

Teaching Information Literacy Reframed

**50+ Framework-Based Exercises for
Creating Information-Literate Learners**

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Introduction

ONE FOCUS OF THIS BOOK IS ON UNDERSTANDING THE SIX THRESHOLD CONCEPTS outlined in the *Framework for Information Literacy for Higher Education* and on imagining how instructors might help students cross those thresholds. Another focus is on discovering how memory and transfer of learning apply to the teaching of information literacy. This book also offers some advice