LIS in U.S. higher education, the *Framework* is the guiding document with the rescission of the *Standards* on June 25, 2016. Although the *Framework* was officially adopted January 11, 2016, the importance of definitions of IL to encompass socio-cultural constructs of information and knowledge in IL has been espoused for some time (Burkholder, 2010; Buschman, 2009; Elmborg, 2006; Fields, 2001; Foasberg, 2015; Gregory & Higgins, 2013; Hicks, 2013; Kraemer, 2007; Montiel-Overall, 2007; Mitchell & Hiatt, 2010; Mitchell & Smith, 2009; Norgaard, 2003; O'Connor, 2009a; O'Connor, Bowles-Terry, Davis, & Holliday, 2010; Oakleaf & VanScoy, 2010; Ragains, 2001; Simmons, 2005; Woodard, 2003).

***Metaliteracy, threshold concepts, and Framework for Information Literacy in Higher Education.*** In more recent years, some in LIS have proposed an expansion of the concept of IL to the broader concept, *metaliteracy*. Metaliteracy is viewed by proponents as a broader framing, or as an umbrella term under which several literacies fit including digital literacy, media literacy, visual literacy, and information technology fluency, compared to the skills-based *Standards* definition of IL. Proponents of IL as a metaliteracy see IL as comprised of key components, or threshold concepts, rather than the skillsets in the former *Standards*, as the crucial attributes and activities that information literate individuals would possess and exhibit (Jacobson & Mackey, 2013; Jacobson & O'Keeffe, 2014; Mackey & Jacobson, 2011).

The concept of metaliteracy began to appear more frequently in the published literature of LIS around 2011. Early proponents of metaliteracy referred to the need to broaden the definition and teaching of IL to encompass metaliteracy and transliteracy

(Mackey & Jacobson, 2011; McBride, 2011). Transliteracy has been defined as “the ability to read, write and interact across a range of platforms, tools and media from signing and orality through handwriting, print, TV, radio and film, to digital social networks” (Thomas, et al., 2007, para. 3; see also Dunaway, 2011; Mackey & Jacobson, 2011). Metaliteracy is seen as a much broader term, as “an overarching and self-referential framework that integrates emerging technologies and unifies multiple literacy types” (Mackey & Jacobson, 2011). Because of the strong emphasis on the social aspects of information, proponents of metaliteracy-based or *Framework*-based IL definitions fit solidly within Addison’s and Meyers’ IL as a socio-cultural practice definitional category.

Threshold concepts have been used as a way to broaden IL from a skills-based definition to that of a metaliteracy. In LIS published literature, Meyer and Land are often credited with the definition of threshold concepts, which they defined as:

a transformed way of understanding, or interpreting, or viewing something without which the learner cannot progress. As a consequence of comprehending a threshold concept there may thus be a transformed internal view of subject matter, subject landscape, or even world view. (2003, p. 1)

For many proponents of a broader definition of IL, threshold concepts have been viewed as a way to escape the difficulties in defining IL, provide a means to incorporate changing information formats, and foster development of individuals’ IL skills in the increasingly social information environments of the global age. The ACRL’s *Framework*

is based on a view of IL as a metaliteracy and presents six threshold concepts, which the ACRL sees as central to IL:

- Authority Is Constructed and Contextual
- Information Creation as a Process
- Information Has Value
- Research as Inquiry
- Scholarship as Conversation
- Searching as Strategic Exploration. (American Library Association, 2015, p. 2)

*Strengths, weaknesses, and challenges.* Although the IL-as-a-social-practice approach to defining IL has several strengths, there are weaknesses and challenges as well. This section focuses on critiques of the *Framework*, as this is ACRL's replacement for the *Standards* and as such will influence (and already has influenced) IL and ILI in U.S. higher education, and because critiques of the *Framework* often include criticisms of many of the core concepts of IL defined as a social practice such as threshold concepts and metaliteracy.

The incorporation of the term, metaliteracy, in the *Framework* was not well received by all (Witek, 2014). One respondent noted frustration with the contradiction of teaching authority while simultaneously undermining authority, while other voiced concerns with the (then potential) loss of the *Standards* cited the clear outcomes, ease of assessment, and institutional and accrediting agency buy-in of the *Standards* as benefits lost with the adoption of the *Framework* (Berg, et al., 2015; Witek, 2014). Others have

criticized the misuse of threshold concepts in the *Framework*, charged the *Framework* with overreaching by placing IL as a separate discipline, and noted the difficulty in assessment of IL based on threshold concepts (Bombaro & Watstein, 2016; Wilkinson, 2014). In fact, as Bombaro & Watstein noted, “an inherent contradiction arises: we have been asked to adapt the *Framework* locally by writing our own outcomes, while using a document based on a theory whose authors reject outcomes-based assessment in its application” (Bombaro & Watstein, 2016, p. 555). Bombaro and Watstein also pointed out the seeming disregard or misunderstanding by the ACRL in the *Framework* and its adherents of the work librarians do. This charge was underscored by an interview with Lisa Janicke Hinchliffe prior to the ACRL’s decision to rescind the *Standards*, in which she stated she believed there was still a need for the *Standards*. The authors included Hinchliffe’s response to a question posed after the interview, in which she stated that if ILI librarians “decide that those Standards-based outcomes are still the best choice for your program, you no longer have the authority of ACRL behind them and ACRL will no longer be offering any training and support for libraries who are working in that mode” (Bombaro, Harris, Odess-Harnish, & Mitchell, 2016, p. 551). (This additional question was posed after the interview, but prior to publication and after the *Standards* were rescinded.)

### **Critical Theory and Information Literacy in Library and Information Science**

Because the theoretical framework, Critical Theory (CT), is used in this project, it is useful to look at the use of theory in LIS on IL. The following provides an overview on studies or other published articles in which CT has been discussed in the literature in

relation to IL and ILI. Although a number of articles have been published on CT and IL, this review focuses on those that examined class or status, and/or power in the context of IL and ILI for undergraduate students. Several articles discuss CT, IL, and reference work or cataloging; these articles are not included in this review. More information on CT is provided in Chapter 3. A review of the published literature in LIS on DA is also provided in Chapter 3.

Although librarians may feel they lack status, a few articles looked at the power wielded by ILI librarians and opportunities to empower students through ILI librarians' praxis. The reproduction of hegemony through library instruction was critiqued by Pawley (1998). Later Pawley (2003) used a CT lens to demonstrate the inherent contradiction between the claim of IL to promote participation in a democratic society and the privileging of 'quality' information. Doherty and Ketchner used a critical lens to examine the ways librarians have historically "privileged positioning of their expertise in relation to the users they serve" (2005, p. 1). Simmons (2005) proposed the application of genre theory to ILI. Doherty critiqued ILI as a practice "that continues to reify... a hegemonic, traditional way of looking at information" (2007, p. 1).

Doherty later noted the need for librarians to engage in reflective praxis in order to overcome the hegemonic nature of librarians' work, particularly in "the inherent privileging of information" (2008, p. 111). Jacobs (2008) also pointed out the need for reflective praxis. Elmborg (2006) used critical literacy theory to argue that ILI librarians should focus less on transfer of information. He stated, "librarians and library educators can better engage the educational climate on campuses by defining academic

librarianship through the scholarship of teaching and learning in general, and the scholarship of literacy in particular” (2006, p. 193). O’Connor (2009a, 2009b, 2009c) explored through a CT lens the ways LIS has legitimated the profession through the IL movement. Bossaller, Adkins, and Thompson (2010) also critiqued the reproduction of hegemony within IL and librarianship. Mark (2011) discussed the privileging of peer review in ILI. Cyberfeminism was the critical theory Schlesselman-Tarango (2014) used for her suggestions on teaching IL. Pagowsky (2015) discussed the ways the using CT and *Framework* can help ILI librarians with pedagogy. In 2016, Tewell published an article using CT to critique Google Scholar and find ways to teach critical reading of information in ILI.

Schroeder and Hollister (2014) reported on a study of ILI librarians’ knowledge, views, and application of CT in their praxis. In another article, Tewell (in press) reported the findings of a survey of librarians teaching critical information literacy (CIL).

Several authors saw the application of CT to ILI as a means to empower students. Swanson (2004b) discussed the use of CT in an IL course. Ward described the use of CT to expand the definition of IL and application in a specific IL course. Broidy (2007) discussed the application of feminist theory to an IL course. Elmborg used CT to explore ways to better assist adult learners in IL development (2010). Reale (2012) discussed the application of CT in order to decentralize the power in traditional classrooms and empower students. Beilin and Leonard (2013) also saw the need to apply CT to ILI in order to empower students. Weaver and Tuten (2014) discussed the application of CT in a specific IL course.

A few authors critiqued the *Standards* or the *Framework* through application of CT. Swanson (2004a) and Lilburn (2007) each examined the *Standards* using CT. Beatty (2014) and Beilin (2015) each used CT in critique of the *Framework*.

## **Conclusion**

This literature review was fundamental in establishing the categories of IL definitions used by authors and reveals a gap in the contemporary literature. Recent research has overlooked exploration of any correlation between IL definition used and the role of the author, or any other factors. In the selection process of articles for this review, it was found that authors were predominantly concerned with supporting particular definitions, adding skills to established IL definitions, or research focused on how a method, technique, or tool supported IL development rather than examining IL definitions and factors underlying IL definitions used. Two articles, Mark (2011) and Gross and Latham (2011), were included in this review and were also texts analyzed in in this project.

**Limitation of Addison’s and Meyers’ framework of information literacy definitions.** While Addison’s and Meyer’s framework of IL definitions is useful to analyzing the myriad of discussions on IL within LIS, there is a limitation to this approach. This weakness stems from their admission that in comparison with the other approaches they name, their approach focuses “less ... [on] either the theoretical underpinnings ... or [on] the relationship to information” (Addison & Meyers, 2013, para. 2). Indeed, the omission of these aspects tends to make placing an authors’ approach within their approach somewhat difficult at times. However, as they stated,

their approach is “not to set up binaries or oppositional arrangements but to illustrate how values, goals and institutional priorities play a part in defining (and reifying) who is ‘information literate’” (para. 3), it parallels the critical approach taken in this project and offers a means of grouping the texts under investigation in this project. As seen, their approach offers a look at the historical context of IL in U.S. higher education which is a critical component of the critical theory framework used in this project.

## CHAPTER 3: THEORETICAL FRAMEWORK AND METHODOLOGY

### Introduction

This project is a comparison of how academic librarians, LIS scholars, and the ACRL define IL in the published LIS literature regarding undergraduate education in the United States. One pre-assumption in beginning this study is that there are differences in the uses and/or definitions of IL by these groups. Because this study seeks to show these differences are due to a reinforcement of traditional stratifications in the discipline between participants of varying social stratification, a perspective based upon the work of Pierre Bourdieu provides a direction to the Critical Theory framework to describe the acts of the participants in the discourse. Critical Discourse Analysis is an appropriate method to disclose the existence and reenactment of these stratifications within the published LIS literature.

### Theoretical Framework

**Definitions.** Critical Theory (CT) is an orientational qualitative inquiry which “focuses on how injustice and subjugation shape people’s experience and understandings of the world” (Patton, 2002, p. 130). Other orientational qualitative inquiry approaches include feminist inquiry and queer theory, but all orientational qualitative inquiry seeks to describe particular manifestations of social inequities from a predetermined theoretical framework. The orientation of any individual researcher’s inquiry can be of any intensity, as it is the reflection of the researcher’s personal agenda; it is the addition of *critical* that

implies the commitment of the researcher to use findings to support change in the social phenomena under study (Patton, 2002).

CT emerged from the work of theorists from the Institute of Social Research, founded in Frankfurt in 1923. Held (1980) described two branches of CT. One branch was comprised of the Frankfurt school's founding critical theorists, in particular, Max Horkheimer, Theodor Adorno, and Herbert Marcuse, and the second branch stemming from the work of Jürgen Habermas. As Held noted "Critical theory ... does *not* form a unity" (1980, p. 14) [emphasis in original]. In Held's description of these two branches, he noted differences even among Horkheimer, Adorno, and Marcuse, underscoring the disunity of thought among critical theorists. However, he saw the theories espoused by these earlier members of the Frankfurt school as distinct from the theories of Habermas.

The Frankfurt school theorists, the founders of CT, originated from and preserved German idealism; "concern[ed], for example, with the nature of reason, truth and beauty – but [these theorists] reformulated the way in which these had been previously understood. They placed history at the centre [sic] of their approach to philosophy and society" (Held, 1980, p. 15). Of primacy to CT,

Each of the critical theorists maintained that although all knowledge is historically conditioned, truth claims can be rationally adjudicated independently of immediate social (e.g. class) interests. They defended the possibility of an independent moment of criticism. They also all attempted to justify critical theory on a non-objectivistic and materialistic foundation. The extension and development of the notion of critique, from a concern with the conditions and

limits of reason and knowledge (Kant), to a reflection on the emergence of spirit (Hegel), and then to a focus on specific historical forms – capitalism, the exchange process (Marx) – was furthered in the work of the Frankfurt theorists and Habermas. They sought to develop a critical perspective in the discussion of all social practices. (Held, 1980, pp. 15-16)

While Held described the positions of the critical theorists in relation to political economy, aesthetics, and psychoanalysis, it is the Frankfurt school theorists' approach to CT that holds much value for this investigation, which is discussed following an introduction of the Frankfurt school theorists' and Habermas' approach to CT.

**Frankfurt school theorists' and Habermas' approach to Critical Theory.** A truly comprehensive overview of the foundations of CT and the nuances of thought of each of the Frankfurt school's theorists and that of Habermas is well beyond the scope of this project. What is covered here is limited to a brief overview in broad terms of each of these approaches to CT as it relates to this project.

According to Held, the Frankfurt school theorists' purpose in CT was a reform of social philosophy with a focus on the “forces which moved (and might be guided to move society) towards rational institutions – institutions which would ensure a true, free and just life” (1980, p. 15). Their approach was not only to analyze and critique obstacles to rational institutions, but also to engender change in society. At a foundational level, they held a “non-objectivistic and materialistic” (p. 16) belief that “all knowledge is historically conditioned” (p. 15), with which they sought to base social philosophy. In addition, and to varying degrees, Adorno, Horkheimer, and Marcuse each believed that

social philosophy should be established through interdisciplinary study of philosophy, economy (political), sociology, psychology, aesthetics, and history. Of significance to the approach of these theorists was a belief in a gap or break between the promised outcomes of a society's ideology and the actuality of the lives of the working classes. While, for the most part, they saw the work of CT as a means to promote awareness of social contradictions which would in turn lead to societal change, they were increasingly pessimistic of society attaining the eventuality of a direct democracy.

Adorno, Horkheimer, and Marcuse were first generation Frankfurt school critical theorists; Habermas is the leader of the second generation of Frankfurt school critical theorists. Habermas' work has been to reshape CT, with a major focus on "the spread of instrumental reason to many areas of social life" (Held, 1980, pp. 253-254), which he has focused upon in the levels of social theory and the theory of knowledge. Habermas' approach to CT is quite different. For Habermas, CT begins with analysis of discourse. While the Frankfurt school theorists' saw the exposure of the gap between a society's ideology and actuality as the goal of CT, Habermas believes the aim of CT is the unveiling of distorted communication, based on his theory of communicative competence. Habermas' theory of communicative competence is the idea that all speech is aimed at a real and un-coerced consensus. Consensus achieved in any other way is distorted and is "in his view, the contemporary formulation of ideology" (Held, 1980, p. 256).

Although each of these approaches to CT is much more detailed than described above, the general basis for CT is the theorists' beliefs in the necessity of a social theory

to examine societal practices to illuminate the gap between a society's ideology and actuality. The Frankfurt school theorists believed only an interdisciplinary approach to a social theory could uncover this gap. In his chapter "On the Concept of Philosophy" in *Eclipse of Reason*, Horkheimer discussed the inability of singular approaches to determine truth. He addressed the failure of philosophy, idealism, naturalism, and positivism to adequately uncover truth. The necessity of an interdisciplinary approach was emphasized by Horkheimer:

What is called philosophy, together with all the other branches of culture, superficially bridges the chasm and thus adds to the dangers. An underlying assumption of the present discussion has been that philosophical awareness of these processes may help to reverse them. (Horkheimer, 1947, p. 162)

The way to this philosophical awareness of social practices was a critical approach to the study of objective and subjective reason. In Horkheimer's perspective, the prioritization of one type of reason over the other was the cause for the failure of theoretical approaches to uncover truth.

The task of philosophy is not stubbornly to play one against the other, but to foster a mutual critique and thus, if possible, to prepare in the intellectual realm the reconciliation of the two in reality. (Horkheimer, 1947, p. 174)

Linguistic analysis, in concert with the historical context, lay at the core of critical analysis; the way to discover truth was to look at the language of a society, as "definitions acquire their full meanings in the course of a historical process" (p. 165). He went on to say:

Philosophy is the conscious effort to knit all our knowledge and insight into a linguistic structure in which things are called by their right names. However, it expects to find these names not in isolated words and sentences...but in the continuous theoretical effort of developing philosophical truth. (p 180)

Thus, an interdisciplinary approach to social philosophy was inescapable.

Held summarized Horkheimer's view:

Social phenomenon cannot be deduced from material being, that is, from the economy .... they should ask: what interconnections exist in definite social groups, in definite periods of time and in definite countries, between the position of the group in the economy, changes in the psychic structures of its membership and other relevant factors which condition and affect the group's thoughts and practices." (1980, p. 33)

To achieve this interdisciplinary approach, they drew from Marx, Kant, Hegel, Webber, Nietzsche, Heidegger, Fromm, and Freud, among others. They examined political economy, aesthetics, psychoanalysis, and philosophy of history. They particularly emphasized and defined rationality and the centrality of historical context in their work. Specific concepts from their work, in particular, those of Adorno and Horkheimer, that are most applicable to this project are discussed next.

**Frankfurt school theorists' approach to Critical Theory in regards to philosophy of history.** In their preface, Horkheimer and Adorno noted their goal in *Dialectic of Enlightenment* "was nothing less than to explain why humanity, instead of entering a truly human state, is sinking into a new kind of barbarism" (2002, p. xiv). Held

noted the work as central to the Frankfurt school thought with their exploration of “one of the school’s most central concerns – the rise and domination of instrumental reason” (1980, p. 148).

In the *Dialectic of Enlightenment*, Horkheimer and Adorno described two aspects of reason, of which one part is:

Reason as the transcendental, supraindividual self contains the idea of a free coexistence in which human beings organize themselves to form the universal subject and resolve the conflict between pure and empirical reason in the conscious solidarity of the whole. The whole represents the idea of true universality, utopia. At the same, however, reason is the agency of calculating thought, which arranges the world for the purposes of self-preservation and recognizes no function other than that of working on the object as mere sense material in order to make it the material of subjugation. The true nature of the schematism which externally coordinates the universal and the particular, the concept and the individual case, finally turns out, in current science, to be the interest of industrial society. Being is apprehended in terms of manipulation and administration. Everything – becomes a repeatable, replaceable process, a mere example of the conceptual models of the system. Conflict between administrative, reifying science, between the public mind and the experience of the individual, is precluded by the prevailing circumstances. The senses are determined by the conceptual apparatus in advance of perception; the citizen sees the world as made a priori of the stuff from which he himself constructs it. (2002, p. 65)

As the above excerpt shows, these theorists, drawing from Kant, Hegel, and Nietzsche, saw two facets of reason: the first, the universal, which provides all with ideals and legitimations, and the second, instrumental, which “has generated the structure of conventions which have actually conditioned day-to-day practice” (Held, 1980, p. 151), those conventions which result in domination. The Frankfurt school theorists were concerned with the spread of instrumental reason, but did not ascribe society’s contradictions to this spread. “Rather, it is the mode in which the process of rationalization is itself organized” (Held, 1980, p. 66). These theorists believed the structures of capitalist production in modern society were “threaten[ing] the spirit and today even the material survival of mankind, and not technological progress itself” (Frankfurt Institute for Social Research, 1973, pp. 94-95; see also Held, 1980, p. 66). In order to understand the mode in which the process of rationalization is organized, only an interdisciplinary approach would suffice. All aspects of a society, its history, including historical context, the psychological development of the society’s individual members, the political influence of the economy and economic conditions, and the influences of cultural artifacts such as art and music as well as popular media messages, are components of and contributors to the spread of instrumental reason and as such must be analyzed in relation to that society’s ideology in order to discover and critique domination in that society.

Critical theory aims to assess ‘the breach between ideas and reality’ The method of procedure is immanent criticism. Immanent criticism confronts ‘the existent, in its historical context, with the claim of its conceptual principles, in order to

criticize the relation between the two and thus transcend them.’ (Held, 1980, p. 183)

**Bourdieu’s habitus.** As Shannon (2011) noted in his text, *Reading Wide Awake: Politics, Pedagogies, & Possibilities*, Bourdieu offers a middle ground between deliberate choice and social conditioning as an explanation of social acts of participants in a social phenomenon. As Bourdieu stated, “The habitus, the durably installed generative principle of regulated improvisations, produces practices which tend to reproduce the regularities immanent in the objective conditions of the production of their generative principle...” (2009, p. 78). Social practices tend toward reproduction:

In short, the habitus, the product of history, produces individual and collective practices.... The system of dispositions – a past which survives in the present and tends to perpetuate itself into the future by making itself present in practices structured according to its principles...– is the principle of continuity and regularity ... (Bourdieu, 2009, p. 82)

Shannon noted that for Bourdieu “agency does not guarantee change within social structures, but offers its possibility” (Shannon, 2011, p. 68). Thus, Bourdieu’s perspective offers the opportunity to CT to explain inequities in social practices in manner that is temperate.

**Application to this project.** CT is an approach used as “confirmation and elucidation rather than discovery” of social inequity with an aim to move beyond mere study and understanding to “critique and change society” (Patton, 2002, p. 131). This study seeks to show that the differences in the ways academic librarians, LIS scholars,

and the ACRL *Standards* conceptualize IL are due to a reinforcement of traditional stratifications in the discipline between participants of varying social position. CT serves as an appropriate structure to examine this phenomenon. CT provides the foundation for this study's presupposition of the varying definitions (or levels of interaction with IL) of these three groups of participants. CT also offers a means of examining the presence of ideology within the claims of IL, and the actuality of praxis within the field of LIS in U.S. higher education.

A Bourdieusian perspective is employed as a theoretical framework for this study. Bourdieu defined habitus as

systems of durable, transposable dispositions, structured structures predisposed to function as structuring structures, that is, as principles of the generation and structuring of practices and representations which can objectively "regulated" and "regular" without in any way being the product of obedience to rules, objectively adapted to their goals without presupposing a conscious aiming at ends or an express mastery of the operations necessary to attain them and, being all this, collectively orchestrated without being the product of the orchestrating action of a conductor. (2009, p. 72)

Bourdieu's habitus provides the view of a middle ground between external coercion and unconscious acquiescence, and as such offers a means with which to examine explanations of any existing discrepancies between the participant-groups in this analysis. Bourdieu stated that "habitus is the universalizing mediation which causes an individual agent's practices, without either explicit reason or signifying intent, to be none

the less ‘sensible’ and ‘reasonable’” (p. 79). Using this Bourdieusian principle of habitus and the aim of CT, the intention of this study is to show that rather than any extrinsic motivation, each of the participant-groups reenacts the social practices as a part of an existing environment and the varying specific role[s] within LIS they have chosen to fill. Bourdieu saw habitus as acting within participants “as the organizing principle of their actions, and ... this modus operandi informing all thought and action (including thought of action) reveals itself only in the opus operatum” (p. 18). Thus, the work of Bourdieu provides a direction to the use of the CT framework to describe the definitions of and levels of interactions with IL of the participants in the LIS discourse. In addition, CT offers a further explanation of the effects of instrumental reason which underlie the praxis of these participants.

**Addison’s and Meyers’ framework of information literacy definitions.** As noted in Chapter 2, Addison’s and Meyers’ categorizations of IL definitions offer a relevant “interpretation ... [that is] concerned with the interpretations of information literacy that stem from the library and information science field .... to illustrate how values, goals and institutional priorities play a part in defining (and reifying) who is ‘information literate’” (2013, para. 2, 3). Addison’s and Meyers’ basis for framing their three conceptualizations of IL within LIS shows, as demonstrated in Chapter 2, a historical development of definitions of IL. Establishment of a historical context of the evolution of IL phenomenon within U.S. higher education and within LIS in the United States is a crucial component for the application of CT in this project.

**Limitations.** CT is an orientational approach to qualitative research, beginning with the pre-assumption that some inequity or imbalance is at play in the social sphere under study, and because of this pre-assumption, some critics have charged objectivity within CT is not possible. Frankfurt school critical theorist, Horkheimer, believed that as “objective reality is not identical with .... [nor can be fully apprehended by] man’s thought....an isolated and completable theory of reality is simply inconceivable” (Horkheimer, 1993, p. 189; see also Held, 1980, pp. 178-179). Not only is there an assumption of social imbalance, but an orientational approach also begins with the orientation, or theoretical framework, that explains that imbalance. Held noted from the Frankfurt school theorists’ viewpoint, and in particular that of Adorno, that “societal objectivity [is] the embodiment of all of the conditions, institutions and forces within which human beings act” (Adorno, 1976, p. 70; see also Held, 1980, p. 204). In addition, the Frankfurt school theorists believed “the illusionary nature of modern science’s claim to neutrality .... [wherein] social facts are given the status of natural facts ...” (see also Held, 1980, pp. 167-168). As Adorno noted, “empirical methods, whose power of attraction lies in their claim to objectivity, favour [sic] the subjective” (1976, p. 71).

Thus, traditionally viewed objective methods are seen to be incapable of objectivity, as most are based on the positivistic concept of the separation in science between fact and value, because in “this dichotomy science can judge the efficiency of means for given ends but it cannot contribute to the formation of an objective basis for values ... The dichotomy is untenable ... [as] the ideals of objectivity and value-freedom are themselves values” (Held, 1980, p. 169). Because the goal of CT “is to be able to

judge between competing accounts of ‘reality’ and to expose realms of ideology” (Held, 1980, p. 173), the use of CT in this project offers an avenue to study the claims of IL and the actuality of those claims. The application of Bourdieu’s habitus offers a means to further elaborate upon the rationale of CT. The rationale in using this approach is based upon the pre-assumption that the actions and discourse of each of three participant-groups are enacting and re-enacting normative practices that were already in existence prior to the participants’ entry into their respective roles. This study seeks to describe this reinforcing of disciplinary normative practices.

### **Methodology**

**Definitions.** An excellent and concise definition of Critical Discourse Analysis (CDA) has been provided by Teun A. Van Dijk:

Critical discourse analysis (CDA) is a type of discourse analytical research that primarily studies the way social power abuse, dominance, and inequality are enacted, reproduced, and resisted by text and talk in the social and political context. With such dissident research, critical discourse analysts take [an] explicit position, and thus want to understand, expose, and ultimately resist social inequality. (Schiffrin, Tannen, & Hamilton, 2006, p. 352)

In addition, Van Dijk noted that discourses, “especially scholarly discourse, are inherently part of and influenced by social structure, and [are] produced in social interaction” (p. 352). However, it might appear from Van Dijk’s definition of CDA that CDA is limited to exposure of significant social issues, although critical discourse

theorists take a position in embarking upon analysis of discourse and discursive practices.

Wodak and Meyer note:

*CDA is therefore not interested in investigating a linguistic unit per se but in studying the social phenomena which are necessarily complex and thus require a multidisciplinary and multi-methodical approach* [emphasis in original]. The objects under investigation do not have to be related to negative or exceptionally ‘serious’ social or political experiences or events – this is a frequent misunderstanding of the aims and goals of CDA ... Any social phenomenon lends itself to critical investigation, to be challenged and not taken for granted.” (2010, p. 2)

Wodak and Meyer also stated that all approaches of CDA are problem-oriented.

Fairclough described CDA as comprised of “three basic properties: it is relational, it is dialectical, and it is transdisciplinary” (2013, p. 3). The relational property of CDA denotes the focus of the approach on social relations rather than on individuals or entities. The social relations under investigation are dialectical, which Fairclough explained as “relations between objects which are different from one another but not ... discrete” (p. 4). Fairclough used ‘power’ and ‘discourse’ as an example of concepts which are dialectic in nature. Finally, the transdisciplinary characteristic of CDA arises from the foundations of CT, which the Frankfurt school theorists termed interdisciplinary.

Fairclough, however, made a further distinction in that he sees even the

objects of research ... [as] constructed in a transdisciplinary way on the basis of theorizing research topics in terms of the categories and relations of not only a

theory of discourse ... but also other relevant theories ... [which] may be, depending on the topic, political, sociological, political-economic, educational, media and/or other theories (p. 5).

The transdisciplinary nature of CDA results in “translation” of, or connecting, the concepts of CDA with other theories or frameworks. Fairclough used the example of analyzing power relations in which theories and concepts from discourse theory would be connected to concepts and theories, such as power, hegemony, ideology, and legitimacy, from political theory (p. 6). Fairclough defined CDA as *critical*, with its focus on righting wrongs “from a particular normative standpoint” (p. 7), *discourse*, as “a complex set of relations including relations of communication between people ... but also ... describe relations between concrete communicative events” (p. 3), and *analysis* as being two-fold: *interdiscursive*, what particular discourses, genre and styles have been drawn upon and “how they are articulated together” (p. 7) and *linguistic or multimodal analysis*.

It is within these definitions of CDA by Wodak and Meyer and, primarily, Fairclough that this study will analyze the use of IL in LIS literature. More information regarding this point follows a brief overview of the use of CDA in LIS.

**Critical Discourse Analysis in Library and Information Science.** Discourse analysis (DA) (and CDA) has become an increasingly popular method of research in LIS. This section provides an overview of the discussions on DA and CDA in LIS that have the most bearing and influence on this project.

Bernd Frohman, in his work on discourse analysis as a research method in LIS, is credited with first introducing Foucauldian (or Foucaultian) DA in LIS (Haider &

Bawden, 2006; Haider & Bawden, 2007; Powell, 1999). According to Frohmann, DA is a qualitative research method “that draws from the quantitative approaches of several disciplines” (1994, p. 119). DA examines texts that are “serious speech acts” by “institutionally privileged speakers” (p. 119; see also Powell, 1999, p. 107).

Although Foucauldian DA has been proposed by a few authors as an appropriate research method for LIS (Budd, 2006a; Budd & Raber, 1996; Frohmann, 1994; 2001) and offers a great deal of potential for the study of IL, it has been relatively underused as a method of research in the discipline within the United States. It has been gaining in popularity as a method of inquiry in more recent years. This rise in the popularity of the use of DA by LIS researchers has coincided with the interest of critical theorists within the LIS scholarly community in the use of CDA.

According to Budd (2006a), there are two general branches of DA, the formalist linguistic branch and the culturally or socially based branch, each of which would be used to analyze written texts such as articles. However, as Martínez-Ávila, Smiraglia, Lee, and Fox (2015) noted, there is no prescribed way of performing this method of research. While there is no formalized process of performing Foucauldian DA, Frohmann noted,

Three key ideas of Foucauldian discourse analysis offer useful analytical resources for LIS: (1) the shift of theoretical attention from interpretation to the existence of statements, sets of statements, texts, and documents; (2) the study of overt, public, disciplined, and, in particular, institutionalized practices with statements, sets of statements, texts, and documents; and (3) the study of how

specific statements, and sets of statements, achieve sufficient stability to constitute authoritative and legitimate knowledge of persons, objects, processes, and events. (2001, p. 16)

Within the United States, LIS scholars who have employed the use of DA or CDA have examined a wide range of topics and applications of DA to their research. While DA and CDA have been used by LIS scholars for a number of research questions, the articles covered here are confined to only those studies related to IL for undergraduate education in the United States, even if only indirectly related to IL in higher education.

Day (1998) analyzed discourse of academic LIS on transformational organizational change in academic libraries. Thomas (2001) analyzed ALA promotional posters using DA. Budd (2006b) examined the use of rhetoric and argument in LIS discourse. Three separate research studies used DA to examine chat transcripts (Berndt-Morris & Minnis, 2014; Koshik & Okazawa, 2014; Westbrook, 2007). Adler (2012) used DA to examine the discursive practices of the Library of Congress, particularly in regards to the Library of Congress subject headings, to evidence the marginalization of the discourses of the humanities and social sciences, as well as marginalizing the general public. Fleming-May (2014) used concept analysis from nursing scholarship as a methodology for DA of LIS discourse on usage of library resources. James and Nahl (2014) provided information from a DA on students' information seeking behavior. Knox (2014) described findings from a DA on the discourse of book challengers. Martínez-Ávila, Smiraglia, Lee, and Fox (2015) discussed conceptualizations of authorship from their DA research.

**Application to this project.** With the opportunities for describing social phenomena as LIS scholars have advocated (Budd, 2006a; Budd & Raber, 1996; Frohmann, 1994, 2001), CDA is an appropriate research method for examination of definitions of IL by the participant-groups, academic librarians, LIS scholars, and the *Standards*. As Powell noted, DA offers LIS opportunities to examine

such questions as the definition of information as affected by new technology; how professional and corporate discourse constructs information so that it becomes the object of professional expertise, administrative structures, or corporate strategies; how information is constructed in the discourse of Melvil Dewey; and the ways in which the identities of information users are constructed in LIS theories (1999, p. 107).

The use of CDA offers the advantage over DA because in CDA both of the branches of DA described by Budd (2006a), 1) the formal linguistic branch and 2) the socially based branch are combined. Fairclough described CDA as the “analysis of dialectical *relations between* discourse and other objects, elements or moments, as well as analysis of the ‘internal relations’ of discourse ... [which] cuts across conventional boundaries between disciplines (linguistics, politics, sociology, and so forth) ... [and] is an interdisciplinary form of analysis, or ... a *transdisciplinary* form” [emphasis in original] (2013, p. 4).

Fairclough further noted that for critical discourse analysis, the focus is “on what is wrong with a society (an institution, an organization, etc.) ... [or] assesses what exists, what might exist and what should exist” (2013, p. 7). The critique can be either positive, which focuses on how people attempt to right societal wrongs, or negative, with a focus

on “how societies produce and perpetuate social wrongs” (p. 7). Ideologies, in the sense of those societal ideals which a society uses as “ways of representing aspects of the world... that contribute to establishing or sustaining unequal relations of power,” (pp. 7-8) figure largely in CDA, and critique of those ideologies can be focused on the ways ideologies are employed in the “service of power .... [or] on the grounds that they represent or explain aspects of the world inadequately” (p. 8).

As the objects of study under CDA are on the ways inequities are perpetuated throughout a society, texts form one major object of study. According to Fairclough (2013), analysis under CDA focuses on three dimensions or aspects: texts, discourse practice, and social practice. Within the dimension of social practice, examination in this project is focused why the discourse practice is as it exists and what impact the discourse practice has on the social practice in which the discourse resides by a focus on the social matrix of discourse and orders of discourse. Within the dimension of discourse practice, this study explores how the texts under analysis are created, disseminated, and consumed. Fairclough’s (1992) method provides for several dimensions in which analysis of discourse practice can be focused; in this project the dimensions of interdiscursivity and manifest intertextuality, and intertextual chains, are examined. The first dimensions will provide useful insight into how the profession has been influenced by and has reproduced the ACRL’s definition of IL. Within the dimension of text analysis, this study focuses on dimensions of modality and overwording, both of which are provided through Fairclough’s approach. The use of modality and overwording are particularly useful to uncovering an author’s degree or level of commitment to a concept. Although

Fairclough's approach does not provide a specific dimension, the analysis also examines the contexts of discussions of IL and the *Standards*, which, given the focus of this project on locating definitions of IL and the contexts in which these participant-groups discuss IL, examination in this area is relevant to analysis.

Further discussion and definitions of these dimensions and particular application to this project are provided in Chapter 4. The application of CDA in this project will focus on exploring these dimensions in the LIS discourse. One premise in this project is that the ACRL's definition of IL as expressed in the *Standards* has been a means of norming hierarchical roles within LIS higher education, and this means of norming has shaped the definitions of IL of ILI librarians and LIS professors in U.S. higher education as well as provided the context in which IL has been discussed by ILI librarians and LIS professors. For example, one pre-assumption of this research is that LIS professors and especially librarians have drawn their IL definitions from the *Standards*, and librarians, particularly, have used assessment measures of outcomes based on the *Standards* to demonstrate the value of their IL programs. While these librarians demonstrate the value of their IL programs to their institutions, they simultaneously undermine their calls for increased inclusion in academic programs. With the demonstrated value of one-shot 50 minute sessions, there is little incentive for the host institutions to expand IL programs beyond that format.

This project should offer several insights on the LIS discourse surrounding IL in the United States. In addition to the numerous discussions over definitions of IL, it is anticipated that this project will bring additional insight into how those definitions have

been shaped by the ideologies present in the *Standards*. Although other researchers have critically examined the LIS discourse on a number of topics including IL, this is the first that compares the discourse from the roles of the LIS professors and librarians, and offers a look at the ways the *Standards* have normed the discourse and the ways the discourse of these two participant groups has reproduced this norming.

### **Data Collection and Method of Text Selection**

The goal of this study is to examine and compare the definitions of IL by the three participant-groups in the discourse, the ACRL, LIS academe (professors and scholars), and academic ILI librarians. This section provides an explanation of the selection of texts used in this analysis. At the top level, the ACRL, a subdivision of the ALA, publishes various LIS policy statements. The primary document used in this analysis is the ACRL's *Standards*, mainly due to its long-standing influence on the IL movement within the United States undergraduate education in LIS since its adoption in 2000. The *Standards* represents the ACRL's earlier conception of IL and the specific skills the ACRL deemed necessary for IL during the time period most of the articles under analysis in this project were written and published. The second document used is the ACRL's *Framework* which is the publication of the ACRL's current thought on IL, from which a few documents under analysis drew upon for IL definitions.

At the next tier, LIS academe, professors and scholars, also create a wide variety of documents within the discourse on IL, as do academic ILI librarians, at the final level. The texts selected for this project were peer-reviewed research articles and one theoretical article written by LIS academe and ILI librarians. While many of the

documents created by LIS academe and ILI librarians could reflect the conceptualizations of IL of these two participant-groups, published articles reflect these participant-groups' perceptions of IL as they engage in the discourse with the LIS community. Although blog postings and books authored by LIS academe and ILI librarians would also offer insights into their publicized perceptions of IL, these formats were omitted, as explained in the next section. The *Standards* and published articles written by LIS academe and ILI reflect their intent to persuade the other groups to accept their definitions of IL and include the rhetoric each has used to convince the other groups, and the ACRL's documents and the published literature will shape future discourse within LIS about IL. At issue is whether these definitions of IL and ILI are in agreement or if differences in definitions of IL exist within these three groups. Because this research is about how IL is defined by these three groups and the implications for the profession and for undergraduate education, examination of the discourse enacted in the social setting of the LIS literature is relevant to understanding the influence of these participant-groups on their professional praxis and on students' education.

As described previously, Frohmann (2001) defined the three main ideas of Foucauldian CDA as texts, institutional practice through discourse, and how particular discourse is imbued with authority. CDA investigates social phenomena from an analytical position. As cited above, Wodak and Meyer noted, regarding CDA, "Any social phenomenon lends itself to critical investigation, to be challenged and not taken for granted" (2010, p. 2). What distinguishes CDA from other forms of DA is the researcher

takes a particular issue or social occurrence to examine from a critical perspective.

Foucauldian DA focuses on four questions:

- What is valid knowledge at a certain place and a certain time?
- How does this knowledge arise and how is it passed on?
- What functions does it have for constituting subjects?
- What consequences does it have for the overall shaping and development of society? (Jäger & Maier, in Wodak & Meyer, 2010, p. 34)

These questions form the basis of the analysis of the texts in this project.

The issue under examination in this study is the IL movement within higher education within the LIS community in the United States. In particular, this study examines how the ACRL's definition of IL has been interpreted by LIS academe and ILI librarians by examination of published articles written by LIS academe and ILI librarians. One premise is that the ACRL's definition of IL as expressed in the *Standards* has been a means of norming hierarchical roles within LIS higher education. Thus, this project examines the *Standards* and published research written by LIS academe and ILI librarians using CDA to illustrate this phenomenon.

### **Rationale and Explanation of Texts and Methods of Analysis**

The original intention at the beginning of this study was to examine a variety of texts, including books, journal articles, syllabi, and blogs, because of this researcher's belief that examining such a broad spectrum of items would enable a more accurate determination of variances in the use and definitions of IL by academic librarians, LIS scholars, and the ACRL. However, because of both the immensity of the project and the

many obstacles to obtaining many of the formats desired, the decision was made to base the project on an analysis of published research articles.

The first step was a search of library and information science and education databases for articles on information literacy in U.S. undergraduate education. Limiting to research articles published since 2000 resulted in over 2,300 articles as candidates for analysis. The next step was to sort these articles into categories of authorship: written by academic librarians, written by LIS professors, co-authored by academic librarians and LIS professors, and co-authored with professors of other disciplines. The information provided on most of the articles was used to determine the role within LIS that authors filled, supplemented by Google searches of institutions listed on by-lines with author information, when necessary. Because the number of articles was still too numerous for the detailed analysis of Fairclough's approach to CDA, a method of selecting a smaller number texts recommended by Fairclough was used.

The focus of CDA on discourse is, according to Fairclough, "especially relevant to detailed analysis of a small number of discourse samples" (1992, p. 230). Fairclough (1992) proposed one selection strategy as the use of *cruces* or *moments of crises* in a large corpus. He defined these moments of crises as "moments in the discourse where there is evidence that things are going wrong" (p. 192). For the U.S. IL movement in higher education, two separate years stand out as such moments. In July 2011, the ACRL Information Literacy Competency Standards Review Task Force convened to work on revision of the *Standards*, and in January 2015, the new *Framework* was filed by the ACRL. As the *Standards* had been for many in higher education the "de facto definition"

(Bell, 2013, para. 1) of IL, these two years can be viewed as moments of crisis within the discipline. Because the Task Force did not convene until mid-2011, viewing items published throughout this year can also offer the advantage of the perspective of the discourse of librarians and academe prior to the engagement of LIS professionals into discussions of what revisions should be made to the *Standards*.

Limiting to the years of 2011 and 2015 narrowed the number of articles to 322. The documents were imported into the qualitative software application, NVIVO, which was used to code the text of documents in order to determine the number of occurrences of IL in the articles. Any articles that were tagged with the key phrase, information literacy, but did not contain the phrase in the text of the article were then eliminated. Also eliminated were articles that discussed IL or ILI in contexts other than first-year students. As a result, the sample size contained 57 articles: three written by LIS professors, 45 written by librarians, one article co-authored by librarians, LIS professors, and other disciplinary professors, seven co-written by librarians and other disciplinary professors, and one article written by two professors outside of LIS. Table 1 shows the breakdown of articles in authorship role and year. (See Appendix A for the list of articles used.)

Table 1

*Breakdown of Sample Size on Role of Author and Year*

Role of Author(s)	2011	2015	Total
Librarians	16	29	45
LIS Professors	2	1	3
Librarians, LIS Professors, Outside Professors	0	1	1
Librarians, Outside Professors	4	3	7
Outside Professors	0	1	1
Totals	22	35	57

Using a combination of reading and re-reading and coding the texts of these remaining documents, excluding reference lists and main titles within NVIVO, the texts were examined for broad themes. (See Appendix B for lists of phrases and number of occurrences in each article.) Tables 2 and 3 below show the number of times the phrase, information literacy or information literate, appears in the texts under analysis. Table 2 shows the librarian-authored articles in which the phrase appeared 20 times or more.

Table 2

*Highest number of occurrences of the phrase information literacy or information literate in librarian-authored articles*

Librarian Authored Articles	IL
Christensen, 2015	20
Luetkenhaus, Borrelli, & Johnson, 2015	20
Critten, 2015	25
Tewell & Angell, 2015	25
Caminita, 2015	26
Gustavson, Whitehurst, & Hisle, 2011	27
McCallum & Collins, 2011	28
Fain, 2011	29
Karshmer & Bryan, 2011	30
Holliday, Dance, Davis, Fagerheim, Hedrich, Lundstrom, & Martin, 2015	43
Fabbi, 2015	45
Brier & Lebbin, 2015	46
Archambault & Masunaga, 2015.	59
Townsend, Brunetti, & Hofer, 2011	72
Gains & Stoddart, 2011	77
Lowe, Booth, Stone, & Tagge, 2015	93
Booth, Lowe, Tagge, & Stone, 2015	112

Table 3

*Number of occurrences of the phrase information literacy or information literate in all other authorship role categories*

Article	Role	IL
Douglas, Van Epps, Mihalec-Adkins, Fosmire, & Purzer, 2015	L, LIS-P, OP	33
Ferrer-Vinent & Carello, 2011	L, OP	7
Kelly, Williams, Matthies, & Orris, 2011	L, OP	103
McClure, Cooke, & Carlin, 2011	L, OP	50
Paterson & Gamtso, 2011	L, OP	25
Moore, Black, Glackin, Ruppel, & Watson, 2015	L, OP	28
Rapchak & Cipri, 2015	L, OP	47
Rinto & Cogbill-Seiders, 2015	L, OP	32
Gross & Latham, 2011	LIS-P	69
Markey, Leeder, & St. Jean, 2011	LIS-P	46
Kim & Shumaker, 2015	LIS-P	97
Kuh & Gonyea, 2015	OP	55

Note: L= librarian, LIS-P=LIS professor, OP=Outside professor

Coding for phrases allowed focus to be placed first on the broad themes of the articles. After this initial phase of coding, next began the process of more granular coding by closely reading each article and coding for other themes that were present. (See Appendix C for the second listing of phrases.) These themes provided insights into the actual usage of IL by the various authors.

## **Conclusion**

Although a relatively unused research method, CDA affords the opportunity to examine the discourse of academic librarians, LIS scholars, and the *Standards*. The application of Bourdieu's habitus to CT and the use of CDA as a method allows distillation and provides a framework to describe the differences in definitions of the participant-groups. Not only should this approach offer insights into the LIS discourse on IL in higher education, but should also help build the burgeoning trend of discourse studies in the discipline.

## CHAPTER 4: DISCUSSION AND FINDINGS

### Introduction

Examining the articles in comparison with the *Standards* and *Framework* using CDA allows both a broad view of the social practices of the discipline and a focused view of each participant-groups' perspectives of IL, their self-identities, and how the social practices and norms are re-enacted. The following provides an overview of the data collection and selection methods used in this analysis.

### Findings

There are many methodological elements to CDA, dependent upon the researcher's perspective and theoretical framing (Fairclough, 2007; Wodak & Meyer, 2010). This project drew from Fairclough's three-dimensional framework approach to CDA, which is a method of analysis that examines three aspects of discourse: analysis of discourse practices, analysis of texts, and analysis of the social practice in which the discourse resides (2013, also 1992). Although there is no prescribed linear path to this approach, and indeed it is an iterative process, in the following description of this project for the sake of simplicity and comprehension, each aspect in each of these three areas is discussed in a linear fashion moving from the macro level and moving to the micro level where appropriate, rather than the cyclical process followed in the analysis. As Fairclough noted, "in any particular analysis some of the categories are likely to be more relevant and useful than others, and analysts are likely to want to focus upon a small

number of them” (1992, pp. 231-232). Thus, the following description of findings also includes the categories that were most relevant to this project.

**Analysis of the social practice.** In this dimension of CDA - analysis of the social practice - the researcher examines why the discourse practice is as it exists linguistically and socially and what impact the discourse practice has on the social practice in which the discourse resides. Fairclough provides no checklist of questions for this dimension of analysis. This analysis concentrates on the social matrix of discourse and orders of discourse.

***Social matrix of discourse.*** Within this area, the researcher identifies the dominant social relationships and structures within the discourse practice in which the texts under analysis reside, in order to identify both how the analysis texts are placed in the discourse practice and whether the analysis texts conform and reproduce, or transform the social practice (Fairclough, 1992, p. 237). In this project, analysis in this dimension was on the relational and impact aspects of Fairclough’s (1992) CDA. In terms of relational aspects, all but three of the articles participated in the discourse in ways that are normative and reproduce existing social practices of reenacting and reinforcing conceptions of IL aligned with the ACRL’s official IL policy documents, the *Standards* and the *Framework*. Of the remaining three articles, arguably the text authored by Townsend, Brunetti, and Hofer (2011) also presented views in line with the ACRL, as Townsend was a member of the Task Force.

The article by Mark (2011) stood in opposition to the traditional view of the privilege of peer-review in higher education as a signal of the quality of information

contained in information sources. However, Mark continued to reinforce the ACRL view of IL as foundational for critical thinking and lifelong learning (2011, p. 7). Thus, in the context of IL, Mark's article also reproduced the ACRL's perspectives on IL.

The final article of the three was written by Critten (2015). Critten presented the view that the *Framework* does not adequately address the concept of critical self-reflection or "understanding the social, political, and cultural forces that shape and filter information is a means of empowerment" (p. 146). While she critiqued the *Framework* in these areas, Critten appeared to support the use of the *Framework* in her conclusion:

If educators wish for students to meaningfully internalize the concepts outlined in the *Framework*, those contexts and concepts of research should be the focus of instruction rather than a side note in an instruction session focused on the tools and mechanics of research (Critten, 2015, p. 155).

Therefore, this analysis concluded that Critten, as with all the texts in this analysis, also reproduced the ACRL perspective of IL.

**Analysis of discourse practice.** In this area of analysis, the researcher seeks to identify how the texts under analysis are created, disseminated, and consumed.

Fairclough (1992) noted these dimensions in which analysis of discourse practice can be focused; interdiscursivity and manifest intertextuality, and intertextual chains.

***Interdiscursivity.*** In Fairclough's approach, examining the interdiscursivity of a discourse practice is accomplished by identifying the discourse types which were drawn upon in the texts under analysis and describing how those discourse types were drawn upon. Fairclough identified the following example questions in which to examine

interdiscursivity:

Is there an obvious way of characterizing the sample overall (in terms of genre)? (if so, what does it imply in terms of how the sample is produced, distributed, and consumed?)

Does the sample draw upon more than one genre?

What activity type(s), style(s), discourse(s) are drawn upon? (Can you specify styles according to tenor, mode, and rhetorical mode?)

Is the discourse sample relatively conventional in its interdiscursive properties, or relatively innovative? (1992, p. 232)

The most obvious way of describing the texts under analysis is that of scholarly discourse. All of the texts were articles published in LIS journals, and all but three underwent the peer-review process typical of this genre. The mode of the articles is written. Intended for other professionals within LIS, the tenor is predominantly formal, with one article taking a somewhat more conversational tone. The rhetorical mode of these texts varies depending upon article type; the studies and case studies were predominantly descriptive and the theoretical article was expository and at times argumentative. (See Appendix F for article types and style elements.) Within the texts, however, authors often shifted in the use of rhetorical mode. For example, studies and case studies generally have several sections including introduction, literature review, methodology, theoretical framework, methods, findings, and conclusion. While the case studies and studies took a descriptive rhetorical mode in the literature reviews, methods, and findings sections, the introductions and conclusions were more often rhetorical or

persuasive, with theoretical framework sections most often expository. The sample texts, without exception, conform to the scholarly genre within its interdiscursive characteristics.

***Manifest Intertextuality.*** Fairclough described manifest intertextuality as the “grey area between discourse practice and text” (1992, p. 233). He noted that within this aspect of analysis the researcher looks to determine what other texts have been derived from, and he proposed examining discourse representation and presuppositions within the texts as means to establish what other texts have been drawn upon.

The discourse most often drawn upon in the texts under analysis is that of the *Standards*. Approximately half of the texts directly referenced the *Standards*. Fairly early into analysis of the articles, it was clear that most of the articles, including both those written by academic librarians and LIS academe, drew their definitions either directly or indirectly from the *Standards*. Indeed, out of the 45 articles authored by librarians, 22 articles referenced the *Standards* – ten of the 16 articles authored by librarians in 2011 cited the *Standards*. Of the 29 articles published in 2015, 12 mentioned the *Standards*, with four of these 2015 articles discussing both the *Standards* and the *Framework*. Two of the three articles, one from each year, authored by LIS professors referred to the *Standards*. Of the remaining nine texts, five also mentioned the *Standards*. Of the 2015 articles, a much smaller percentage referenced the *Framework*, only a total of four librarian-authored articles out of the total 38 articles published in 2015. Given that the ACRL filed the *Framework* in February 2015, this may not seem surprising, but with drafts of the *Framework* released periodically after the convening of the Task Force in

mid-2011, it is interesting to note that 18 of the 2015 articles referred to the *Standards*. (See Appendix C for article references to the *Standards* and *Framework*.) The 2015 article written by outside disciplinary professors was actually a reprint of a 2003 article, in which the *Standards* were referenced. Although originally this article was retained as it might have been revised or updated in the second publication, it was eventually removed because there were no changes made in the second printing. Table 4 shows the references to the *Standards* and *Framework* in 2015 published articles by all authorship categories other than librarian only authored articles.

Table 4

*Number of references to Standards and Framework by role of authorship – all others*

Article	Role of author	<i>Standards</i>	<i>Framework</i>
Kim & Shumaker, 2015	LIS-P	1	0
Moore, Black, Glackin, Ruppel, & Watson, 2015	L, OP	1	0
Rapchak & Cipri, 2015	L, OP	0	1
Douglas, Van Epps, Mihalec-Adkins, Fosmire, & Purzer, 2015	L, LIS-P, OP	1	0
Kuh & Gonyea, 2015	OP	1	0

Note: L= librarian, LIS-P=LIS professor, OP=Outside professor

Table 5 displays the number of references to the *Standards* and *Framework* by librarian authored articles published in 2015.

Table 5

*Number of references to Standards and Framework by role of authorship-librarians*

Article	Role of author	Standards	Framework
Angell, 2015	L	1	0
Archambault & Masunaga, 2015	L	7	0
Azadbakht, 2015	L	2	0
Bryan & Karshmer, 2015	L	0	8
Caminita, 2015	L	1	0
Caniano, 2015	L	0	0
Christensen, 2015	L	0	17
Critten, 2015	L	0	14
Djenno, Insua, & Pho, 2015	L	1	0
Ellis & Peña, 2015	L	1	0
Fabbi, 2015	L	1	0
Gibeault, 2015	L	1	0
Giles, 2015	L	3	0
Hosier, 2015	L	4	6
LeBlanc, & Quintiliano, 2015	L	6	17
Ludovico & Wittig, 2015	L	1	0

Other obvious discourses drawn upon within all of the texts are direct quotes, paraphrases, and summaries of previous scholarly discourse. All of the texts contain some form of a literature review. While the studies, overviews, and case studies contain a special section for a literature review, the theoretical article drew upon previous scholarly

discourse throughout its entirety. That all these texts drew upon the ACRL documents and previous literature is not surprising as this is conventional for the scholarly genre.

Another item of interest within the aspect of manifest intertextuality is the discussion of threshold concepts by Townsend, Brunetti, and Hofer, published in 2011. They proposed a shift of the conceptualization of IL from a skills-based pedagogical approach to that of a theoretical construct based on such threshold concepts as format as process, authority as constructed and contextual, information as commodity, primary sources and disciplinarity, and library as part of the research process. Many of these concepts can be traced to the later *Framework* threshold concepts, of no surprise as Townsend, a data librarian, served as a member of the Task Force, and this article is one cited in the *Framework* as a text drawn upon in the creation of the document.

Presuppositions were defined by Fairclough as constructs which the author presents as established fact (1992, p. 120). In this examination, at least one of three presuppositions was present in all but 12 of the texts: definition of IL, importance of IL skills, or importance of lifelong learning. In 35 articles, the authors did not provide any discussion or evidence for the importance of IL. Twenty-seven articles did not define IL, and seven merely referred to lifelong learning, without providing evidence or discussion regarding the significance of this construct. For example, the excerpts below show how authors drew upon these constructs to support teaching IL with claims of IL supporting lifelong learning (underlined in excerpts below for clarity). Appendix E displays the occurrences of these presuppositions in the articles analyzed.

The 1989 ALA Presidential Committee on Information Literacy defines information literacy as the ability “to effectively locate, evaluate, and use information”. Information literacy instruction is the process of teaching students how to develop cognitive skills for use in their college studies and throughout their lives. It is the latest incarnation in the evolution of library education and differs from bibliographic instruction because it focuses on evaluation skills instead of the mechanics of retrieving information in a library environment. (Gustavson, Whitehurst, & Hisle, 2011, p. 726) [Librarian authors]

If librarians and other teaching faculty change their approach of privileging peer review to a student-centered approach and include student views, information literacy will become more relevant to students, leading them more willingly to critical thinking skills and life-long learning. (Mark, 2011, p. 7) [Librarian author]

... One of the mission statements of Orientation Services is “preparing students for lifelong learning”, with the goal of “connecting students to valuable support resources”. This coincides with the University Library’s mission of “responding to the need of all members of the University community to be library and information literate.” (Cal Poly Pomona, “Mission, vision and values”, 2015, as cited by Hottinger, Zagami-Lopez, & Bryndzia, 2015, p. 469) [Librarian authors]

The attainment of information literacy skills continues to be emphasized as critical to support academic achievement, lifelong learning, and to prepare

students for the workplace. Information literacy is seen as vitally important, but investigations show that many students enter college without these skills. (Gross & Latham, 2011, pp. 161-162) [LIS professors]

Information literacy (IL) is a critical 21st century skill which empowers students to think critically when locating, evaluating and using online information sources. While these skills are universally seen as crucial to student success in academics and professional life, as well as forming the basis for lifelong learning, research repeatedly shows that many of today's university students enter the university without having received any IL training. (Markey, Leeder, & St. Jean, 2011, pp. 46-47) [LIS professors]

***Intertextual chains.*** Within the dimension of intertextual chains, the analyst identifies the distribution of the text under analysis and describes “the series of text types it is transformed into or out of” (Fairclough, 1992, p. 232). One aspect within Fairclough's approach in examination of this dimension is to consider the type of audience expected, as well as to look for indications that more than one type of audience is expected (p. 233).

In the texts analyzed, the general target audience is the community of LIS professionals within higher education. All of the texts were published in LIS academic journals. Within the target audience, LIS academe and academic librarians in higher education are two main subgroups. These authors expected their audience to be conversant with library jargon and especially interested and active in IL and ILI. In addition, it is expected that the authors anticipated various discourses to draw upon their

work, including influencing the instruction of others in LIS and potentially influencing future national organizational policy statements (e.g., future iterations of the *Framework*) or local institutional and/or state IL policies.

**Analysis of texts.** The next step in the project was an in-depth analysis of each of the texts. Fairclough's approach provides a number of dimensions in which to examine texts. In analysis of the texts, focus is on the dimensions of modality and overwording. Within analysis of the texts, attention was also directed to examination of the contexts of discussions of IL and the *Standards*. While Fairclough's approach to CDA does not provide a specific dimension for this aspect, given this study's focus on locating definitions of IL and the contexts in which these participant-groups discuss IL, examination in this area is relevant to the textual analysis.

**Modality.** Fairclough (1992) defined modality as a way to determine the degree to which the author or authors of a text align themselves to or disassociate themselves from concepts under discussion in their text. Fairclough's method of examining modality, or the author's degree of affinity to a concept, is to look at the texts for the use of modal auxiliary verbs, such as would, will, could, can, may, etc., as well as tense of verbs. This project focused on the use of modal auxiliary verbs by a search of each text for the authors' use of this grammatical element. (See Appendix G for number of occurrences of modal auxiliary verbs.) Tables 6, 7, and 8 list some examples of parts of speech indicating modality examined in this analysis of the texts.

Table 6

*Common examples of modality: Nouns and adjectives*

Nouns			
chance	opportunity	possibility	necessity
capacity	certainty		
Adjectives			
potential	possible	certain	definite
clear	probable	likely	unlikely
total	essential		
absolute	complete		

Table 7

*Common examples of modality: Verbs*

Modal Verbs			
would	can	will	could
should	must	might	may
shall			
Modal Verb Phrases			
ought to	used to	was to	are/is to
had better	have to	have got to	would rather
would sooner	be supposed to	be about to	be bound to
be certain to	be likely to	be due to	be meant to
be obliged to	be sure to		
Verbs Indicating Modality			
appear	believe	expect	feel
gather	guess	know	look
promise	reckon	seem	sound
suppose	tend	think	

Table 8

*Common examples of modality: Adverbs*

Modal Adverbs			
actually	all else being equal	all in all	all things considered
allegedly	apparently	arguably	as a matter of fact
assuredly	at bottom	at first sight	believably
certainly	clearly	conceivably	conditionally
credibly	debatably	defensibly	definitely
doubtless	doubtlessly	essentially	evidently
fortunately	hypothetically	impossibly	in essence
in fact	in point of fact	incontestably	indeed
indisputably	indubitably	inescapably	inevitably
likely	literally	loosely	manifestly
maybe	most certainly	necessarily	needlessly
noticeably	observably	obviously	ostensibly
patently	perhaps	plainly	plausibly
positively	possibly	presumably	presumptively
probably	purportedly	really	reportedly
reputedly	scarcely	seemingly	statistically
strictly	sure	surely	technically
totally	transparently	truly	unarguably
unavoidably	undeniably	undoubtedly	unfortunately
unnecessarily	unquestionably	verifiably	without a doubt

After locating the uses of modal auxiliary verbs for each article, attention was directed to the use of the pure modal auxiliary verb “must.” With the use of must, authors were signifying their perceptions of the importance of the concept under discussion. The use of must by the authors adds a feeling of gravity and significance. In the following excerpts, with the use of must (underlined for clarity here in the excerpts below), these authors indicated their advocacy for collaboration with faculty to teach IL skills.

... If searching for information becomes an end rather than a means, students are likely to lose interest in and motivation to discover more about the subject. To minimize this outcome, the librarian and faculty member must collaborate to help students see that when they are doing research, they should not be exclusively focused on hunting for information, but rather they should conceive of the research process as way to contextualize and organize meaning. (Paterson & Gamtso, 2011, p. 120) [Co-authored by librarian and outside professor]

As assessment of student learning outcomes continues to be a growing focus for institutions of higher education, librarians will be integral to the assessment of information literacy among college students. To be successful, the literature shows, librarians must build strong collaborative relationships among teaching faculty and university administrators, and be active participants in design and assessment of learning goals, outcomes, and curriculum. (Luetkenhaus, Borrelli, Johnson, 2015, p. 51) [Librarian authors]

... Librarians must answer Norgaard's call and work to place the information literacy of the library into praxis with writing-intensive first-year seminars, thereby moving ahead the discussion, and building upon research paper, information literacy and first-year writing legacy studies and scholarship. Unless librarians heed this call, they and information literacy will continue to be marginalized. By examining student research and resources, we hope to change this paradigm and move the conversation forward on our campus. (Ludovico & Wittig, 2015, p. 37) [Librarian authors]

In the following excerpt, the author both opposed the prominence of peer-review journals in ILI, and also advocated librarians take on an expanded role in education.

Librarians must stop teaching purely within the academic frame and instead assist students in their intellectual growth and understanding though [sic] critical practice that more resembles a journey with the student. From a critical pedagogical approach, information literacy librarians *should* recognize that students have their own experiences with information, even if it is not valued in the scholarly world. In order to assist students in achieving information literacy skills, librarians *should* understand student perceptions of information. (Mark, 2011, p. 7) [Librarian author]

As these examples demonstrate, librarians see their role as integral to ILI, but also acknowledge the limitations of their current role in higher education. These examples also demonstrate the importance librarians have assigned IL. Students are positioned as in need of the assistance that librarians are uniquely qualified and situated to fill.

**Overwording.** According to Fairclough, overwording, defined as the number of different wordings in a discourse domain, indicates a preoccupation that points to ways a group conceptualizes a particular idea (1992, p. 193). In this dimension, examination looked at the various terms also used for IL and ILI, including bibliographic instruction, library instruction, research skills, library skills, critical thinking, and threshold concepts. Analysis did not find any significant differences in how librarians or LIS professors refer to IL or ILI (see Appendix B).

**Information literacy definitions and context of discussion of information literacy.** In the analysis of IL definitions, the focus was on two questions: 1) what definition(s) of IL are present within the articles, and 2) to whom definitions are attributed. A total of 22 articles out of the 57 texts analyzed either cited or drew from the definition of IL from the *Standards* or the definition from the ALA's 1989 *Final Report*, which the *Standards* used as the definition of IL. However, while one of these, a 2011 article written by librarians, quoted the *Final Report* definition, the context of this article was threshold concepts. No definition of IL was provided in 30 articles, but three of these drew from the *Standards*. The *Framework* was used in five articles, all published by librarians in 2015. (See Appendix F.)

The analysis of the contexts in which IL was discussed in the texts focused on comparing the overall themes of LIS professor-authored articles with librarian-authored or co-authored articles (see Appendix F). This study's examination also drew from analysis of modality and overwording (see sections above) to base findings. In this area, findings showed, not surprisingly, that while librarians and LIS professors may have

discussed the same *Standards*, the approach to those discussions differed, although the distinction was subtle at times. For example, several articles written by librarians and one by LIS professors examined IL games. In many of these articles on IL games, librarians focused on assessment of students' learning, how to incorporate IL games into one-shot sessions, and how IL games can increase students' engagement and motivation in ILI. While the professor-authored article discussed these topics, the articles authored by librarians tended to focus more on implications for their pedagogical practice, while the professor-authored article focused more on implications for future development of games. In addition, as the discussion of the analysis will show, predominant themes of IL and political ideologies as well as preoccupations with the importance of IL, and the importance and status of librarians and libraries, emerged. These themes were included as each theme serves to demonstrate the context and influences upon the participant groups' IL definitions.

At this point, another analysis of the texts was performed with a more expanded category of modality. Fairclough's approach allows for an expansion in this category (2003, p. 170). In the reanalysis, the texts were examined for direct or indirect indications of ideologies. The following provides highlights of the analysis of IL definitions, with a focus on the context in which IL and ILI is discussed. This discussion is provided within each of the categories of authorship, and then within the category of IL definition under Addison's and Meyers' framework of IL definitions. The term "outside professors" refers to professors of disciplines other than LIS. It should also be noted that while each of Fairclough's dimensions of modality and ideologies were found within these texts, the

excerpts used here are drawn mostly from the introductions and conclusions of the articles as these areas within the texts provided the most frequent and direct occurrences of the dimensions. Because introductions of texts within this genre typically set the tone for the article and conclusions sum up findings in conjunction with authors' commentary, the richest examples of Fairclough's dimensions often occurred within these sections of the texts. The following presents an overview of the findings of texts in each authorship and IL definitional category, with discussion of the results in Chapter 5. At this point, one category, the article authored by outside professors, was eliminated from this analysis because it was a reprint of an article published in 2003. The article was reprinted with no explanation or indication that it was a reprint or why it was reprinted.

*Library and Information Science professors.* My analysis of articles written by LIS professors was limited to a total of three articles; two published in 2011 and the other in 2015. This analysis of the definitions of IL espoused as presented in the articles revealed that only one of Addison's and Meyers' framework of categories of IL definitions was represented by one of the articles. As discussed in the previous chapter, Addison and Meyers presented three conceptualizations of IL within LIS; IL as skills, IL as a way of thinking, and IL as a sociocultural practice. Each of the three LIS professor-authored articles analyzed fit within the IL as a way of thinking definition. In each of the excerpts below, bold font has been added to all modalizations considered in the analysis. The items considered within the dimension of modality includes modalized verbs (see Appendix G), adverbs, phrases, and modalized clauses (see Fairclough, 2003, p. 170).

The first article examined in this category was the study authored by Gross and Latham (2011) which examined first year students' experiences with and perceptions of information. The study's focus on students' perceptions of information was the aspect used to place these authors' definition of IL in the category of IL as a way of thinking. The analysis found that the authors placed a significant importance on IL as noted by the opening paragraph. In the excerpt below, bold font has been added to indicate modality, and phrases have been underlined to indicate ideologies. The use of both these dimensions underscore the authors' level of commitment to IL:

The attainment of information literacy skills continues to be emphasized as **critical** to support academic achievement, lifelong learning, and to prepare students for the workplace. Information literacy is seen as **vitaly** important, but investigations show that many students enter college without these skills. (Gross & Latham, 2011, p. 161)

According to Fairclough, levels of commitment can be discerned in the use of epistemic (truth) and deontic (obligation) clauses and modal adverbs. The examination of modality from adverbs and verbs was expanded to other phrases and clauses, based on Fairclough's argument that "it is possible to take a very inclusive view as what may mark modalization" (2003, p. 170). In this excerpt, the modalizations are bolded and the truth claims or indications of ideology present in the statements are underlined. Further examples of modalization and inculcation of ideologies, whether direct or implicit, can be seen in the following excerpt:

The importance of achieving competence in information literacy is an area of **great** concern in higher education in the United States. **Increasingly**, this is evidenced by the inclusion of information literacy in the college and university accreditation process. Given the emphasis on achieving competence in information literacy, it seems logical to investigate students' own perceptions of their competence levels. Studies of people without competent information literacy skills have revealed a phenomenon in which individuals who lack skills in a domain tend to believe, **contrary to negative feedback**, that they have the ability to perform at an above-average level. (Gross & Latham, 2011, p. 164)

According to Fairclough, what is not said can also reveal insight into a text. In the above excerpt, the premise of IL being of great importance to higher education is substantiated by its inclusion in accrediting processes, but no mention of why it has been included in accreditation is indicated. The focus in the *Standards* on the importance of IL to lifelong learning is seen in the second paragraph of the *Standards*: "Information literacy forms the basis for lifelong learning. It is common to all disciplines, to all learning environments, and to all levels of education" (American Library Association, 2006, p. 2). The *Standards* were built from the ALA's *Final Report*, which noted the significance of IL to democracy, one of the ideologies looked for in the texts:

To say that information literacy is crucial to effective citizenship is simply to say it is central to the practice of democracy. Any society committed to individual freedom and democratic government must ensure the free flow of information to all its citizens in order to protect personal liberties and to guard its

future. As U.S. Representative Major R. Owens has said: Information literacy is needed to guarantee the survival of democratic institutions. All men are created equal but voters with information resources are in a position to make more intelligent decisions than citizens who are information illiterates. The application of information resources to the process of decision-making to fulfill civic responsibilities is a vital necessity. (American Library Association, 1989, para. 15)

Thus, the societal ideology of IL as necessary for participation in a democratic society is overtly stated.

In the analysis of the second 2011 LIS professors-authored article, by Markey, Leeder, and St. Jean, the findings were similar. The authors' definition of IL also fit within the definition of IL as a way of thinking given the PBL aspect of the IL game they discussed. Markey, Leeder, and St Jean positioned their discussion of IL within the findings of their study of undergraduates' IL game play. Their opening paragraph is also replete with ideology:

Information literacy (IL) is a **critical 21st century** skill which **empowers** students to think critically when locating, evaluating and using online information sources. While these skills are **universally** seen as **crucial** to student success in academics and professional life, as well as forming the basis for lifelong learning, research **repeatedly** shows that many of today's university students enter the university without having received any IL training. Academic IL programs have **ambitious** goals; however, **only a minority** of institutions feature first-year

experience programs where information literacy content is mandatory. Although faculty **delegate** teaching students information literacy skills to librarians, faculty are **primarily** concerned with disciplinary coverage, and are **therefore reluctant to cede valuable in-class time** to librarians. Students are intent on reaping the rewards faculty and library staff give them for mastering the core concepts of the academic disciplines and focus on their coursework rather than on information literacy skills and concepts. Librarians fight an **uphill** battle, **trying to reach as many students as they can** through a **wide range** of venues such as workshops, short courses, virtual reference assistance, web-based instruction pages, and walk-in assistance at information desks. (Markey, Leeder, & St. Jean, 2011, pp. 46-47)

As the bolded modalizations above show, these LIS professors position IL as critical, crucial, and lacking. Another revelation from this excerpt, shows that although some attention is devoted to the plight of students' lacking IL skills, the librarians are positioned as the primary victims, struggling to reach students and seizing and creating any opportunity they can.

One answer these authors proposed was IL games. In the excerpt below, the authors discussed an IL game BiblioBouts which taught students IL skills such as citation creation as evaluation of sources.

Along with the IL content and activities that are the core of BiblioBouts, students also **benefit** from gaining experience in **21st century** skills such as collaboration, communication, networking, and peer feedback. Reviewing the work of other players is a **crucial** element of the game, as students become members of a

learning community through practicing their **critical evaluation** skills both on their own sources and on those of their classmates, and through exposure to a **broader** array of research sources on their topic than they **might have found** on their own. Through assessing their own ratings, tags and comments as well as those of other players, students practice giving **constructive** feedback as well as receiving it. While playing BiblioBouts, students take on the role of a researcher by practicing the skills and habits of **expert** researchers. These new techniques and strategies will help students both in their college and professional careers. (Markey, Leeder, & St. Jean, 2011, p. 50)

Here the ideology of IL as the solution for college and professional life in the 21<sup>st</sup> century is placed in the foreground, while the actual IL skills supported by game play are not named within the text of this paragraph.

The third article analyzed within this category was a study published in 2015 by Kim and Shumaker, which explored the perceptions of students, faculty, and librarians of ILI in a first-year experience (FYE) program. The definition of IL discussed within this article similarly fit within the IL as a way of thinking category. Again, the authors' opening paragraph contained the ideology of IL, although it was moderate in tone compared to the previous two articles analyzed.

In recent years, many institutions of higher learning have created “first year experience” (FYE) programs. These programs are **specifically** designed to create an **engaging** learning experience for students, and to improve both student academic success and retention. As these programs have grown, academic

librarians have found them to be **hospitable** forums for information literacy instruction. Information literacy, or its siblings information fluency and critical thinking, are **widely** agreed to be **essential** for students' success in undergraduate programs and beyond. Librarians have thus delivered instruction in information skills in the context of FYE programs using a **variety** of methods and approaches. (Kim & Shumaker, 2015, p. 449)

In addition to the inclusion of the IL ideology and implied ideology of democracy in the above excerpt, IL and librarians were positioned by these authors as the primary foci of discussion, with students positioned secondary to institutions of higher learning, FYE programs, IL and librarians. Later in the article, librarians again play a leading role:

At the same time that higher education has increased its attention to FYE programs, another trend has been the **increased emphasis** among librarians on their teaching role. **As instructors**, librarians **take responsibility** for educational objectives that are **closely** related to the objectives of FYE programs. Librarians **foster knowledge** of the institution's library resources and how to use them, which is related to the **broader** goal of orientation to campus resources and services. They teach information literacy skills, which are **inextricably bound up with the development of academic skills and critical thinking skills**. **Thus it stands to reason that many librarians have sought out, and been encouraged** to participate in, opportunities to teach **various** aspects of library use, bibliography, and information literacy, in the context of FYE courses. (Kim & Shumaker, 2015, p. 450)

In the conclusion, the authors further emphasized the role of librarians and the centrality of IL:

Second, librarians and instructors **must** communicate and collaborate to **effectively** integrate information literacy instruction into courses. The survey results show that instructors, as well as librarians, see themselves as having a role in information literacy instruction. If the two groups fail to engage with each other, the results are likely to be some combination of **unnecessary** duplication, **gaps** in coverage, the librarian **being seen as having nothing unique to add**, and even librarians **being marginalized or left out entirely** ...

The fourth and final conclusion is that this study offers **further** support for other research that shows a positive relationship<sup>2</sup> between information literacy skills and academic performance. Here, student grades on assignments and student self-assessments of information literacy skills were significantly<sup>3</sup> correlated. This study recommends that continued assessment of this relationship be done, and shared with incoming students, as a **further** method to impress upon them that information literacy **truly** is a **critical 21st-century skill that is essential to their success**. (Kim & Shumaker, 2015, p. 456)

*Librarians, Library and Information Science professors, and outside professors.*

Only one article co-authored by librarians, LIS professors, and outside professors was analyzed. The study reported by Douglas, Van Epps, Mihalec-Adkins, Fosmire, and Purzer (2015) compared beginning and advanced engineering students' descriptions of IL skills, and their definition of IL falls within IL-as-a-way-of-thinking. The following

excerpt shows this article confirms the pattern of the opening text containing ideologies:

With the **vast amount** of information **readily** available to current students on the open web and through library resources, the skillset **necessary** to **navigate** through information and use it **appropriately** is **arguably** one of the most **important** factors for educational success. **All students, both undergraduate and graduate, need** to possess information literacy skills to manage the **rapidly changing technological environment**. **In particular**, future and current engineers are **challenged to be adept** at information literacy as **rapid** research and technological advances in their fields generate **new and changing** information that **directly** impacts their daily work. Throughout their careers, engineers **must** stay current within their field and incorporate **new** information to inform their own professional development. Innovation and **future** technology are, **at least in part**, influenced by information literacy skills. (Douglas, Van Epps, Mihalec-Adkins, Fosmire, & Purzer, 2015, p. 128)

Here IL ideology is evidenced through the imagery of a view of IL being the solution to students combating information overload and the necessity of IL for a successful career.

The third paragraph continues the authors' attention to the IL ideology of lifelong learning:

Information literacy skills are an **important** part of undergraduate and graduate education. For example, the Association of College and Research Libraries (ACRL) standards state an information literate person should be able to effectively search for, identify, evaluate, use, and document information. In

addition, the document *Criteria for Accrediting Engineering Programs*, created by the body which accredits engineering programs, ABET (Accreditation Board for Engineering and Technology), includes a requirement that students demonstrate life-long learning skills. As we prepare future engineers, it is **necessary** to cultivate habits of information literacy that **will serve** as the **prerequisites** for **life-long learning**. According to a 2006 report, 91% of responding engineering employers rated life-long learning as either **essential**, **highly important**, or **moderately important**. Yet, Lattuca and colleagues note that in the years since this criterion was **originally** released, growth in preparing engineering students in life-long learning skills has been **relatively stagnant**. (Douglas, Van Epps, Mihalec-Adkins, Fosmire, & Purzer, 2015, p. 129)

Life-long learning is the focus within the context of the field of engineering, which adds to the strength of the premise, further legitimating the claim.

*Librarians and outside professors.* A total of seven articles were analyzed with this category of articles authored by librarians and outside professors. Four of the articles were published in 2011 and the other three were published in 2015. The following section discusses highlights of the analysis of these articles, discussing first the articles which fit within Addison's and Meyers' IL definition of IL as skills.

Although the study reported upon by Ferrer-Vinent and Carello (2011) explored perceptions of students, because the focus of the research was on students retaining IL skills, this article fit best within the IL as skills definition. The article reported on the findings of a study of first-year biology students who had embedded ILI within a general

biology class. As with the other texts, the analysis found attention devoted to establishing the importance of IL:

The National Association of Biology Teachers (NABT) (2008) **recently** issued guidelines for evaluating undergraduate programs in biology. As part of those evaluation criteria requirements for biology curriculums, NABT states the **need** for students to learn how to do library research. The **importance** of information literacy for science and engineering students is also recognized by the Science and Technology Section (STS) Task Force on Information Literacy for Science and Technology, Association of College and Research Libraries (ACRL), and American Library Association (American Library Association) (2006). In addition, the National Research Council (2003) report of proposals to **improve** undergraduate training of **future** researchers in biology **underscores the value** of learning library research skills. **Logically**, an **ideal** time to **initiate good** research skills is **early** in a career. First-year biology students **need** to begin learning how to find and evaluate information so they can **adequately** utilize it when researching topics of interest in their biology courses. They **should expand** their **initial** skills throughout later courses. These lifelong library research skills help students through undergraduate and graduate programs and in their professional careers. (Ferrer-Vinent & Carello, 2011, pp. 254-255)

The excerpt above also shows the conflation of the ideology of lifelong learning with the library in the phrase “lifelong library research skills.” This phrasing positions library research skills as IL skills, and signifies the authors’ definition of IL is primarily the

research conducted in library holdings. While relatively moderate in tone in their opening paragraph, these authors conclude with stronger language:

Developing **strong** library research skills is a **necessary** component to becoming a **good scientist**. **However, most** academic programs do not have first-year, discipline-specific training in these research skills with the requirement of using those skills over the course of a semester. We have shown that an embedded library instruction program with **weekly reinforcement** of skills resulted in students who take a **more scholarly** approach to their studies in both advanced biology courses and nonbiology courses. Upperlevel students who had participated in the GBL2 library instruction made **better** library database choices, **a very important aspect** of library research. **In addition**, students who had taken GBL2 expressed **more** confidence in their library research skills and were **more likely** to use the library databases in their current courses than their counterparts who had not taken the discipline-specific instruction. ... **Clearly**, students who had GBL2 were **more likely** to meet the faculty's expectations. Overall, biology-specific library research instruction had **lasting value**, but we also believe that the skills should be revisited and scaffolded in upper-level courses so that our graduates have the tools to develop into **biology scholars** and **can succeed** in graduate school and their professional careers. (Ferrer-Vinent & Carello, 2011, p. 263)

One message is that IL through librarian-led instruction is necessary for academic and professional success.

Similarly, in an article in which the definition of IL fits solidly within the IL-as-skills definition, business students benefited from first-year embedded ILI as reported by Kelly, Williams, Matthies, and Orris (2011) in their concluding remarks:

The results from this research investigation suggest that IL knowledge and skills taught in an introduction to business course can be learned and applied in a **subsequent** introduction to financial accounting course. **Furthermore**, students receiving this instruction in the **earlier** business course performed **significantly** better than students who had not received this training. Some evidence suggests that repetition **may be helpful** for specific concepts, such as acronyms used for industry classification; and students, once reminded, **are able to show retention** of knowledge that extends beyond the current semester. **These findings encourage** the inclusion of course-integrated library instruction in business core classes **early** in the curriculum because students **can retain** this knowledge over an extended period of time for application in subsequent coursework. **Furthermore, targeted** reinforcement of particular library resources **later** in the curriculum can be helpful in achieving student learning. (Kelly, Williams, Matthies, & Orris, 2011, pp. 345-346)

Although moderate in tone in comparison to many of the other articles, the ideology of IL and its promises of long-term benefits is present. The position of these authors is that IL is best developed through progressive, iterative ILI which would better support students' retention beyond a single semester.

In the McClure, Cooke, and Carlin (2011) report on an ILI online tutorial, the authors' definition of IL also fits within IL-as-skills:

Delivering information literacy instruction has been a **driving force** in the library profession for more than twenty years. As early as 1989, the American Library Association defined an "information literate person" as one who "must be able to recognise [sic] when information is needed and have the ability to locate, evaluate, and use effectively the needed information." (American Library Association, 1989). A decade later, the (American) Association of College and Research Libraries developed the "Information literacy competency standards for higher education" to **further guide** academic librarians in **helping** their students achieve performance indicators such as defining the information need, recognizing information is available in different formats, identifying and using appropriate search terms, retrieving information, and citing sources (Association of College & Research Libraries, 2000). (McClure, Cooke, & Carlin, 2011, p. 26)

The authors established the definition of IL from the authority of the ALA and the ACRL. These authors took a subtler approach by posing the importance of libraries in ILI as their opinion:

**Despite the possibilities suggested** by the use of the Skunk Ape online information literacy tutorial in English Composition, we **believe** that online instruction **will never fully replace** face-to-face information literacy instruction at our institution. **In fact**, we find it **difficult to ever** see a time when in-person individual consultations **will disappear given the complexities and the**

**changing nature of research in the digital age. Further,** the face-to-face approach **may** be the **best** way to deliver instruction to upper-division and graduate courses, as these students have **increasingly specialized** research needs. **It is safe to say,** though, that online information literacy tutorials have **value** for both students and libraries and that they are here to stay. **It is also safe to say** that technological advances **will help to improve** online instruction over the years to come, **perhaps** allowing libraries to strike a **perfect balance** between online and in-person delivery of information literacy programmes. (McClure, Cooke, & Carlin, 2011, p. 40)

These concluding remarks demonstrate the authors' ambivalence with the necessity and value to students of online IL with an unstated concern in the future of librarianship. The authors are conflicted with the evidence from their findings that the tutorial provides support for IL development in students with their fears of being replaced.

The final article in which the authors' definition of IL fit within the IL-as-skills definition was a study co-authored by a librarian and an English professor. The report by Rinto and Cogbill-Seiders (2015) focused on the development of English composition students' IL skills in relation to whether students received ILI and on whether instruction was based on a theme. In the following excerpt from the introduction, the authors positioned ILI as a natural integration with English composition.

On **many** college and university campuses, English composition holds the **dual distinction** of being **both** a **gateway** course for academic writing and research as

well as a **requirement** for graduation. The **high impact nature** of these courses makes them a **focus** for many academic library instruction programs, and the information literacy literature is **filled** with case studies of collaborations between the library and English composition. **Due to the natural partnership** between information literacy and first-year writing programs, it is **important to continue** to evaluate how these programs **work in tandem** and can **best support** one another. (Rinto & Cogbill-Seiders, 2015, p. 14)

In the above excerpt, the combination of ILI and English composition is positioned as typical. By emphasizing the importance of English composition courses, linked or embedded ILI takes on additional significance.

In their conclusion, the authors further emphasized the significance of the link between English composition and ILI:

The results of this study suggest that the variables of library instruction and section theme have significantly positive<sup>2</sup> and marginally positive<sup>3</sup> impacts, respectively, on annotated bibliography score.

In particular, student work from sections of ENG 102 that attended a library session scored significantly higher<sup>2</sup> on the topic development criterion on the Proposal rubric, as well as the relevance and authority evaluative criteria on the Annotated Bibliography rubric. Section theme had a significant positive<sup>3</sup> impact on the topic development criterion on the Proposal rubric; on the Annotated Bibliography rubric, theme had only a marginal positive<sup>3</sup> impact. These results indicate that library instruction contributes to information literacy

skill development as evidenced by a course assignment, and point toward the possibilities of section theme as a contributing factor. If information literacy instruction programs and English composition **continue** to partner in teaching students research-based writing skills, a **combination** of **targeted** library instruction and **well-developed** themed courses has the potential to **deeply impact** student learning. (Rinto & Cogbill-Seiders, 2015, p. 20)

While the authors noted the specific IL skills evaluated and promoted by ILI, in the last sentence in the excerpt above, the phrase “deeply impact” implies benefits beyond these specific skills as long as the partnership between academic libraries and English departments continues, with the implication that the potential advantages to students would be diminished if the partnership ceased.

The other three articles co-authored by librarians and outside professors provide a look at the contexts in which IL was discussed from a perspective of IL as definition IL as a way of thinking.

The study reported by Paterson and Gamtso (2011) fits within the IL as a way of thinking category with IL skills described as transferable:

As teaching faculty and librarians at the urban branch of a New England public university, the authors collaborate across faculty, librarian, and student constituencies to teach students the information literacy skills they **need** in college and in the workplace. **Despite attempts to develop** students’ critical thinking **expertise**, students **often continue** to have **difficulty** understanding the acquisition of knowledge as a lifelong process; this is a **misunderstanding**

**exacerbated** by the tendency of the **different** constituencies of faculty and librarians to **emphasize** information retrieval rather than knowledge creation in the library instruction context. This **can have negative** consequences, as stressing the *tool* of information retrieval **runs the risk of distracting** the student from learning the *process* of generating knowledge from retrieved information, a process **crucial** to teaching lifelong learning skills.

**Moreover**, faculty and librarians' own approaches to and attitudes toward library tools, and their assumptions about student research practices, **impede** students' ability to view learning as a **recursive, creative, and ongoing** inquiry. The authors **have tried to overcome** these impediments by collaborating to craft a Freshman English Composition library instruction session that **moves beyond** developing students' information-gathering expertise by focusing on the development of transferable knowledge and critical thinking skills. (Paterson & Gamtso, 2011, p. 118)

On a cursory look, it seems from this excerpt that librarians are depicted as co-responsible with faculty in creating impediments to students' acquisition of IL skills, as seen in the statement, "Moreover, faculty and librarians' own approaches to and attitudes toward library tools, and their assumptions about student research practices, impede students' ability." However, the authors also positioned librarians and faculty as the means to overcoming those obstacles, which indicates the perspective that librarians are instructors as well as faculty. Collaboration is key for IL development as the authors made clear in their conclusion, shown in the excerpt below:

The authors **anticipate** that the institutional initiative – which **encourages** faculty, librarian, and student collaboration in the teaching of **core** information literacy competencies – **will prove as fruitful** as this small-scale classroom venture. The **multiple** voices in the classroom – teacher, librarian, mentor, and students – led to an educational environment in which **all of the participants** learned from one another and **reminded all stakeholders** that education is a **cooperative** enterprise. **By together** asking students to **examine** their own assumptions, pose **serious** questions about an **important** civic issue, and seek after knowledge by engaging in **scholarly** research, the authors invited them to become **active** participants in the scholarly discourse and set them upon the road to information fluency. (Paterson & Gamtso, 2011, pp. 124-125)

In addition, the authors pointed to the unstated benefits of being “upon the road to information fluency.” Although not defined or even referred to elsewhere in the article, the phrase *information fluency* denotes another IL ideology in which implies a higher level of competency as “information fluency is envisioned ... as the optimal outcome when relevant computing skills are combined with information literacy and critical thinking skills” (Zhang, 2002, p. 358). Lombard noted some including Mani (2004) claimed the adoption of the phrase information fluency by many may have been due to the positive rather than the negative connotations of illiteracy associated with the use of IL (2016). As in virtually all of the articles examined, another point is revealed in this excerpt in which IL as taught by librarians (or librarians and faculty) is necessary for “scholarly” or academic research. This demonstrates a point made by others, especially

proponents of CIL, in which the ideology of capitalism is revealed in the discourse with education viewed as a form of capital which allows greater participation in the dominant society, which can be viewed by the marketization of education (Fairclough, 2013).

Battista, et al. noted the influence of ideologies including capitalism on IL:

The *Framework* is essentially describing normative academic research and knowledge practices. In other words, it describes the culture of academic research. Although these academic cultural practices are always fraught and contested, they are historically largely shaped by cultures of dominance (i.e. European colonialism/imperialism, white supremacy, patriarchy, capitalism, heteronormativity, ableism, etc.). (2015, p. 117)

Although Battista, et al. were commenting on a draft of the *Framework*, their comments are applicable to the *Standards* as well, as the *Standards* also described normative academic research.

Moore, Black, Glackin, Ruppel, and Watson (2015) described their research on the use of team-based learning and Process Oriented Guided Inquiry Learning (POGIL) elements using iPads in ILI for first-and second-year students. Focused on ILI in a collaborative learning environment, their definition of IL also fits within IL as a way of thinking. The library was positioned as central to students' development of IL skills as shown in the excerpt from the conclusion below:

As a result of the Library's collaboration with the University's Foundational Studies Program, the Library and the UF information literacy curriculum has become an **integral** part of the educational experience for **all** incoming students

and had a **positive impact** on student learning. The information literacy instruction, linking learning activities **directly** to student assignments, was **advantageous** to skill mastery, retention, and transference. **Strategically** scaffolding these information literacy skills throughout the students' educational experience provided a platform for student **success**. The **desired** outcome for providing **consistent** library instruction to 1st and 2nd year students in the UF Program is that librarians **are able** to teach **higher level** information literacy skills to students in their 3rd and 4th year subject-specific courses, resulting in students' **increased** ability to effectively gather, evaluate and use information. (Moore, Black, Glackin, Ruppel, & Watson, 2015, p. 162)

In the final article analyzed in this category, Rapchak's and Cipri's (2015) research on ILI in learning communities of undergraduate students, their definition of IL fits within IL as a way of thinking with their attention on critical thinking and service learning. This excerpt from their introduction depicts librarians as central to ILI:

Graduating information-literate students – students who understand how to navigate information resources and evaluate their findings – remains a **major** goal of many colleges and universities. **While information literacy instruction occurs throughout the curriculum**, many institutions **rely** on their librarians to provide the **bulk** of this training. Academic librarians **often struggle** to make information literacy instruction **relevant** and **meaningful** to students, **especially first-year students**. For those teaching stand-alone, for-credit courses, engaging students remains a **perennial** challenge. At Duquesne University in Pittsburgh,

the reference and instruction librarians, along with several part-time faculty partners, face this **challenge** because **most** students **are required** to take a one-credit research skills course in their first semester. To **better link** information literacy skills to other courses, instructors of the Research and Information Skills Lab **have tried** to work with other faculty **when possible**. For example, one librarian found a section of the course to have **many** pharmacy students, so she contacted a faculty member in pharmacy to collaborate on some assignments. However, **most efforts** at **such** collaboration were **ad hoc** and **not sustained** until Duquesne experimented with incorporating information literacy into one of its learning communities. (Rapchak & Cipri, 2015, pp. 661-662)

In this excerpt, librarians are positioned as the champions of IL and at the mercy of reluctant faculty and even students, who “are required” to take a research skills course. Implied within this excerpt, the librarians were responsible for originating the idea of integration with the learning community, which the authors confirmed later in the article (p. 666), also implied here as successful. In their conclusion, they affirmed this success:

For libraries **striving** to **show the value** of their role in their university, working with learning communities provides an **excellent opportunity** to **highlight** the **essential nature** of libraries; the instruction, support, and assistance that they **can provide**; and how these can relate to **improved student grades and persistence**.

(Rapchak & Cipri, 2015, p. 673).

Again, the authors’ underscored the challenges librarians face in promoting ILI. The phrase “can provide” implicitly underscores the reluctance of faculty as the message

implied shows libraries as willing and able but at the mercy of faculty. This excerpt shows another aspect of IL ideology, in which ILI benefits students' academic performance and retention rates.

*Librarians.* By far the largest category of texts analyzed was a total of 45 librarian-authored articles. Rather than discuss each article as in the previously covered categories of authorship, the following provides the highlights of articles published in the years 2011 and 2015 which are representative of the main findings from librarian-authored articles in each of the three categories of Addison's and Meyers' framework of IL definitions. Also of interest is that several articles were authored by the same author or authors (Archambault, 2011; Archambault & Masunaga, 2015; Dennis, Murphey, & Rogers, 2011; Dennis & Dees, 2015; Angell, 2015; Boss, Angell, & Tewell, 2015; Tewell & Angell, 2015).

*Librarians: Information literacy as skills.* Most of the librarian-authored articles examined in this project IL fit in the category of IL as skills, with 27 articles presenting IL as skills-based as in Addison's and Meyers' framework of IL definitions. This conceptualization of IL sees IL as a set of discrete skills. A total of eleven were published in 2011. The context of the articles published in 2011 were reports of assessment based on various aspects which ranged from ILI for freshmen English (Archambault, 2011), impact of ILI based on the findings of a citation analysis of students' research papers (Cooke & Rosenthal, 2011), the use of clickers in an ILI session (Dennis, Murphey, & Rogers, 2011), multi-year assessment of students' IL skills (Fain, 2011), an analysis of communication textbooks for IL concepts (Gains & Stoddart, 2011), IL skills of students

developed from use of an IL tutorial (Gustavson, Whitehurst, & Hisle, 2011), an IL course created in collaboration with a computer science professor (Loesch, 2011), the collaborative ILI by a cataloger and a reference librarian (McCallum & Collins, 2011), pre-and post-ILI test results (Swoger, 2011), impact of an IL workbook (Walsh, 2011), and students' perceptions of an IL tutorial (Weiner, Pelaez, Chang, & Weiner, 2011). The following discussion of one librarian-authored article published in 2011 illustrates the findings of the analysis of these 11 articles.

While the richest data in most of the articles published in 2011 was found in the conclusion or other internal sections, the following excerpt from the introduction of the article by Swoger (2011) is illustrative of the findings in this analysis of librarian-authored articles in which the definition of IL was skills-based:

While **many** librarians are making **excellent** progress toward embedded library instruction, **many** sessions **are still traditional** one-shot instruction sessions. The *ACRL Information Literacy Competency Standards for Higher Education* have proved **very useful** for providing **overall** program guidance, **but only a small subset** of the outcomes **can** be explored in these **single** class sessions. **Distilling** from the standards what is **necessary** and **possible** for students to learn in a 50-minute session **can be difficult**.

**Determining** what to teach in a one-shot library instruction session for a freshman writing and critical thinking class **can be daunting** – librarians **would like** the students to learn **enough** to prepare them for college level research, but time **is very limited**. **Traditional** “library orientation” sessions **can focus** on the

building, the library web site, the web online public access catalog (OPAC), or other **basic** concepts.

Librarians at SUNY Geneseo's Milne Library used pre-and post-assessment results to evaluate and revise the goals and objectives for the one-shot library instruction sessions taught in **many** sections of a freshman writing and critical thinking class. The assessments **helped** the librarians focus on student learning outcomes and to **prioritize** the knowledge and skills we **hope** for students to learn in these sessions. (Swoger, 2011, p. 244)

Couched in relatively optimistic terms, the authors presented an attitude of friendly concern for the difficulties and challenges faced by librarians. Although the authors use of modalized phrases such as "but only a small subset", "can be difficult", and "can be daunting", presented the challenges as significant, the use of "can be" moderates the challenge to a scalable obstacle. The challenges faced by librarians were given primary attention with students presented as passive possible recipients of the benefits of librarian expertise and guidance. In this excerpt, direct reference to IL ideology was omitted; it was implied in the reference to the *Standards* in the second sentence of the first paragraph.

There were 16 librarian-authored articles in which the IL definition fit in IL as skills published in 2015. The context in which IL was discussed in these articles ranged from assessment of the effectiveness of a rubric to evaluate students' IL skills (Angell, 2015), the use of curriculum mapping to plan ILI (Archambault & Masunaga, 2015), the impact of a discovery tool on ILI (Azadbakht, 2015), various aspects of library

orientations (Boss, Angell, & Tewell, 2015; Dennis & Dees, 2015; Giles, 2015; Hottinger, Zagami-Lopez, & Bryndzia, 2015), embedded librarianship (Caminita, 2015), ILI for student athletes (Caniano, 2015), the use of Google Forms in ILI (Djenno, Insua, & Pho, 2015), use of crowdsourcing to market ILI (Ellis & Peña, 2015), the use of flipped classrooms (Gibes & James, 2015) or iPads (Gibeault, 2015) in ILI, assessment of ILI programs (Holliday, et al., 2015; Luetkenhaus, Borrelli, & Johnson, 2015), and assessment of the use of an IL game in ILI (Tewell & Angell, 2015).

Analysis of the 2015 librarian-authored articles in this IL definitional category showed, similar to the 2011 librarian-authored articles, that the richest data was found in the conclusions, although stronger levels of commitment was found in modalizations used. Several made only minimal references to the *Standards*, while others did not directly reference the *Standards*. The following excerpt from the concluding paragraphs of one article demonstrates findings typical in the analysis of these articles:

This pilot **was successful** in introducing librarians and instructors to the idea of using D2L and a flipped approach to **enhance** classroom instruction and **building enthusiasm** for the continued use of D2L as a home for **supplemental** library instruction. **Yet it is also clear** to us that the **ultimate value** for students in interacting with a librarian **comes from personal contact**, and digital learning objects **must be seen as a means to that end rather than a substitute for it**.

Connecting librarians to courses through the integrated librarian program **cemented** the library **as an integral piece** of the learning process, and **the bulk of feedback** from **both** students and instructors **focused on the value** of the

connection to a librarian, with **particular appreciation** for the **consistency** of having a single librarian.

For librarians, the **greater** collaboration with instructors and the systematic inclusion in the courses **improved** the quality and depth of our work with students and our **satisfaction** with the process. The **scalability** of this model **seems to have worked without trouble**, and we **will continue** to partner with FYE instructors in this way.

**In some ways**, what we did is **not revolutionary**. **In other ways**, the approach has **vastly shifted** the partnership between the libraries and the English Department and **has changed** our impact on the campus **to a degree** that we've **only begun** to measure. (Gibes & James, 2015, p. 13)

Typical of the examined articles published in 2015, attention to collaboration with faculty and focus on the success and importance of librarians' involvement in ILI are the dominant themes. No direct or implied reference to IL ideologies, including IL-as-skills are present in these paragraphs. The omission in these paragraphs indicates the authors' confidence in the audience's knowledge and acceptance of dominant IL ideologies. Specific IL skills were mentioned sporadically and infrequently throughout the text.

*Librarians: Information literacy as a way of thinking.* The definition of IL of twelve librarian-authored articles examined in this project fit within Addison's and Meyers' category, IL as a way of thinking. In this category definitions of IL are cognitivist in approach as adherents see IL as an attitude of mind. Four articles were published in 2011 (Battles, Glenn, & Shedd, 2011; Detmering & Johnson, 2011;

Karshmer & Bryan, 2011; Mark, 2011) and another eight were published in 2015 (Booth, Lowe, Tagge, & Stone, 2015; Brier & Lebbin, 2015; Debose & Miller, 2015; Fabbi, 2015; Keener, 2015; Lowe, Booth, Stone, & Tagge, 2015; Ludovico & Wittig, 2015; Pashia & Critten, 2015).

The analysis of most of the 2011 published articles in this category stood out more for the somewhat diminished degree of overt modalization and ideologies present than seen in other authorship and definitional categories. The contexts in which IL was discussed in these varied from the development of an IL game (Battles, Glenn, & Shedd, 2011), the positive impact on ILI of a university's Quality Enhancement Plan focused on critical thinking (Detmering & Johnson, 2011), the redesign of a one-shot ILI session (Karshmer & Bryan, 2011), and a theoretical article arguing against privileging peer-review articles in ILI (Mark, 2011). The highlights of the analysis of two articles published in 2011 (Karshmer & Bryan, 2011; Mark, 2011) are presented below. A discussion of the implications of these findings will be discussed in Chapter 5.

Drawing from models including Bruce's Seven Faces and Bloom's taxonomy, Karshmer and Bryan (2011) defined IL as constructivist process, which fits within the IL as a way of thinking category, as seen in the below excerpt, which appears in the section of the article in which the authors discussed theoretical models:

An earlier study by Seamans, which looked at the process of first-year student information acquisition in terms of designing instructional programs for this **specific** group, offered **some interesting insights** that **might be useful** in creating **meaningful** instructional scenarios. Similarly, Orne agrees that information

literacy is “contextual and depends on particular characteristics of an information seeker, an information need, and an information environment.” **Taking the discussion a step further**, Orne mentions Christine Bruce’s work, *Seven Faces of Information Literacy in Higher Education*, and describes how Bruce’s “conceptions” of information literacy illustrate **progressive** categories that help explain how information literacy is a component of lifelong learning. Orne also suggests that different learning taxonomies and frames of reference (Bloom, Perry) **might allow** librarians to develop lessons that **are not only** constructed around first-year students’ experiences and points of reference, but that they apply information literacy skills in terms of the **familiar** and **everyday** occurrences that first-year students encounter. This “constructivist” approach **will allow** librarians to build foundations that **will support** “the type of lifelong learning that information literacy advocates have promised.” (Karshmer & Bryan, 2011, p. 256)

The location of this excerpt in the original text demonstrates a departure from other articles examined in this project. The richest examples of ideologies and other dimensions of analysis as proposed from Fairclough did not appear in the introductory or concluding sections, but within internal sections of the text. The moderate aspect of modalizations, such as “some interesting”, “might be useful”, and “might allow”, contrast with the more overt expressions used in the other articles examined in this project. Fairclough noted modalizations indicate levels of commitment by the authors of the particular discourse (2003, p. 170). The ever-present IL ideology is presented in support

of the concept of IL as a way of thinking in departure from the more widely accepted skills-based definition.

The theoretical article by Mark (2011) also defined IL as a way of thinking as can be seen in the excerpt below:

How does the ability to locate, read and incorporate peer review journal articles improve undergraduates' critical thinking skills? Teaching faculty have noted that peer reviewed articles are a **shortcut** to ensure that students are “**not just using Google**” but accessing **reliable** articles. It is also a method that librarians use to measure the **efficacy** of library instruction sessions through citation reviews. Does the ability to locate, read and incorporate peer reviewed articles **necessarily** aid students in their ability to determine the reliability of sources and improve their critical thinking skills? I suggest that we are **privileging** peer review literature out of **ideals** rooted in academic culture more than for pedagogical reasons.

Undergraduates **would find greater benefit** in the **opportunity** to search and critique the sources related to their **personal** and **creative** interests as well as **relevant** to academic research projects. This is something that many peer review articles are **too narrow in scope** to accommodate. (Mark, 2011, p. 5)

In contrast to most of the other articles examined in this librarian-authored and IL definitional category, the author used high levels of commitment within the modalizations and indirect IL ideology in the introduction of the text in a challenge to the existing practice. The references to the students' “personal and creative interests” indirectly invoke the lifelong learning ideology in the *Standards* which the author also

drew from in the phrases “the ability to locate, read and incorporate,” and “ability to determine the reliability of sources and improve their critical thinking skills.”

The eight articles published in 2015 which were examined in this combination of definitional and authorship categories also discussed IL in a variety of contexts. Two articles by the same group of librarian authors discussed the positive impact on students’ development of IL skills with progressive librarian involvement (Booth, Lowe, Tagge, & Stone, 2015; Lowe, Booth, Stone, & Tagge, 2015). Brier and Lebbin (2015) discussed the use of drawing pictures of IL concepts in ILI to assist students’ development of IL as a way of thinking. The article by Debose and Miller (2015) discussed the collaboration between disciplinary faculty and librarians in the creation of a FYE course. Fabbi (2015) discussed factors from students’ high-school experiences which may impact undergraduates’ level of IL. Fostering students’ understanding of copyright issues was the focus of Keener’s (2015) article. The findings of a citation analysis study which examined the types and incorporation of sources as well as accuracy of citation style employed by students’ incorporation of sources was the context of discussion of IL in another article (Ludovico & Wittig, 2015). Pashia and Critten (2015) described the use of an ethnographic approach to ILI to develop students’ IL as a way of thinking. Similar to the 2011 librarian-authored articles examined in this definitional category, in the 2015 articles the richest data appeared in later sections. However, in the 2015 articles rich data was absent from introductions, but appeared in conclusions with more direct drawing from ideologies and higher levels of commitment apparent in the analysis of modalizations used. The following discussion highlights the analysis of two articles

published in 2015 (Lowe, Booth, Stone, & Tagge, 2015; Pashia & Critten, 2015), with a discussion of the implications of these findings addressed in Chapter 5.

The richest data in the analysis of the text by Lowe, Booth, Stone, and Tagge (2015) appeared in several paragraphs of the conclusion. The excerpt below shows several items of interest from one of the concluding paragraphs:

Instruction librarians experience **varying levels of buy-in** among faculty in **many** walks of course-integrated IL teaching practice. **As a result, it is profoundly important** to determine the student learning effects of **varying levels of engagement** to **target** our own efforts and **advocate** for **effective** course integration scenarios. In the context of the present research, it **is important** to note that a **great deal** of librarian pedagogical development underlies the IL instruction program at CCL. The program **is committed** to the **consistent cultivation** of a “community of practice” that **encourages best practices, confidence** in peer-to-peer collaboration with faculty, **meaningful** assessment, and **consistency in engaging** students with IL habits of mind reflected in our institutional definition of IL. These strategies are discussed at **greater** length in the publication of our pilot results. (Lowe, Booth, Stone, & Tagge, 2015, p. 500)

In contrast to analysis of other articles, the challenges of faculty buy-in faced by librarians are presented in a moderate statement of fact. The importance of librarian involvement in ILI is underscored by the phrase “profoundly important”. Somewhat unclear in this paragraph is the phrase “varying levels of engagement”, which in the context of the article is a reference to the level of faculty buy-in and involvement in ILI.

Collaboration with faculty is the primary item of focus in this paragraph as underscored with the two sentences, the first of which begins “In the context of the present research.” Students are given only a cursory reference.

Unlike most of the other 2015 librarian-authored articles that defined IL as a way of thinking, the use of higher level of commitment in modalizations appeared in the introduction of the article by Pashia and Critten (2015), as shown in the excerpt below:

The **emerging** field of critical IL recognises these dimensions, and **advocates** that librarians **eschew** what critical pedagogue Paulo Freire has called the “banking concept of education” in order to create **more meaningful** and **transformative** learning experiences for students ... We recognised that **much** of our **traditional** instructional curriculum fell within this banking concept of education and so we **sought new** ways to make learning **more impactful** for students. We found that **especially paradigmatic** instructional models like one-shots and orientations **did not allow** for **extended interaction** or **meaningful relationship-building**. **In particular**, we identified an **acute need** to revise our curriculum for UWG 1101, the university’s freshman seminar. Our sessions for this course were **ostensibly** the students’ library orientation and our **traditional** curriculum **very much fell within** the banking model of education. We wanted to create a **critical** introduction to the library space for students that **allowed** them to, as Elmborg writes, “read, interpret and produce ‘texts’” within their new-found **academic (if not yet disciplinary)** community. (Pashia & Critten, 2015, pp. 84-85)

At first glimpse, traditional IL ideology is not present, which indicates the authors' advocacy of a departure from the traditional skills-based IL definition to a more critical way of thinking and interacting with information. However, the phrase "read, interpret and produce texts" draws from the *Standards* skills-based definition.

*Librarians: Information literacy as a social practice.* In six articles, the authors' definitions of IL fit within the IL as a socio-cultural process definitional category. Adherents to this definitional approach perceive IL as highly contextual and that ways of interacting with information arise within the social practice. One article was published in 2011 (Townsend, Brunetti, & Hofer, 2011), and the other five in 2015 (Bryan & Karshmer, 2015; Christensen, 2015; Critten, 2015; Hosier, 2015; LeBlanc & Quintiliano, 2015). The following provides highlights from articles representing the discussion of the context and definitions of IL in this category.

The article by Townsend, Brunetti, and Hofer (2011) represents the earliest publication of articles analyzed in this project of espousing an IL definition that fits within IL as a social practice. In their article proposing what they call a "theoretical framework" (p. 867) of IL based on threshold concepts, their opening paragraphs demonstrated their view of the need to move from *Standards*-based definitions:

What do we teach when we teach information literacy in higher education? There is **certainly** no shortage of published guidelines, standards, teaching strategies, and advice awaiting the **motivated** instruction librarian. The literature **abounds** with the profession's collective efforts to **improve** teaching by **searching out meaningful** instructional content.

Yet while information literacy program statements and policies **generally espouse** goals of critical thinking and lifelong learning, research on the practice of information literacy instruction finds that it **is often taught** as a **kind of enhanced bibliographic instruction**. This **dissonance** between espoused theories and theories in-use suggests that while many **innovative** approaches have been theorized, **librarians in the trenches sometimes struggle** to relate theory to practice. We, the authors, began our exploration of improving information literacy instruction because we felt that our own teaching **was not as effective** as it **could be**.

This paper aims to **advance** the conversation around this issue by introducing threshold concepts, a pedagogical strategy **designed to help** instructors in higher education identify and teach foundational disciplinary concepts. It provides an overview of threshold concepts, looks at how they are already being applied to the field of information literacy instruction, and addresses related questions of disciplinarity and existing standards ... (Townsend, Brunetti, & Hofer, 2011, pp. 853-854)

The authors posed IL as a construct developing from “the conversation” and not limited to the “enhanced bibliographic” skills based on the *Standards*. Instruction librarians are positioned as potentially “motivated” and “in the trenches.” Posing IL as a social construct positions the concept as socio-cultural practice which the authors see as a new opportunity for instruction for motivated librarians.

Also seeing IL as a socio-cultural practice, Christensen (2015) drew on the definition of IL from the *Framework*, as seen in the excerpt below:

These frames **redefine** an information-literate student as one who is **self-directed**, **collaborative**, and **capable of comfortably participating** in a **rapidly changing information ecosystem**. In **updating** the essence of an **ideal** information-literate student, the Framework **offers an opportunity** for librarians to do the same for themselves and their instructional tools and tactics. An **ideal** information literacy session will **engage** students **while fundamentally changing** their perspective on the information ecosystem. Although the Knowledge Practices and Dispositions **are not prescriptive**, they **may be interpreted** as the skills students **should acquire** and the learning outcomes that **should frame** information literacy course design. (Christensen, 2015, p. 99)

The author positioned the *Framework* in optimistic terms; “ideal”, “offers an opportunity”, “not prescriptive”. The *Framework* is lauded as the chance for librarians to break from the outdated *Standards*; a promise which is also seen in the author’s opening paragraph:

The release of the first version of the Association of College and Research Libraries (ACRL) Draft Framework in February 2014 became a **catalyst** for finding **new ways** of providing information literacy instruction at the University of Virginia. A task force to develop information literacy instruction for undergraduate students began work on designing learning **opportunities that do not rely** on the methods of **traditional bibliographic instruction**. A review of

learning theories in education and rhetoric contributed to the initiative to **engage** students and **enhance** their grasp of core threshold concepts outlined in the Framework for Information Literacy for Higher Education (Association of College & Research Libraries, 2014). (Christensen, 2015, p. 97)

IL ideology is apparent through the further emphasizing of the bright future for IL with the *Framework*, with the *Standards* denoted as “traditional bibliographic instruction.”

In their article, LeBlanc and Quintiliano (2015) discussed adapting the mnemonic, C.R.A.P., to relate to threshold concepts from the *Framework*. They drew their discussion of IL from the definition of IL in the *Framework*. Contrary to concerns voiced by other librarians over the *Framework*, such as those who authored the *Open Letter*, in their abstract the authors demonstrated their acceptance of the new way of conceptualizing IL:

In 2015, the American Association of College and Research Libraries **jettisoned** its **longstanding** set of Information Literacy Standards for Higher Education and **adopted** the **richer, more flexible** Framework for Information Literacy for Higher Education. Composed of **core concepts rather than prescriptive objectives**, the Framework **more closely** mirrors the **complexity** of the **rapidly evolving** academic environment and **encourages engagement** on the part of students. **However**, many instruction librarians find that the framework’s flexibility also poses pedagogical **challenges**. The authors describe how instruction librarians at one university library have adapted and used a **popular** mnemonic device when presenting the frames, thus **promoting greater** student reflection and interaction. (LeBlanc & Quintiliano, 2015, p. 115)

The authors positioned the *Standards* negatively by the use of the verb “jettisoned” and the phrase “prescriptive objectives”, and prioritized the *Framework* as “richer”, “more flexible”, etc. Familiar IL ideology can be seen in the phrase “complexity of the rapidly evolving” and “promoting greater student reflection and interaction”. The weight given to these statements was further emphasized by the appearance in the original document, in which the paragraph is set out from the other text with a background of a bordered and shaded box. The authors further emphasized their advocacy with the *Framework* by their opening paragraph:

The **recent introduction** of the Association of College and Research Libraries (ACRL) Framework for Information Literacy for Higher Education **has redefined** information literacy standards and **shifted** them from “**a set of standards, learning outcomes, or any prescriptive enumeration of skills**” to a **broader “cluster of interconnected core concepts, with flexible options for implementation**” (Association of College and Research Libraries, 2015). **While much has already been** written about how the framework has changed the way instructional librarians will deliver and assess information literacy outcomes, the **current challenge** is how to introduce **these advanced concepts** into research classes. Instructional librarians at Villanova University’s Falvey Memorial Library have repurposed a **popular** mnemonic acronym, C.R.A.P., to introduce these new concepts to undergraduate students and **elevate** the instructor’s **pedagogical** goals in information literacy instruction. (LeBlanc & Quintiliano, 2015, p. 115)

These authors framed the “current challenge” facing librarians in a positive manner with the opportunity for librarians to teach “advanced concepts” and “elevate the instructor’s pedagogical goals.” Not only does this offer librarians opportunity, but the challenges can be faced by using a mnemonic acronym, implying the *Framework* will ease the burden on librarians.

To further emphasize the benefits of the *Framework* and the use of the acronym, the authors’ concluding paragraph summed up:

**Based on these initial assessments**, the **new** C.R.A.P. acronym has **broadened** and **enhanced** our students’ **overall** understanding of **advanced** research. During the class sessions, instructors have found that **specific** questions about nuts-and-bolts searching **are now being augmented** by **weightier questions** about intellectual property, the **ongoing** research process prior to and after forming a thesis, and the **acceptability** of blogs and online news resources in **modern** research. Most of all, the **new** C.R.A.P. acronym has **challenged** us as instructors to shift toward a **broader conceptual** pedagogy in our **introductory** information literacy class sessions; a **welcome** change from a **traditionally skills-based** classroom experience. (LeBlanc & Quintiliano, 2015, p. 120)

Students are the beneficiaries of the new approach; gaining a greater understanding of research and thinking at a higher level. Instruction librarians also benefit by being able to work with broader concepts, even in introductory IL sessions. Discussion of these findings are provided in Chapter 5.

## Reflection on the Analysis

In summary of the findings of this study, this discussion returns to Jäger's & Maier's (Wodak & Meyer, 2010) four questions that guided the examination of the texts: 1) what is valid knowledge at a certain place and time, 2) how does this knowledge arise and how is it passed on, 3) what functions does it have for constituting subjects, and 4) what consequences does it have for the overall shaping and development of society.

Within the field of LIS, it is clear from the results of this project that the ACRL's conceptualizations of IL have been the principal shaping of definitions of IL for both LIS academe and ILI librarians. The work of the members of both participant-groups is significantly influenced by the ACRL. The ramifications of the ACRL's influence are widespread: influencing accreditation standards, as well as national and state IL policies, and extending to disciplinary academe outside of LIS. The ACRL is, however, made up of members of these two participant-groups, which does provide some empowerment to those who are in agreement with the prevailing ACRL policy. As librarians typically perceive they are viewed at the lower level in LIS in relation to LIS academe, drawing from the ACRL likely provides acquiescent librarians a sense of enfranchisement.

While the ACRL has no power of enforcement of the *Standards* or the *Framework*, the majority of the members of these participant-groups reinforce the policies of the ACRL both in their work with students and in the published discourse, which serves as a norming of the ACRL's IL policy statements. Although the review of the literature in Chapter 2 discussed some in disagreement with the *Standards*, with the published literature within LIS regarding first-year freshmen IL comprised predominantly

of ILI librarians advancing views of IL aligned with the ACRL, those voices of dissent become marginalized. This has a tremendous impact on what is viewed as credible instruction in IL to students. When dissenters with the ACRL's IL conceptions are essentially silenced, valuable insights are lost, with potential of loss to students, to society as a whole, and for future higher education. More details on the findings are provided in Chapter 5, including the specifics on differences found between the 2011 and 2015 articles and differences found in relation to authorship roles.

### **Limitations to this Study**

This analysis was directed to an examination of the context and conceptions of IL within first-year programs in the United States at four-year institutions; thus, findings do not represent conceptualizations, definitions, or instruction in IL in other levels of higher education or in other collegiate organizations (e.g., community and technical colleges). Analysis is also limited in the number of texts, years examined, and type of documents used. While other conclusions may be drawn from analysis of texts such as blogs, syllabi, and institutional IL policy statements, these findings represent the context and definitions of IL for first-year students at U.S. four-year institutions in the years 2011 and 2015 is prevailingly shaped by the ACRL. Another area not represented in this analysis is the impact, deficiency, or lack of ILI in high school, an area which several of the texts under analysis mentioned as a factor in students' IL skills. Further research in these other contexts would provide valuable insights into IL within United States' higher education.

## CHAPTER 5: CONCLUSION

### Introduction

This final section summarizes the findings of the analysis, followed by a look at the current discussions within LIS on the *Framework*. The chapter concludes with recommendations for LIS as a result of the findings.

### Summary of Findings

This analysis did not find evidence that definitions of IL differ substantially between LIS academe and librarians, but did find support that most of the IL definitions of these two participant-groups tend to reflect the full definition of IL from the *Standards*. While the number of articles authored by LIS professors in this study were far too few to draw generalizations, the contexts of discussions of IL in the LIS professor-authored articles support claims that LIS academe tend to focus on IL theory, even within a study focused on assessing lower-order IL skills such as finding and accessing information.

Initially, the second research question was framed as “What skills are taught or assessed as IL skills by LIS in higher education?” because in examining the IL skills taught or researched, the intent was to determine whether the skills (and/or attitudes) taught or assessed reflect the definition of IL presented by the author or authors, how those skills or attitudes relate to the ACRL’s definitions of IL, and how those skills, attitudes, and/or definitions presented by the authors relate to philosophical context of IL presented. However, while gathering documents for the literature review and texts for

analysis, and in the early stages of analysis, the focus of this question was modified.

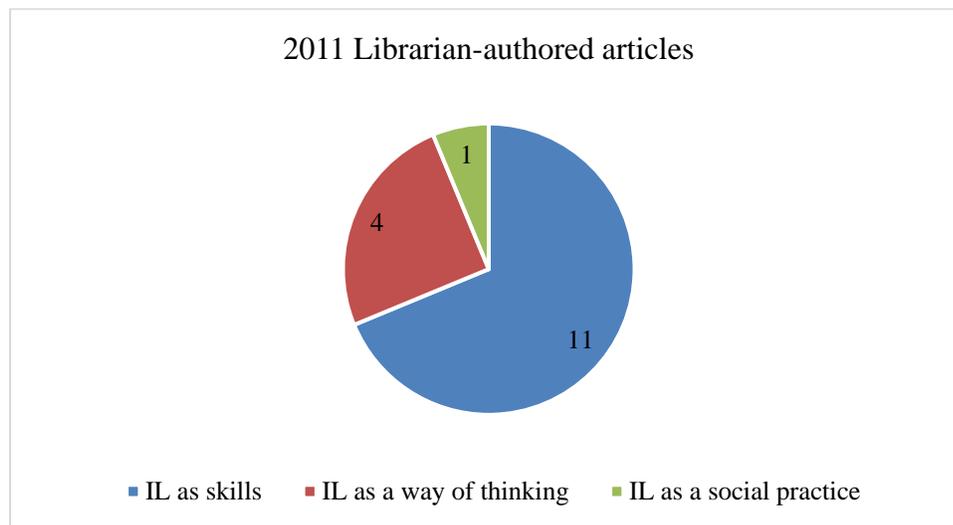
While what skills taught or assessed was examined (see Appendix E), the second research question shifted to an analysis of the definitional category from Addison's and Meyers framework of IL definitions in which authors' discussions of IL fit in conjunction with whether authors' definitions and discussions of IL aligned with the *Standards* or the *Framework*, in order to evaluate the existence of a link between authors' professional work, IL definitional category used, and tendency to reproduce the ACRL's IL policies.

The analysis of articles written by librarians solely or articles co-authored by librarians and professors from other disciplines displays similarities. In both of these groupings of authorship, librarians demonstrate their understanding of and desire to develop students' higher-order IL skills, such as critical thinking, ethical and legal use of information, and integration of information in their papers; however, many cite the constraints of what can be covered in their limited classroom time with students as a factor necessitating a focus on lower-order skills such as finding and accessing information in their ILI. The analysis of these articles shows a shift in the focus of librarians from lower-order IL skills to higher-order IL skills. A small number of articles published in 2011, only four articles written or co-authored by librarians, discussed critical thinking and various aspects of evaluating sources to over half of the 2015 published articles authored or co-authored by librarians which discussed higher-order IL skills, including critical thinking, threshold concepts from the *Framework*, evaluation of information, and use of information in students' work (see Appendix C).

**Definitions.** A finding of interest in this analysis of definitions was in the breakdown of articles among the three IL definitional categories. For example, of the 22 articles analyzed which were published in 2011, 14 articles contained definitions of IL as skills, seven were IL as a way of thinking, and one fit within IL as a social practice. In both years, librarians were far more likely to define IL as skills. Librarian-authored articles in both years were at least twice as likely to define IL as skills than IL as a way of thinking. In 2011 librarian-authored articles, 11 or 59% defined IL as skills, four (25%) defined IL as a way of thinking, and one (6%) defined IL as a social practice (see Figure 1 and Appendix H).

Figure 1

*Breakdown of IL categories of 2011 librarian-authored articles*



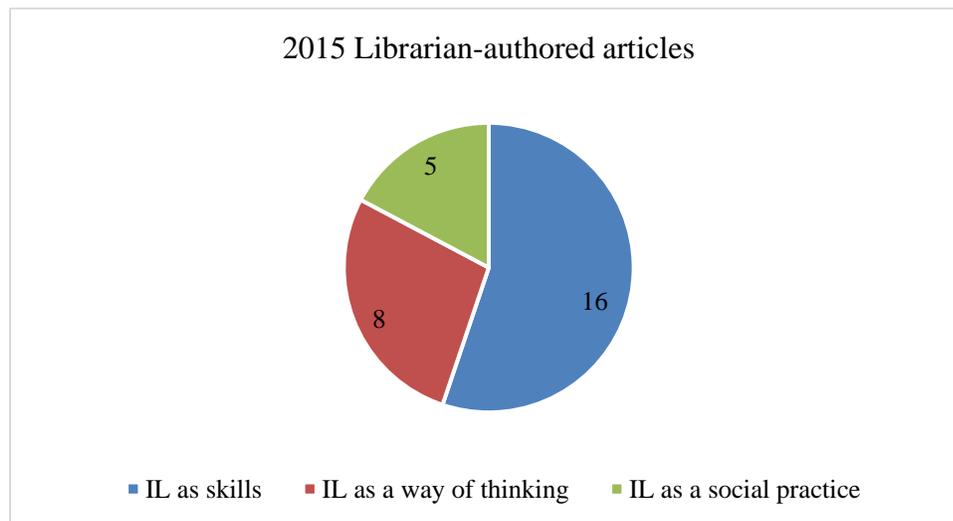
In the other six articles published in 2011 in which professors were authors or co-authors, they were equally likely to define IL as a way of thinking or as skills. The two 2011 articles written by LIS professors defined IL as a way of thinking as did one

librarian and outside professor author-team. The other three 2011 articles co-written by librarians and outside professors defined IL as skills (see Appendix H).

The 33 articles written by librarians which were published in 2015 also displayed a tendency of librarians, 16 (55%), to continue to define IL as skills. Of the other 13 librarian-authored articles published in 2015, eight defined IL as a way of thinking and five defined IL as a social practice (see Figure 2 and Appendix H).

Figure 2

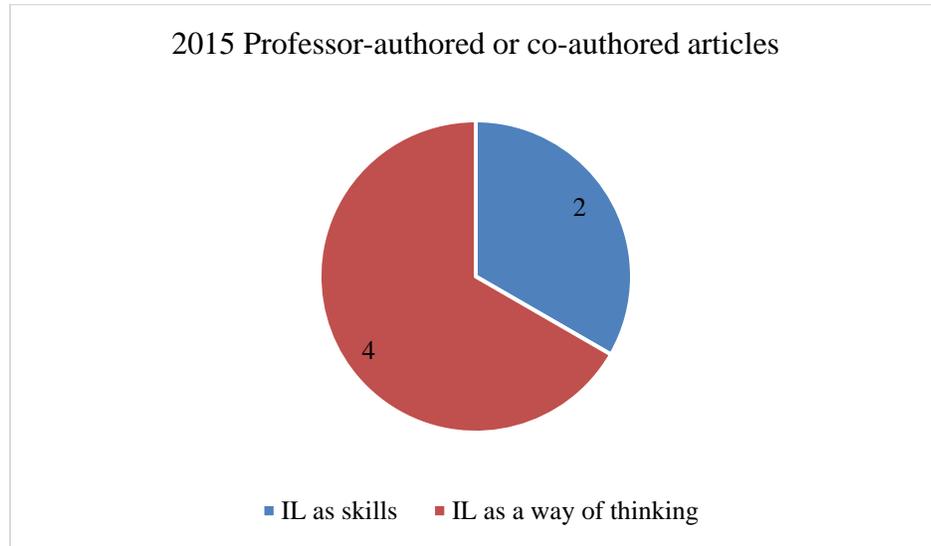
*Breakdown of IL categories of 2015 librarian-authored articles*



In 2015 published articles in which professors were authors or co-authors, IL defined as a way of thinking occurred twice as often as IL defined as skills (See Figure 3 and Appendix H).

Figure 3

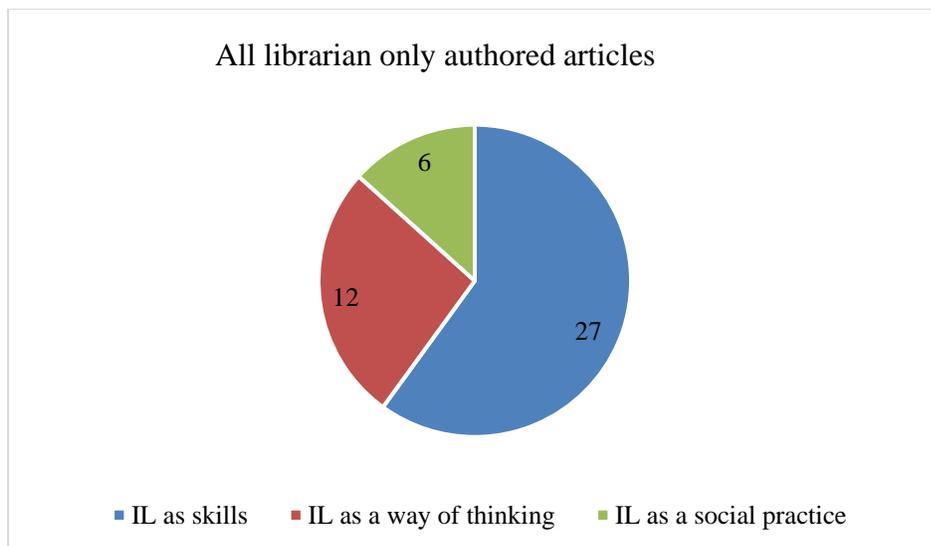
*Breakdown of IL categories of 2015 professor-authored or co-authored articles*



Overall, of the 45 librarian-only authored articles, 27 or 60% defined IL as skills, 12 (27%) defined IL as a way of thinking and six (13%) defined IL as a social practice (see Figure 4 and Appendix H).

Figure 4

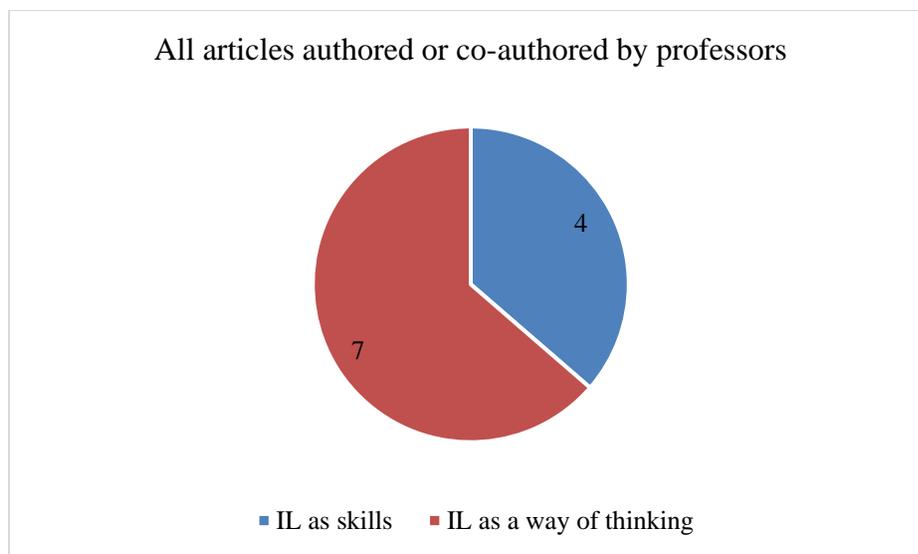
*Breakdown of IL categories of all librarian only authored articles*



In articles written by librarians only, librarians were more likely to define IL as skills. However, in articles published in both years which were authored or co-authored by professors, professors were more likely to define IL as a way of thinking (seven or 64%) compared to four (36%) which defined IL as skills (see Figure 5 and Appendix H). Librarian-only authored articles were the only ones to define IL as a social practice.

Figure 5

*Breakdown of all articles authored or co-authored by professors*



In addition, in the co-authored articles, the definitions of IL broke down as follows: four articles co-authored by librarians and outside professors defined IL as skills, three articles co-authored by librarians and outside professors defined IL as a way of thinking, the one article co-authored by librarians, LIS and outside professors also defined IL as a way of thinking.

While all three IL definitional categories can be seen to draw from the ACRL's definitions present in the *Standards and Framework*, this analysis found that the

categories of IL as skills and IL as a social practice more closely mirror the definitions of IL from the two documents, respectively. From this analysis, in these years of change within LIS, librarians tended to be more likely to respond to and reproduce ACRL's definitions in comparison to LIS professors. This is a subtle distinction perhaps, and given the limited numbers of articles analyzed in this project, by no means generalizable. In the cases where authorship of articles was a combination of librarians and professors, IL as skills and IL as a way of thinking were equally represented. No articles were found that were co-authored by librarians and LIS professors, and it would be of interest to see how this authorship partnership would define IL. From these limited findings, a probable definition would be IL as a way of thinking, given the lack of deviation from this definition in all cases of articles analyzed in this project in which LIS professors were authors or co-authors.

In 2011, librarians were somewhat more likely to define IL as skills than in 2015; however, in both years, the predominant definition of IL by librarians was IL as skills. In this study, the view is taken that the more direct interpretation of the *Standards* definition is that of IL as skills in comparison to a definition of IL as a way of thinking, although arguably, both can be seen as *Standards*-based. The definition of IL as a social practice is more strongly aligned with the *Framework*, although the 2011 librarian-authored article was published prior to the adoption of the *Framework* and subsequent rescindment of the *Standards*. As noted earlier, the article by Townsend, Brunetti, and Hofer (2011) also presented views in line with the ACRL, as Townsend was a member of the Task Force.

In their critique of the *Framework*, Bombaro and Watstein (2016) argued that debates over the *Framework* had revealed, among other issues, a division within LIS between “philosopher librarians” who support the *Framework* and “practical librarians” who advocated retaining the *Standards*. By way of explanation of the division, they noted supporters of the Framework “generally had PhDs or other advanced degrees along with the benefits often associated with large institutions, including faculty status, tenure and sabbatical options. They were teachers of for-credit classes at universities” (Bombaro & Watstein, 2016, p. 555), in contrast to the practical librarians who “may not have had terminal degrees or any other advanced degree besides a master’s in library science” (p. 556). Lacking the professional status and perks enjoyed by philosopher librarians, Bombaro noted practical librarians taught one-shot IL sessions, and “expressed concern about marketing information literacy, ensuring continuity in existing programs, managing collections and assessing their services” (p. 556).

Although this project did not explore nor was directed to determining educational level or faculty status of librarian authors of texts analyzed in this project, there is evidence from analysis of definitions present in the articles that a division among librarians as to how IL should be defined exists. However, findings support a three-way division among IL definitions. Analysis of the context of definitions confirms Bombaro’s and Watstein’s observations to the extent that in articles in which authors defined IL as skills and some in which authors defined IL as a way of thinking, attention was often directed to assessment measures and the need to provide their institutions with such data supporting IL programs. Other common themes of articles authored by librarians

included marketing IL programs, the need for institutional and disciplinary faculty levels of buy-in of IL, and often included commentary on the lack of time in one-shot IL sessions.

In an attempt to determine what factors might relate to IL definition used by the authors, this project looked at whether a discussion of disciplinary IL might impact IL definitional category present in articles. The analysis of context and IL definitional category did not reveal any correlation between IL definitional category to the context of IL for specific disciplines, most likely because of the limitation of this project to first-year ILI. This is an area in which further research could help determine whether such a correlation exists.

**Modality and overwording.** The findings from the textual analysis in the dimensions of modality and overwording support the conclusion that librarians may feel constrained within their limited opportunities for engaging students' in IL and that they increasingly look for ways to expand their teaching role. However, given the broad range of avenues discussed in their articles, librarians are inventive and creative in their ILI efforts. Most of these librarians appeared to see the *Standards*, with some now espousing the *Framework*, as the best way to teach students how to engage with scholarly communication and succeed in their academic endeavors.

**Social practice.** The analysis of the social practice found the ways the discourse of the two participant-groups serves to norm the ACRL's conceptualization of IL. While one possibility proposed in Chapter 4 was that LIS professionals might reinforce and reproduce the ACRL's perspective on IL, there is no evidence from the findings to

explain the reasons for this phenomenon, aside from an explanation based on Bourdieu's concept of habitus. The best example of habitus in this analysis is the evidence of librarians' continued reference to and reproduction of the ACRL's IL definitions, even in the face of their disagreement with the decision of the ACRL to rescind the *Standards*. Some of these librarians have even moved on to advocate the *Framework* and to seek ways to accommodate their institutions' requirement of assessment data, further indicating their acceptance and reproduction of ACRL's IL definitions. The interpretation based on this analysis is that librarians perceive the backing of the ACRL supports and legitimates their ILI efforts. Another piece of evidence supporting this argument is the continuance of ILI programs, even though librarians voice their limited efforts in one-shot sessions. Librarians accept and reproduce ACRL's IL ideologies (e.g., life-long learning, participation in a democratic society, necessity of IL for participation in a global society) in contradiction to their admission that most ILI in one-shot sessions does not advance much, if any, beyond BI.

Other evidence supporting the norming of ACRL's ideologies was the results from the analysis examining presuppositions present in the articles. Librarian-authored articles were heavy in references to the importance of IL and IL skills, but did not support these claims. References to lifelong learning without support were far less frequent appearing in only four librarian-authored articles, and this presupposition was present in both 2011 LIS professor-authored articles. Articles that were co-authored were largely absent of these presuppositions (see Appendix E).

## **Overview of Current Library and Information Science Discourse on the *Framework***

This section provides a brief overview of the most recent published literature on the *Framework*. This section presents this summary of the LIS literature on undergraduate IL to provide a context for these interpretations and for concluding recommendations for LIS based on these findings and the *Framework*.

The rounds of discussions in the LIS literature on undergraduate IL and ILI have begun again with authors now focused on application of the *Framework* to ILI. As with earlier discussions in the literature on application of the *Standards* to ILI, the focus of articles on the *Framework* covers a broad range of topics. Some authors have already begun providing overviews, including Robinson's summation of the changes in the definition of IL to encompass metaliteracy, defined as "critical self-reflection crucial to self-directed learning" (2015, p. 91) and threshold concepts, defined as "those transformative ideas in any discipline that are portals to understanding the ways of thinking within that discipline (p. 91). Thus, the intention of the *Framework* is to address claims that IL skills can be and often are disciplinary-specific. However, Kuglitsch noted that the divergence between IL as "a generalizable skill" or as disciplinary-situated skills as conceptualized within the *Standards* has not been addressed with the *Framework*, but can be reconciled through "teaching for transfer" pedagogy (2015, p. 457). Jacobson and Gibson (2015) have also offered pedagogical techniques to use in teaching ILI in light of the *Framework*, and Seeber (2015) stressed the need for situational-contextual ILI. Other authors have begun with publication of literature reviews (Lohmann, 2015), and application to specific courses, such as art (Garcia & Labatte, 2015), or in conjunction

with specific products, such as ProQuest Research Companion (D'Amato & Kruy, 2015). Still others have pointed out the use of the *Framework* to promote critical dispositions, (Kelly, 2015) and how to apply established teaching tools, such as the mnemonic C.R.A.P. in ILI based on the *Framework* (LeBlanc & Quintiliano, 2015).

While some have critiqued the *Framework*, including the lack of connection in the *Framework* to social justice (Battista, et al., 2015), Foasberg (2015) noted various critiques of the *Standards* which the *Framework* addresses. Others praised the salient aspects of the *Framework's* threshold concepts for students' IL skills (Christensen, 2015) or the usefulness of the *Framework's* "big ideas" (Pagowsky, 2015, p. 136) contrasted with the skills-based *Standards*. Ragains (2015) discussed the implications of the *Standards* and the *Framework* for ILI. Dempsey, Dalal, Dokus, Charles, and Scharf (2015) voiced their concerns with the future of IL in LIS with the adoption of the *Framework* and offered suggestions for using the *Standards* and *Framework* together in ILI; although as Bombaro and & Watstein (2016) noted, this will now be without the support of the ACRL. Hess noted the need to "incorporate transformational learning theory, use principles of social learning theory, and consider learners' goal orientation and motivation" (2015b, p. 771, see also 2015a) in professional development for ILI librarians and in ILI to students.

**Implications.** The aims of this study were to determine if differences in IL definitions exist with LIS undergraduate IL education in the United States, and if so, what factors underlie differences, as well as to determine the influence of the ACRL on the roles of LIS professors and librarians, with the end goal to determine the effect on

librarians' status and undergraduate IL education.

Based on this analysis, LIS professor-authors of the texts analyzed defined IL as a way of thinking, tend to focus on theory, and are less apt to reflect the ACRL's IL definitions. Librarians, on the other hand, vary on IL definitions used. In order of preference, librarians may define IL as skills, as a way of thinking, or, more recently, as a social construct. Librarians tend to respond to and reproduce the ACRL's IL definitions. This study found evidence for the considerable influence of the ACRL on these librarian-authors, particularly in view of the inclusion of the *Framework's* IL definition in articles published in 2015. This evidences the power the ACRL has in its IL policy documents, with inclusive IL definitions and IL ideologies, on shaping the discourse, praxis, and status of librarians, as well as shaping the IL education of undergraduates in the United States. Librarians are the primary IL instructors in undergraduate IL education, and due to their need to account to their institutions, rely on the ACRL's IL documents as support for their IL programs. Although librarians are dependent on the ACRL, the organization has not been responsive to the need to support librarians' work, as evidenced by the removal and replacement of the *Standards* with the *Framework*.

### **Next Steps for Library and Information Science**

If LIS practitioners believe claims regarding the importance of IL, then the discipline should consider the direction the IL movement needs to follow for the future. Our current pedagogical IL model has each researcher and ILI librarian approaching instruction in IL skills in whatever manner deemed best suited, with the ACRL's approval as stated in the *Framework*. While flexibility and adapting to students' needs is

a great strength as a pedagogical method, if we accept the premise that knowledge is a process (McInerney, 2002), then it follows that in order to teach students IL skills, we need an educational program that would foster the progressive development of IL skills. However, in light of the disagreements voiced (Berg, et al, 2015) with the release and approval of the new *Framework*, the ACRL has moved in the opposite direction by removal of “a set of standards or learning outcomes, or any prescriptive enumeration of skills” (American Library Association, 2015, p. 2) to a theoretical framework based on threshold concepts. The *Framework* further states:

Neither the knowledge practices nor the dispositions that support each concept are intended to prescribe what local institutions should do in using the *Framework*; each library and its partners on campus will need to deploy these frames to best fit their own situation, including designing learning outcomes (American Library Association, 2015, p. 2).

This seems counterintuitive to the aim of promoting lifelong learning. Indeed, opponents of the removal of the *Standards* and replacement by the *Framework* stated

The *Standards* are broader in their aim of articulating information skills for lifelong learning, are clearly and simply written, and are easy to communicate to a wide range of stakeholders (e.g., other librarians, co-teachers, disciplinary faculty, administrators, and accreditors). The *Framework* explicates a deeper level of understanding of academic research using the language of scholarship and is intended for an expert audience. (Dempsey, Dalal, Dokus, Charles, & Scharf, 2015, p. 165)

While a theoretical framework is necessary for the areas of research, scholarship, and pedagogical advancement, there is a need to build from that theoretical basis a curriculum that can educate students in IL. Several librarian authors of articles analyzed in this project believe the *Framework* offers a new direction for ILI in U.S. higher education; however, for many other librarians, the loss of both the *Standards* and support of the ACRL for *Standards*-based ILI means, at the very least, additional work in determining how to provide their institutions assessment data on their IL programs. Each of the three IL definitional categories, as well as the *Standards* and the *Framework*, holds value for ILI efforts, and efforts within the discipline should be directed to finding the balance between these as a means for further developing what exactly IL means and what our students need to know.

Several texts used in the analysis of this project noted the importance of progressive ILI for students' learning and retention of IL concepts (see Booth, Lowe, Tagge, & Stone, 2015; Ferrer-Vinent & Carello, 2011; Holliday, et al., 2015; Karshmer & Bryan, 2011; Lowe, Booth, Stone, & Tagge, 2015). Critten (2015) noted the need for extensive instruction devoted to *Framework* concepts. Given the evidence found in this analysis for the influence of the ACRL especially on the definitions of IL presented and work by librarians, the ACRL should back their IL policy document, the *Framework*, with efforts to encourage higher education policy makers to incorporate more extensive IL programs within undergraduate education. Rather than sidelining critics such as the authors of the *Open Letter* (Berg, et al., 2015), the ACRL should acknowledge the current ILI situation as one of primarily one-shot instruction based on the *Standards*, and seek to

assist librarians with developing a fuller, richer IL curriculum within higher education. Individual librarians and institutions have already made steps in this direction, with the use of embedded librarians, and IL embedded into the curriculum, learning communities, and linked courses. However, if the *Framework* is to be beneficial as more than a theoretical document, a more expanded IL curriculum should be the goal of the ACRL and proponents of IL. Critiques of IL should not be sidelined, but should be valued. The ACRL is not the only LIS entity with insights into what should comprise IL and what knowledge students need to interact in today's information world.

Further research should be directed to covering those contexts of IL in the United States higher education not investigated in this analysis. Additionally, other venues of publication including blogs, syllabi, and institutional policy statements would yield valuable information for LIS, as would analysis of other years not covered by this project. Future work should also include examination in a similar vein on the influence of the *Framework* on ILI for students. Other areas of future work that might help explain the differences in librarians' definitions of IL include examination of educational level attained by librarians and subject specialty or specialties of librarians in order to discern whether the prior education of librarians influences their IL definitions. This line of research might also look at the disciplinary context of IL discussions, as many librarians hold positions of subject specialists in areas related to their education. Faculty status of librarians is yet another area in which research might provide insight on librarians' affinity for one IL definition over another.

Finally, one other research topic that would add significantly to the fieldwork on IL would be an investigation of the reasons the discourse of LIS academe and librarians reproduce ACRL's definition of IL. In final thought, it is hoped that the findings from this project will assist others in their work on IL and IL-related topics.

## APPENDIX A: LIST OF ARTICLES

### List of Articles Used in Analysis Arranged by Author Role and by Year

#### 2011 LIS professor-authored.

Gross, M., & Latham, D. (2011). Experiences with and perceptions of information: A phenomenographic study of first-year college students. *Library Quarterly*, 81, 161-186. Retrieved from <http://www.jstor.org/stable/10.1086/658867>

Markey, K., Leeder, C., & St. Jean, B. (2011). Students' behaviour [sic] playing an online information literacy game. *Journal of Information Literacy*, 5(2), 46-65. <http://dx.doi.org/10.11645/5.2.1637>

#### 2015 LIS professor-authored.

Kim, S. U., & Shumaker, D. (2015). Student, librarian, and instructor perceptions of information literacy instruction and skills in a first year experience program: A case study. *Journal of Academic Librarianship*, 41, 449-456. <http://dx.doi.org/10.1016/j.acalib.2015.04.005>

#### 2011 Librarian-authored.

Archambault, S. G. (2011). Library instruction for freshman English: A multi-year assessment of student learning. *Evidence Based Library & Information Practice*, 6(4), 88-106. <http://dx.doi.org/10.18438/B8Q04S>

Battles, J., Glenn, V., & Shedd, L. (2011). Rethinking the library game: Creating an alternate reality with social media. *Journal of Web Librarianship*, 5, 114-131. <http://dx.doi.org/10.1080/19322909.2011.569922>

Cooke, R., & Rosenthal, D. (2011). Students use more books after library instruction: An analysis of undergraduate paper citations. *College & Research Libraries*, 72, 332-343. <http://dx.doi.org/10.5860/crl-90>

Dennis, M. R., Murphey, R. M., & Rogers, K. (2011). Assessing information literacy comprehension in first-year students. *Practical Academic Librarianship: The International Journal of the SLA*, 1(1), 1-15. Retrieved from <https://journals.tdl.org/pal/index.php/pal>

Detmering, R., & Johnson, A. M. (2011). Focusing on the thinking, not the tools: Incorporating critical thinking into an information literacy module for an introduction to business course. *Journal of Business & Finance Librarianship*, 16, 101-107. <http://dx.doi.org/10.1080/08963568.2011.554771>

- Fain, M. (2011). Assessing information literacy skills development in first year students: A multi-year study. *Journal of Academic Librarianship*, 37, 109-119. <http://dx.doi.org/10.1016/j.acalib.2011.02.002>
- Gains, M. A., & Stoddart, R. A. (2011). Supplementing a librarian's information literacy toolkit with textbooks: A scan of basic communication course texts. *Communications in Information Literacy*, 5, 55-67. Retrieved from <http://www.comminfolit.org/>
- Gustavson, A., Whitehurst, A., & Hisle, D. (2011). Laying the information literacy foundation: A multiple-media solution. *Library Hi Tech*, 29, 725-740. <http://dx.doi.org/10.1108/07378831111189796>
- Karshmer, E., & Bryan, J. E. (2011). Perspectives on ... Building a first-year information literacy experience: Integrating best practices in education and ACRL IL Competency Standards for Higher Education. *Journal of Academic Librarianship*, 37, 255-266. <http://dx.doi.org/10.1016/j.acalib.2011.02.018>
- Loesch, M. F. (2011). From both sides, now: Librarians team up with computer scientist to deliver virtual computer-information literacy instruction. *Journal of Library & Information Services in Distance Learning*, 5, 181-192. <http://dx.doi.org/10.1080/1533290X.2011.641712>
- Mark, A. E. (2011). Privileging peer review: Implications for undergraduates. *Communications in Information Literacy*, 5, 4-8. Retrieved from <http://www.comminfolit.org/>
- McCallum, C. J., & Collins, B. L. (2011). Enhancing the information literacy classroom experience: A cataloger and a reference librarian team up to deliver library instruction. *Library Collections, Acquisitions, & Technical Services*, 35, 10-18. <http://dx.doi.org/10.1016/j.lcats.2010.12.008>
- Swoger, B. J. M. (2011). Closing the assessment loop using pre-and post-assessment. *Reference Services Review*, 39, 244-259. <http://dx.doi.org/10.1108/00907321111135475>
- Townsend, L., Brunetti, K., & Hofer, A. R. (2011). Threshold concepts and information literacy. *portal: Libraries and the Academy*, 11, 853-869. <http://dx.doi.org/10.1353/pla.2011.0030>
- Walsh, T. R. (2011). Evolution of an information competency requirement for undergraduates. *Journal of Web Librarianship*, 5, 3-23. <http://dx.doi.org/10.1080/19322909.2011.546199>
- Weiner, S. A., Pelaez, N., Chang, K., & Weiner, J. (2011). Biology and nursing students' perceptions of a Web-based information literacy tutorial. *Communications in Information Literacy*, 5, 187-201. Retrieved from <http://www.comminfolit.org/>

## 2015 Librarian-authored.

- Angell, K. (2015). The application of reliability and validity measures to assess the effectiveness of an undergraduate citation rubric. *Behavioral & Social Sciences Librarian, 34*, 2-15. <http://dx.doi.org/10.1080/01639269.2015.996481>
- Archambault, S. G., & Masunaga, J. (2015). Curriculum mapping as a strategic planning tool. *Journal of Library Administration, 55*, 503-519. <http://dx.doi.org/10.1080/01930826.2015.1054770>
- Azadbakht, E. S. (2015). Information literacy instruction with Primo. *Reference & User Services Quarterly, 54*, 23-26. <http://dx.doi.org/10.5860/rusq.54n3.23>
- Booth, C., Lowe, M. S., Tagge, N., & Stone, S. M. (2015). Degrees of impact: Analyzing the effects of progressive librarian course collaborations on student performance. *College & Research Libraries, 76*, 623-651.
- Boss, K., Angell, K., & Tewell, E. (2015). The amazing library race: Tracking student engagement and learning comprehension in library orientations. *Journal of Information Literacy, 9*(1), 4-14. <http://dx.doi.org/10.11645/9.1.1885>
- Brier, D. J., & Lebbin, V. K. (2015). Learning information literacy through drawing. *Reference Services Review, 43*, 45-67. <http://dx.doi.org/10.1108/RSR-08-2014-0030>
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- Dennis, M., & Dees, A. S. (2015). It's SO boring: Improving library orientation sessions for first-year students. *Southeastern Librarian*, 63(2), 2-10. Retrieved from <http://www.selaonline.org/sela/publications/SEIn/issues.html>
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- Ellis, L. A., & Peña, A. (2015). Customer experience and engagement: Crowdsourcing as an approach to customer relationship building in academic libraries. *College & Undergraduate Libraries*, 22, 273-295. <http://dx.doi.org/10.1080/10691316.2015.1076364>
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- Tewell, E., & Angell, K. (2015). Far from a trivial pursuit: Assessing the effectiveness of games in information literacy instruction. *Evidence Based Library & Information Practice*, 10(1), 20-33. <http://dx.doi.org/10.18438/B8B60X>

**2015 co-authored by librarians, LIS professors, and outside professors.**

- Douglas, K. A., Van Epps, A. S., Mihalec-Adkins, B., Fosmire, M., & Purzer, S. (2015). A comparison of beginning and advanced engineering students' description of information skills. *Evidence Based Library & Information Practice*, 10(2), 127-143. <http://dx.doi.org/10.18438/B8TK5Z>

**2011 co-authored by librarians and outside professors.**

- Ferrer-Vinent, I. J., & Carello, C. A. (2011). The lasting value of an embedded, first-year, biology library instruction program. *Science & Technology Libraries*, 30, 254-266. <http://dx.doi.org/10.1080/0194262X.2011.592789>
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- Paterson, S. F., & Gamtso, C. W. (2011). Guiding students from consuming information to creating knowledge: A freshman English library instruction collaboration.

*Communications in Information Literacy*, 5, 117-126. Retrieved from <http://www.comminfolit.org/>

**2015 co-authored by librarians and outside professors.**

Moore, C., Black, J., Glackin, B., Ruppel, M., & Watson, E. (2015). Integrating information literacy, the POGIL method, and iPads into a foundational studies program. *Journal of Academic Librarianship*, 41, 155-169. <http://dx.doi.org/10.1016/j.acalib.2014.12.006>

Rapchak, M., & Cipri, A. (2015). Standing alone no more: Linking research to a writing course in a learning community. *portal: Libraries and the Academy*, 15, 661-675. Available from Project Muse database.

Rinto, E. E., & Cogbill-Seiders, E. I. (2015). Library instruction and themed composition courses: An investigation of factors that impact student learning. *Journal of Academic Librarianship*, 41, 14-20. <http://dx.doi.org/10.1016/j.acalib.2014.11.010>

**2015 Education professor authored.**

Kuh, G. D., & Gonyea, R. M. (2015). The role of the academic library in promoting student engagement in learning. *College & Research Libraries*, 76, 359-385. <http://dx.doi.org/10.5860/crl.76.3.359>

## APPENDIX B: LIST OF PHRASES

### List of Phrases and Number of Occurrences in Each Article

article	IL	bibliographic instruction	critical thinking	library instruction	library skill	lifelong learning	research skill	threshold concepts
Angell, 2015	10			1				
Archambault, 2011	12	1		12				
Archambault & Masunaga, 2015.	59			10			1	
Azadbakht, 2015	18		1	2				
Battles, Glenn, & Shedd, 2011	7	1		4				
Booth, Lowe, Tagge, & Stone, 2015	112			13				
Boss, Angell, & Tewell, 2015	17			3				
Brier & Lebbin, 2015	46			4			1	
Bryan & Karshmer, 2015	12		2	5				13
Caminita, 2015	26	3	2	2				
Caniano, 2015	5							
Christensen, 2015	20	1					1	18
Cooke & Rosenthal, 2011	7			14				
Critten, 2015	25							8
Debose & Miller, 2015	15							
Dennis & Dees, 2015	9		2	3			1	
Dennis, Murphey, & Rogers, 2011	8		2	6				
Detmering & Johnson, 2011	8		20	1				
Djenno, Insua, & Pho, 2015	19		1	11				1
Douglas, Van Epps, Mihalec-Adkins, Fosmire, & Purzer, 2015	33							
Ellis & Peña, 2015	3		1					
Fabbi, 2015	45		3		2			
Fain, 2011	29		1	30	30		1	
Ferrer-Vinent & Carello, 2011	7			46	4		12	
Gains & Stoddart, 2011	77	5	1	4	3		1	
Gibeault, 2015	3			23	1			
Gibes & James, 2015	7			4			1	
Giles, 2015	7			6			1	
Gross & Latham, 2011	69					1		
Gustavson, Whitehurst, & Hisle, 2011	27	4		31			5	
Holliday, Dance, Davis, Fagerheim, Hedrich, Lundstrom, & Martin, 2015	43		2	12		1		
Hosier, 2015	11						1	
Hottinger, Zagami-Lopez, & Bryndzia, 2015	7	1		6	1	2		
Karshmer & Bryan, 2011	30	1	2	11		2		
Keener, 2015	4			2			1	

article	IL	bibliographic instruction	critical thinking	library instruction	library skill	lifelong learning	research skill	threshold concepts
Kelly, Williams, Matthies, & Orris, 2011	103		1	11				
Kim & Shumaker, 2015	97		3	1			19	
Kuh & Gonyea, 2015	55		6					
LeBlanc & Quintiliano, 2015	8							1
Loesch, 2011	13		1	1				
Lowe, Booth, Stone, & Tagge, 2015	93		2	3			1	
Ludovico & Wittig, 2015	16		2	5			3	
Luetkenhaus, Borrelli, & Johnson, 2015	20			7				
Mark, 2011	6		3	1		1		
Markey, Leeder, & St. Jean, 2011	46			1		1		
McCallum & Collins, 2011	28			13		1		
McClure, Cooke, & Carlin, 2011	50			7				
Moore, Black, Glackin, Ruppel, & Watson, 2015	28		13	45	3		6	
Pashia & Critten, 2015	11			4				
Paterson & Gamtso, 2011	25	1	11	12	1	3		
Rapchak & Cipri, 2015	47		2	3			3	
Rinto & Cogbill-Seiders, 2015	32		1	31			2	
Swoger, 2011	9		5	18				
Tewell & Angell, 2015	25			9	4		1	
Townsend, Brunetti, & Hofer, 2011	72	2	3			1		95
Walsh, 2011	4			10	3		1	
Weiner, Pelaez, Chang, & Weiner, 2011	16				1			

## APPENDIX C: CONCEPTS

### References to *Standards, Framework, Critical Thinking, Synthesis, and Evaluation* of Information

Article	<i>Standards</i>	reference	<i>Framework</i>	referenc e	critical thinkin g	synthesi s	evaluation of information
R=reference	Q=quote	P=paraphrase	D=direct	I=indirect			
<b>Librarians 2011</b>							
Archambault, 2011	2	R	0	0	0	0	1
Battles, Glenn, & Shedd, 2011	0	0	0	0	0	0	0
Cooke & Rosenthal, 2011	0	0	0	0	0	0	1
Dennis, Murphey, & Rogers, 2011	1	R	0	0	2	0	2
Detmering & Johnson, 2011	0	0	0	0	20	1	11
Fain, 2011	3	R	0	0	1	0	0
Gains & Stoddart, 2011	5	R	0	0	1	1	17
Gustavson, Whitehurst, & Hisle, 2011	3	R, Q	0	0	0	0	9
Karshmer & Bryan, 2011	17	R, Q	0	0	2	2	7
Loesch, 2011	0	0	0	0	1	0	5
Mark, 2011	2	R	0	0	30	0	0
McCallum & Collins, 2011	0	0	0	0	0	0	2
Swoger, 2011	3	R, Q	0	0	5	0	4
Townsend, Brunetti, & Hofer, 2011	17	R, Q	0	0	3	0	10
Walsh, 2011	2	R	0	0	0	0	18
Weiner, Pelaez, Chang, & Weiner, 2011	0	0	0		0	0	1
<b>Librarians 2015</b>							
Angell, 2015	1	R	0	0	0	0	0
Archambault & Masunaga, 2015	7	R	0	0	0	0	5
Azadbakht, 2015	2	R	0	0	1	0	0
Booth, Lowe, Tagge, & Stone, 2015	0	0	0	0	0	1	10
Boss, Angell, & Tewell, 2015	0	0	0	0	0	0	0
Brier & Lebbin, 2015	0	0	0	0	0	0	3
Bryan & Karshmer, 2015	0	0	8	R, Q	2	0	1
Caminita, 2015	1	R	0	0	2	0	1
Caniano, 2015	0	0	0	0	0	0	1
Christensen, 2015	0	0	17	R, Q	0	0	7
Critten, 2015	0	0	14	R, Q	0	0	3
Debose & Miller, 2015	0	0	0	0	0	0	9
Dennis & Dees, 2015	0	0	0	0	0	0	0
Djenno, Insua, & Pho, 2015	1	R	0	0	1	0	2

Article	Standards	reference	Framework	reference	critical thinking	synthesis	evaluation of information
	R=reference	Q=quote	P=paraphrase	D=direct	I=indirect		
Ellis & Peña, 2015	1	R	0	0	1	0	0
Fabbi, 2015	1	R	0	0	3	1	2
Gibeault, 2015	1	R, Q	0	0	0	2	2
Gibes & James, 2015	0	0	0	0	0	0	1
Giles, 2015	3	R, Q	0	0	0	0	1
Holliday, Dance, Davis, Fagerheim, Hedrich, Lundstrom, & Martin, 2015	0	0	0	0	2	6	11
Hosier, 2015	4	R, Q	6	R, Q	0	0	20
Hottinger, Zagami-Lopez, & Bryndzia, 2015	0	0	0	0	0	0	3
Keener, 2015	0	0	0	0	0	0	0
LeBlanc, & Quintiliano, 2015	6	R, Q	17	R, Q	0	2	3
Lowe, Booth, Stone, & Tagge, 2015	0	0	0	0	2	0	6
Ludovico & Wittig, 2015	1	R	0	0	2	0	1
Luetkenhaus, Borrelli, & Johnson, 2015	0	0	0	0	0	0	2
Pashia & Critten, 2015	0	0	0	0	0	1	2
Tewell & Angell, 2015	0	0	0	0	0	0	2
<b>LIS professors 2011</b>							
Gross & Latham, 2011	5	R, Q	0	0	0	0	19
Markey, Leeder, & St. Jean, 2011	0	0	0	0	0	0	11
<b>LIS professors 2015</b>							
Kim & Shumaker, 2015	1	R, Q	0	0	3	0	12
<b>Co-authored by librarians, LIS professors, and outside professors 2015</b>							
Douglas, Van Epps, Mihalec-Adkins, Fosmire, & Purzer, 2015	1	R, P	0	0	0	2	8
<b>Co-authored by librarians and outside professors 2011</b>							
Ferrer-Vinent & Carello, 2011	0	0	0	0	0	0	1
Kelly, Williams, Matthies, & Orris, 2011	5	R, Q	0	0	1	0	6
McClure, Cooke, & Carlin, 2011	2	R, P	0	0	0	0	8
Paterson & Gamtso, 201	0	0	0	0	11	0	6
<b>Co-authored by librarians and outside professors 2015</b>							
Moore, Black, Glackin, Ruppel, & Watson, 2015	1	R, P	0	0	13	0	8
Rapchak & Cipri, 2015	0	0	1	R	2	2	21
Rinto & Cogbill-Seiders, 2015	0	0	0	0	1	0	0
<b>Outside professors 2015</b>							
Kuh & Gonyea, 2015	1	I	0	0	6	0	5

## APPENDIX D: SECOND ROUND LIST OF PHRASES

### Second Round: List of Phrases and Number of Occurrences in Each Article

article	gam*	learning object* OR LO	tutorials	F2F OR blended OR online OR synchronous” OR “asynchronous”	embedded (librarian)	orientation
<b>librarian 2011</b>						
Archambault, 2011	0	0	5	59	0	1
Battles, Glenn, & Shedd, 2011	238	0	0	0	0	0
Cooke & Rosenthal, 2011	0	0	3	1	0	0
Dennis, Murphey, & Rogers, 2011	1	0	0	0	0	0
Detmering & Johnson, 2011	0	0	0	1	0	1
Fain, 2011	0	0	8	0	0	6
Gains & Stoddart, 2011	0	0	0	0	0	0
Gustavson, Whitehurst, & Hisle, 2011	0	1	68	7	0	0
Karshmer & Bryan, 2011	37	0	0	2	0	4
Loesch, 2011	0	0	2	0	3	0
Mark, 2011	0	0	0	0	0	0
McCallum & Collins, 2011	0	0	0	1	0	0
Swoger, 2011	0	0	0	0	1	2
Townsend, Brunetti, & Hofer, 2011	0	1	0	0	0	0
Walsh, 2011	0	0	13	0	0	0
Weiner, Pelaez, Chang, & Weiner, 2011	0	0	93	1	0	0
<b>librarian 2015</b>						
Angell, 2015	0	0	0	0	0	0
Archambault & Masunaga, 2015.	0	0	1	0	0	0
Azadbakht, 2015	0	0	0	0	0	0
Booth, Lowe, Tagge, & Stone, 2015	0	0	9	2	0	0
Boss, Angell, & Tewell, 2015	1	0	0	0	0	22
Brier & Lebbin, 2015	4	0	7	3	0	0
Bryan & Karshmer, 2015	0	0	0	0	0	0
Caminita, 2015	0	0	4	0	52	0
Caniano, 2015	0	0	0	0	5	2
Christensen, 2015	0	0	0	0	0	0
Critten, 2015	0	0	0	0	0	0
Debose & Miller, 2015	0	0	0	0	0	0
Dennis & Dees, 2015	0	0	0	0	0	7
Djenno, Insua, & Pho, 2015	0	0	0	0	0	0
Ellis & Peña, 2015	0	0	1	1	0	14

article	gam*	learning object* OR LO	tutorials	F2F OR blended OR online OR synchronous” OR “asynchronous”	embedded (librarian)	orientation
Fabbi, 2015	0	0	0	0	0	0
Gibeault, 2015	0	0	0	0	0	0
Gibes & James, 2015	0	19	0	4	0	0
Giles, 2015	95	0	0	0	0	10
Holliday, Dance, Davis, Fagerheim, Hedrich, Lundstrom, & Martin, 2015	0	0	0	0	0	0
Hosier, 2015.	0	0	0	1	0	0
Hottinger, Zagami-Lopez, & Bryndzia, 2015	7	0	0	0	0	19
Keener, 2015	0	0	0	0	0	0
LeBlanc & Quintiliano, 2015	0	0	0	0	0	0
Lowe, Booth, Stone, & Tagge, 2015	0	0	3	2	5	0
Ludovico & Wittig, 2015	0	0	0	0	1	0
Luetkenhaus, Borrelli, & Johnson, 2015	0	0	1	0	0	0
Pashia & Critten, 2015	1	1	0	0	0	10
Tewell & Angell, 2015	128	0	0	0	0	8
<b>LIS professor 2011</b>						
Gross & Latham, 2011	0	0	3	0	0	2
Markey, Leeder, & St. Jean, 2011	209	0	0	0	0	0
<b>LIS professor 2015</b>						
Kim & Shumaker, 2015	0	0	0	0	24	2
<b>Co-authored by librarians, LIS professors, and outside professors 2015</b>						
Douglas, Van Epps, Mihalec- Adkins, Fosome, & Purzer, 2015	0	0	0	0	0	0
<b>Co-authored by librarians and outside professors 2011</b>						
Ferrer-Vinent & Carello, 2011	0	0	0	0	7	0
Kelly, Williams, Matthies, & Orris, 2011	0	0	0	0	0	0
McClure, Cooke, & Carlin, 2011	0	0	98	26	0	0
Paterson & Gamtso, 2011	0	0	0	0	0	1
<b>Co-authored by librarians and outside professors 2015</b>						
Moore, Black, Glackin, Ruppel, & Watson, 2015	0	0	4	3	6	1
Rapchak & Cipri, 2015	0	0	0	0	0	0
Rinto & Cogbill-Seiders, 2015	0	0	0	0	0	0
<b>Outside professors 2015</b>						
Kuh & Gonyea, 2015	0	0	0	1	0	1

## APPENDIX E: PRESUPPOSITIONS AND IL CONCEPTS

### Presuppositions, IL Concepts Taught or Discussed, ILI Responsibility

article	IL concepts	presupposition	ILI by whom or how?
<b>librarian 2011</b>			
Archambault, 2011	Narrowing topic, keys concepts, find books, find articles, cite sources, difference between Google and library resources	Importance of IL	Not stated, online format
Battles, Glenn, & Shedd, 2011	Interact with library and Web content	IL definition, importance of IL	Collaborative developed game
Cooke & Rosenthal, 2011	Number of citations, frequency of scholarly citations, frequency of source format	Definition of IL or importance	Not stated, perhaps online
Dennis, Murphey, & Rogers, 2011	Awareness of library services, location and function of essential areas in the library, basic searches on Web and online library resources, keywords, evaluate information, incorporate information	Importance of IL skills	Collaboration
Detmering & Johnson, 2011	Evaluation of information, organization of information, diversity of information	None found	Not stated
Fain, 2011	Recognizes LC call number system name, recognizes LC call number, identifies location of online catalog on homepage, identifies a general interest database appropriate for the topic, identifies a specialized resource, identifies location of databases on homepage, recognizes scope of online catalog, recognizes steps to avoid plagiarizing sources	IL definition, importance of IL	Not stated
Gains & Stoddart, 2011	Topic selection, access information needed effectively and efficiently, evaluate, use information to accomplish purpose, ethical and legal use of information	None found	Librarians, faculty, and textbooks
Gustavson, Whitehurst, & Hisle, 2011	Getting help, navigating library's website, evaluating sources, searching for books and articles, avoiding plagiarism, citing sources	Importance of lifelong learning	Not stated
Karshmer & Bryan, 2011	Navigating library's website to find relevant resources, recognizing appropriate information resources, basic catalog searches, constructing database searches	Importance of IL skills	Not stated

article	IL concepts	presupposition	ILI by whom or how?
Loesch, 2011	Effectively acquire, evaluate, use electronic information, understand social ethical, legal, economic, and public policy of information fluency	IL definition, importance of IL	Not stated, appears to advocate collaboration
Mark, 2011	Critical thinking, determine reliability of sources	Importance of lifelong learning	Not stated
McCallum & Collins, 2011	Basic search, LC subject headings, keyword searching	IL definition, importance of IL	Not stated
Swoger, 2011	Access library resources and services by navigating library website, use catalog, use research tools and strategies to identify and locate articles on topic, evaluate resources by distinguishing between scholarly, trade, and popular	IL definition, importance of IL	Not stated
Townsend, Brunetti, & Hofer, 2011	Format as process, authority is constructed and contextual, information as commodity, primary sources and disciplinarity, library as part of research process	None found	Librarians
Walsh, 2011	Research process (select topic, LC Call numbers, academic integrity, cite sources), find books, find articles, searching Internet, navigate library's website	IL definition, importance of IL	Not stated, asynchronous, librarian-created tutorial
Weiner, Pelaez, Chang, & Weiner, 2011	Planning project, topic exploration, types of information, search tools, search strategies, evaluating sources, copyright, plagiarism, citing sources	IL definition, importance of lifelong learning	Not stated
<b>librarian 2015</b>			
Angell, 2015	Citing sources	IL definition	Not stated
Archambault & Masunaga, 2015.	Identify information need, research strategy, critically evaluate sources (bias, authority, currency, accuracy, relevance), information ethics, interpret and evaluate information	IL definition	Collaboration
Azadbakht, 2015	Find books, articles, understand difference of peer-review between non peer-review, keywords, ILL,	IL definition, importance of IL	Not stated
Booth, Lowe, Tagge, & Stone, 2015	Communication of evidence, evaluation of sources, attribution of sources	IL definition, importance of IL	Collaboration
Boss, Angell, & Tewell, 2015	Find a book, library services, using reference books, acquaint with library, MLA citation	IL definition, importance of IL	Librarians
Brier & Lebbin, 2015	None specifically stated	IL definition, importance of IL	Librarians
Bryan & Karshmer, 2015	Format as a process	Importance of IL	Librarians

article	IL concepts	presupposition	ILI by whom or how?
Caminita, 2015	Engage with scholarly information, select appropriate sources, use sources appropriately	IL definition, importance of IL	Librarians, stand-alone IL, or embedded
Caniano, 2015	Basic research strategies, setting up user accounts in EBSCO, ILL, Adobe Digital Editions, and library's app	IL definition, importance of IL	Librarians
Christensen, 2015	Authority is constructed and contextual, information creation is a process, information has value, research as inquiry, scholarship as conversation, searching as strategic exploration	Importance of IL	Not stated
Critten, 2015	Critical self-reflection, evaluate source for bias, relevance, currency	Importance of IL	Librarians
Debose & Miller, 2015	Identify appropriate resources and search effectively to locate relevant research, critically evaluate resources found by applying, select best sources, use information ethically, avoid plagiarism, correctly cite sources	IL definition, importance of IL	Collaboration, woven throughout entire course
Dennis & Dees, 2015	Find a book, find help in the library, navigate library's website to find an article	IL definition, importance of IL	Not stated
Djenno, Insua, & Pho, 2015	Construct effective keyword searches, evaluate information, use library databases to find books and articles, understand importance of peer-review process, recognize differences between scholarly and popular articles, Searching as Exploration	IL definition, importance of IL	Not stated, noted for student participation integration with English classes essential
Ellis & Peña, 2015	Awareness of value of academic libraries	IL definition, importance of IL	Not stated
Fabbi, 2015	None discussed, only generically "information literacy competency"	Importance of IL in life	Not stated
Gibeault, 2015	Selecting and refining a topic, access resources (database, Summon (EDS), call numbers) getting help	Importance of IL	Not stated
Gibes & James, 2015	Database search, search strategies, evaluating resources (news article) for credibility and bias	IL definition, importance of IL	Not stated
Giles, 2015	Citing sources, ethical use of information, evaluate sources, search terms	Importance of IL	Not stated
Holliday, Dance, Davis, Fagerheim, Hedrich, Lundstrom	Finding and accessing information, using information legally, ethically, effectively, evaluating information	Definition of IL	Implied in conclusion – librarians

article	IL concepts	presupposition	ILI by whom or how?
, & Martin, 2015			
Hosier, 2015.	Scholarship as conversation, labeling sources, relevant sources, citing sources	Importance of IL	Not stated
Hottinger, Zagami-Lopez, & Bryndzia, 2015	Introduction to library services, how library contributes to academic success, 3 ways to get help, 3 library services, use OneSearch (EDS) to find book, article, service	Importance of lifelong learning	Not stated
Keener, 2015	Copyright, intellectual property, plagiarism, author rights, open access, scholarly publishing system	Not found	Not stated
LeBlanc & Quintiliano, 2015	Authority is constructed and contextual, information creation is a process, information has value, research as inquiry, scholarship as conversation, searching as strategic exploration	Importance of IL	Not stated
Lowe, Booth, Stone, & Tagge, 2015	Attribution of sources, evaluation of sources, communication of evidence	IL definition, importance of IL	Collaboration
Ludovico & Wittig, 2015	Types of sources, incorporation of sources, citing sources, research and writing entering academic conversation	IL definition, importance of IL	Faculty and librarians in FY writing intensive seminars
Luetkenhaus, Borrelli, & Johnson, 2015	Thesis development, evaluate, select primary and secondary sources, critically evaluate selected sources, use sources demonstrating understanding of nature of sources, evidence to construct argument, complete bibliography, Chicago style	IL definition, importance of IL	Collaboration
Pashia & Critten, 2015	Orientation-acquaint with library Credit course-library catalog, LC Call numbers, find books	None found	Not stated
Tewell & Angell, 2015	Games: keywords, categorizing citations Class session: locate articles in database, cite in MLA, APA, locate article	IL definition, importance of IL	Not stated
<b>LIS professor 2011</b>			
Gross & Latham, 2011	Finding, evaluating, using information	Importance of lifelong learning	Not stated
Markey, Leeder, & St. Jean, 2011	Formulate topic, keyword generation, bibliography (Zotero, relevance of sources), database use	Importance of lifelong learning	Not stated
<b>LIS professor 2015</b>			

article	IL concepts	presupposition	ILI by whom or how?
Kim & Shumaker, 2015	Determining information needed, Accessing information, Evaluating information, Using information, Understand legal and ethical issues	IL widely agreed to be essential for student success and beyond	Embedded and collaboration
<b>Co-authored by librarians, LIS professors, and outside professors 2015</b>			
Douglas, Van Epps, Mihalec-Adkins, Fosmire, & Purzer, 2015	Awareness of information needs, search strategies, extraction, sufficiency, and organization of information	None found	Collaboration reinforced over several courses
<b>Co-authored by librarians and outside professors 2011</b>			
Ferrer-Vinent & Carello, 2011	Search catalog, find full-text, identify parts of a citation	None found	Collaboration
Kelly, Williams, Matthies, & Orris, 2011	Classification scheme for business entities, awareness of business databases, LibGuides	None found	Not stated
McClure, Cooke, & Carlin, 2011	Identify audience and purpose, search strategy, difference in scholarly, popular, news, locating sources in catalog and databases, ethical research (plagiarism, citing sources)	None found	Collaboration with faculty to create tutorial
Paterson & Gamtso, 2011	Transferable knowledge, critical thinking skills, keywords, database searches, group inquiry	Importance of lifelong learning	Collaboration
<b>Co-authored by librarians and outside professors 2015</b>			
Moore, Black, Glackin, Ruppel, & Watson, 2015	Information processing, brainstorming key words, concept mapping, database searching and tools, MLA citation style, website and article evaluation using CRAAP criteria (currency, relevance, authority, accuracy, purpose), critical thinking, teamwork development, using mobile devices	None found	Collaboration
Rapchak & Cipri, 2015	Find scholarly sources independently, evaluate to find best sources for topic, integrate and cite appropriately, relevant sources that complement and complicate own idea.	None found	Linked collaboration, learning communities
Rinto & Cogbill-Seiders, 2015	Topic selection, use of sources to focus topic, development of thesis statement, use of evaluative criteria (currency, relevance, authority)	IL definition, importance of IL	Collaboration, partnership
<b>Outside professors 2015</b>			
Kuh & Gonyea, 2015	Frequency of library use	None found	Whole campus

## APPENDIX F: CONTEXT AND STYLE

### Context of Article and Style Elements

Article	Type	Major theme[s]	Mode	Tenor	Rhetorical Mode	IL definition
W=written, F=formal, D=descriptive, C=conversational, E=expository, A=argumentative, S=Study, CS=case study, T=theoretical						
<b>librarian 2011</b>						
Archambault, 2011	S	Impact of blended format and curriculum changes to ILI for freshmen English	W	F	D	ACRL definition
Battles, Glenn, & Shedd, 2011	CS	Creation of an ILI online game	W	F	D	None
Cooke & Rosenthal, 2011	S	Citation analysis of Composition 1 and upper-level students after ILI	W	F	D	None
Dennis, Murphey, & Rogers, 2011	S	Use of clickers and assessment in ILI for FY students	W	F	D	Critical thinking skills required to locate, use, and evaluate information
Detmering & Johnson, 2011	CS	Incorporation of critical thinking in a module for freshmen Business ILI	W	F	D	critical thinking about information and the information-seeking process
Fain, 2011	S	Assessment of ILI on FY English and FY students IL skills development	W	F	D	None
Gains & Stoddart, 2011	S	Examination of communication textbooks for IL concepts	W	F	D	<i>Standards</i> definition
Gustavson, Whitehurst, & Hisle, 2011	CS	Multimedia tutorial (introduction to research) as pre-assessment for one-shot session for English freshmen	W	F	D	1989 ALA definition
Karshmer & Bryan, 2011	S	Use of three videos and 2 IL sessions for FYE	W	F	D	Recognize an information need, locate information that satisfies that need, evaluate the information discovered, and then use the information to fulfill their original need

Article	Type	Major theme[s]	Mode	Tenor	Rhetorical Mode	IL definition
W=written, F=formal, D=descriptive, C=conversational, E=expository, A=argumentative, S=Study, CS=case study, T=theoretical						
Loesch, 2011	CS	IL and computer science course	W	F	D	None
Mark, 2011	T	Peer review is privileged in IL by librarians	W	F	E / A	Indirect (locate, read, and incorporate peer review journal articles)
McCallum & Collins, 2011	CS	IL collaboratively taught by cataloguer & reference librarians to one-shot session for freshmen and upper-division anthropology students	W	F	D	None
Swoger, 2011	CS	Pre-and post-assessment of one-shot IL session for freshmen writing and critical thinking class	W	F	D	None
Townsend, Brunetti, & Hofer, 2011	CS	Application of threshold concepts to 2 credit IL course for FY students	W	F	E / D	1989 ALA definition
Walsh, 2011	CS	Assessment of required IL Library skills workbook tutorial in Blackboard	W	F	D	None
Weiner, Pelaez, Chang, & Weiner, 2011	S	FY nursing and biology students' perceptions of IL tutorial	W	F	D	None
<b>librarian 2015</b>						
Angell, 2015	S	Citation analysis rubric	W	F	D	None, appears to use <i>Standards</i>
Archambault & Masunaga, 2015.	CS	Use of curriculum mapping to plan ILI for FY seminar and upper-level courses	W	F	D	None, appears to use <i>Standards</i>
Azadbakht, 2015	CS	Impact of EDS (Primo) on ILI	W	F	D	None, appears to use <i>Standards</i>
Booth, Lowe, Tagge, & Stone, 2015	S	Impact of progressive librarian involvement on FY seminar students' IL skills	W	F	D	None
Boss, Angell, & Tewell, 2015	S	Students' engagement and IL skills as result of orientation game	W	F	D	None

Article	Type	Major theme[s]	Mode	Tenor	Rhetorical Mode	IL definition
W=written, F=formal, D=descriptive, C=conversational, E=expository, A=argumentative, S=Study, CS=case study, T=theoretical						
Brier & Lebbin, 2015	CS	Use of drawing in ILI for FY Composition students	W	F	D	None
Bryan & Karshmer, 2015	CS	Application of Threshold Concepts from <i>Framework</i> in ILI for freshmen biology	W	F	D	<i>Framework</i> Threshold Concepts
Caminita, 2015	CS	Embedded librarian in FY agriculture courses	W	F	D	None
Caniano, 2015	CS	IL program for freshman athletes	W	F	D	None
Christensen, 2015	CS	Application of Threshold Concepts from <i>Framework</i> in ILI for FY students	W	F	D	Self-directed, collaborative, capable of comfortably participating in rapidly changing information ecosystem
Critten, 2015	CS	Inclusion of ideology and self-reflection in IL semester course	W	F	E / D	<i>Framework</i> IL depends on ... metacognition, or critical self-reflection
Debose & Miller, 2015	S	FY experience IL credit course	W	F	D	None
Dennis & Dees, 2015	S	FY library orientation	W	F	D	None
Djenno, Insua, & Pho, 2015	CS	use of Google Forms for collaboration and assessment in ILI for FY English	W	F	D	None
Ellis & Peña, 2015	CS	Use of crowdsourcing in orientation	W	F	D	None
Fabbi, 2015	S	Examination of high school factors that impact IL of FY students	W	F	D	<i>Standards</i> definition
Gibeault, 2015	CS	Use of iPads, SCALE-UP classroom in ILI for English 101 1-shot sessions	W	F	D	<i>Standards</i> definition
Gibes & James, 2015	CS	Use of flipped classrooms for ILI for FY English	W	F	D	None
Giles, 2015	S	ARG scavenger hunt and one-shot session for orientation for	W	F	D	<i>Standards</i> 1 and 2

Article	Type	Major theme[s]	Mode	Tenor	Rhetorical Mode	IL definition
W=written, F=formal, D=descriptive, C=conversational, E=expository, A=argumentative, S=Study, CS=case study, T=theoretical						
		freshmen engineering				
Holliday, Dance, Davis, Fagerheim, Hedrich, Lundstrom, & Martin, 2015	S	IL and assessment of English composition (freshmen and sophomores), mid-level Psychology students, capstone History	W	F	D	None
Hosier, 2015.	CS	For-credit IL for Ed majors, assessment of final project	W	F	D	Ability to effectively select and evaluate sources, scholarship as conversation
Hottinger, Zagami-Lopez, & Bryndzia, 2015	CS	20-minute library orientation for FYE students	W	F	D	None
Keener, 2015	CS	Guest lecturer on copyright for 1.5 credit IL course for freshmen and sophomores	W	F	D	None
LeBlanc & Quintiliano, 2015	CS	Adaption of CRAP to <i>Framework</i>	W	F	D	<i>Framework</i> Threshold Concepts
Lowe, Booth, Stone, & Tagge, 2015	S	Impact of ILI on FYE students IL skills	W	F	D	None
Ludovico & Wittig, 2015	S	FY students' use of scholarly sources	W	F/ C	D	None
Luetkenhaus, Borrelli, & Johnson, 2015	S	FY History 105 final essay IL analysis	W	F	D	None
Pashia & Critten, 2015	CS	Use of ethnography with students as participant observers for ILI for freshman seminar orientation	W	F	D	Ability to find, evaluate, and ethically use information
Tewell & Angell, 2015	S	Assessment of IL games in ILI for introductory English Composition	W	F	D	None
<b>LIS professor 2011</b>						
Gross & Latham, 2011	S	FY students' perceptions of information	W	F	D	<i>Standards</i> definition
Markey, Leeder, & St. Jean, 2011	S	Behavior in IL game	W	F	D	Think critically, locate, evaluate, use online sources
<b>LIS professor 2015</b>						

Article	Type	Major theme[s]	Mode	Tenor	Rhetorical Mode	IL definition
W=written, F=formal, D=descriptive, C=conversational, E=expository, A=argumentative, S=Study, CS=case study, T=theoretical						
Kim & Shumaker, 2015	S	FYE (English and Religious Studies) students', librarians', and faculty's perceptions of ILI	W	F	D	Cites 5 <i>Standards</i>
<b>Co-authored by librarians, LIS professors, and outside professors 2015</b>						
Douglas, Van Epps, Mihalec-Adkins, Fosmire, & Purzer, 2015	S	Comparison of beginning and upper-level and graduate engineering students' information strategies	W	F	D	<i>Standards</i> definition
<b>Co-authored by librarians and outside professors 2011</b>						
Ferrer-Vinent & Carello, 2011	S	Long-term impact of disciplinary-specific FY ILI on biology students' IL skills (2009 data)	W	F	D	None
Kelly, Williams, Matthies, & Orris, 2011	S	Assessment of course-integrated ILI on introductory accounting students	W	F	D	Critically find, ethically use relevant information
McClure, Cooke, & Carlin, 2011	S	Impact of online tutorial on FY English Composition students' IL skills	W	F	D	1989 ALA definition
Paterson & Gamtso, 2011	CS	Collaboration between librarian and faculty in ILI for freshman Composition	W	F	D	Evaluation and application of research
<b>Co-authored by librarians and outside professors 2015</b>						
Moore, Black, Glackin, Ruppel, & Watson, 2015	CS	Use of iPads, team-based learning, and POGIL in ILI for FY foundational studies students	W	F	D	Effectively gather, evaluate, and use information
Rapchak & Cipri, 2015	CS	Learning community – linked freshman English with IL course	W	F	D	Navigate information resources and evaluate findings
Rinto & Cogbill-Seiders, 2015	S	Impact of themed Composition and ILI on students' IL skills	W	F	D	None
<b>Outside professors 2015</b>						
Kuh & Gonyea, 2015	S	Impact of library on student engagement and academics (data from 1984-2002)	W	F	D	<i>Standards</i> definition

## APPENDIX G: MODALITY

### Occurrences of Modal Auxiliary Verbs by Role of Author

article	must	can or could	should	will or would	may or might
<b>Librarians 2011</b>					
Archambault, 2011	1	15	0	15	9
Battles, Glenn, & Shedd, 2011	1	17	4	34	1
Cooke & Rosenthal, 2011	3	19	0	17	16
Dennis, Murphey, & Rogers, 2011	0	11	3	21	4
Detmering & Johnson, 2011	0	6	3	10	5
Fain, 2011	2	36	3	9	31
Gains & Stoddart, 2011	3	39	10	6	27
Gustavson, Whitehurst, & Hisle, 2011	3	11	3	8	10
Karshmer & Bryan, 2011	2	16	9	41	0
Loesch, 2011	3	1	0	19	2
Mark, 2011	2	6	3	3	3
McCallum & Collins, 2011	3	27	6	35	16
Swoger, 2011	0	20	2	13	5
Townsend, Brunetti, & Hofer, 2011	3	28	3	17	25
Walsh, 2011	4	37	11	19	18
Weiner, Pelaez, Chang, & Weiner, 2011	2	15	12	9	13
<b>Librarians 2015</b>					
Angell, 2015	2	7	0	18	1
Archambault & Masunaga, 2015	3	26	4	13	7
Azadbakht, 2015	3	19	0	16	10
Booth, Lowe, Tagge, & Stone, 2015	0	4	4	4	5
Boss, Angell, & Tewell, 2015	1	7	3	9	0
Brier & Lebbin, 2015	2	29	5	11	8
Bryan & Karshmer, 2015	0	9	1	10	9
Caminita, 2015	1	6	2	9	3
Caniano, 2015	1	6	2	3	3
Christensen, 2015	2	5	5	7	5
Critten, 2015	0	19	3	8	11
Debose & Miller, 2015	4	9	0	19	0
Dennis & Dees, 2015	0	18	6	12	5
Djenno, Insua, & Pho, 2015	1	20	2	12	1
Ellis & Peña, 2015	0	23	6	23	25
Fabbi, 2015	1	7	1	8	11
Gibeault, 2015	0	11	3	6	2
Gibes & James, 2015	2	6	1	1	3
Giles, 2015	0	19	7	20	5
Holliday, Dance, Davis, Fagerheim, Hedrich, Lundstrom, & Martin, 2015	2	14	3	5	5
Hosier, 2015	2	20	3	23	8
Hottinger, Zagami-Lopez, & Bryndzia, 2015	1	15	6	23	2
Keener, 2015	1	7	3	8	4
LeBlanc, & Quintiliano, 2015	0	4	1	10	2

article	must	can or could	should	will or would	may or might
Lowe, Booth, Stone, & Tagge, 2015	0	11	0	1	1
Ludovico & Wittig, 2015	1	10	1	7	6
Luetkenhaus, Borrelli, & Johnson, 2015	3	8	2	8	1
Pashia & Critten, 2015	1	22	2	18	21
Tewell & Angell, 2015	2	16	1	14	7
<b>LIS professors 2011</b>					
Gross & Latham, 2011	4	30	2	22	20
Markey, Leeder, & St. Jean, 2011	4	25	3	23	7
<b>LIS professors 2015</b>					
Kim & Shumaker, 2015	4	3	8	8	9
<b>Co-authored by librarians, LIS professors, and outside professors 2015</b>					
Douglas, Van Epps, Mihalec-Adkins, Fosmire, & Purzer, 2015	3	25	5	13	4
<b>Co-authored by librarians and outside professors 2011</b>					
Ferrer-Vinent & Carello, 2011	0	6	5	7	3
Kelly, Williams, Matthies, & Orris, 2011	4	9	3	20	5
McClure, Cooke, & Carlin, 2011	5	24	12	9	22
Paterson & Gamtso, 201	2	7	4	14	14
<b>Co-authored by librarians and outside professors 2015</b>					
Moore, Black, Glackin, Ruppel, & Watson, 2015	0	7	3	10	1
Rapchak & Cipri, 2015	0	25	2	19	5
Rinto & Cogbill-Seiders, 2015	1	18	7	10	17
<b>Outside professors 2015</b>					
Kuh & Gonyea, 2015	2	14	7	14	23

## APPENDIX H: DEFINITIONAL CATEGORY

### Information Literacy Definitional Category by Year and Role of Authorship

Year	Authorship Role	Article	IL definitional category
2015	OP	Kuh & Gonyea	1
2011	L	Dennis, Murphey, & Rogers	1
2011	L	Fain	1
2011	L	Gains & Stoddart	1
2011	L	Gustavson, Whitehurst, & Hisle	1
2011	L	Loesch	1
2011	L	McCallum & Collins	1
2011	L	Swoger	1
2011	L	Walsh	1
2011	L	Weiner, Pelaez, Chang, & Weiner	1
2011	L	Archambault	1
2011	L	Cooke & Rosenthal,	1
2011	L OP	Ferrer-Vinent & Carello	1
2011	L OP	Kelly, Williams, Matthies, & Orris	1
2011	L OP	McClure, Cooke, & Carlin	1
2015	L	Angell	1
2015	L	Archambault & Masunaga.	1
2015	L	Azadbakht	1
2015	L	Boss, Angell, & Tewell	1
2015	L	Caminita	1
2015	L	Caniano	1
2015	L	Dennis & Dees	1
2015	L	Djenno, Insua, & Pho	1
2015	L	Ellis & Peña	1
2015	L	Gibeault	1
2015	L	Gibes & James	1
2015	L	Giles	1
2015	L	Holliday, Dance, Davis, Fagerheim, Hedrich, Lundstrom, & Martin	1
2015	L	Hottinger, Zagami-Lopez, & Bryndzia	1
2015	L	Luetkenhaus, Borrelli, & Johnson	1

<b>Year</b>	<b>Authorship Role</b>	<b>Article</b>	<b>IL definitional category</b>
2015	L	Tewell & Angell	1
2015	L OP	Rinto & Cogbill-Seiders	1
2011	L	Detmering & Johnson	2
2011	L	Karshmer & Bryan	2
2011	L	Mark	2
2011	L	Battles, Glenn, & Shedd	2
2011	L OP	Paterson & Gamtso	2
2011	LIS	Gross & Latham	2
2011	LIS	Markey, Leeder, & St. Jean	2
2015	L	Booth, Lowe, Tagge, & Stone	2
2015	L	Brier & Lebbin	2
2015	L	Debose & Miller	2
2015	L	Fabbi	2
2015	L	Keener	2
2015	L	Lowe, Booth, Stone, & Tagge	2
2015	L	Ludovico & Wittig	2
2015	L	Pashia & Critten	2
2015	L OP	Moore, Black, Glackin, Ruppel, & Watson	2
2015	L OP	Rapchak & Cipri	2
2015	L, LIS OP	Douglas, Van Epps, Mihalec-Adkins, Fosmire, & Purzer	2
2015	LIS	Kim & Shumaker	2
<b>Year</b>	<b>Authorship Role</b>	<b>Article</b>	<b>IL definitional category</b>
2011	L	Townsend, Brunetti, & Hofer	3
2015	L	Bryan & Karshmer	3
2015	L	Christensen	3
2015	L	Critten	3
2015	L	Hosier.	3
2015	L	LeBlanc & Quintiliano	3

## ENDNOTES

1. A search of three databases *Library Literature & Information Science Full Text* (H.W. Wilson); *Library, Information Science & Technology Abstracts*, and *Library Information Science & Technology Abstracts with Full Text* limited to scholarly journals and a beginning date of January, 2000 resulted in 13,424. This search was performed on March 20, 2016.

2. This term, although used in part as a modalization, is also a statistical term and is therefore not bolded.

3. Another statistical term, that although used in part as a modalization, is not bolded. These and similar phrases appear throughout the excerpts of texts used, but will not be noted from this point forward.

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## VITA

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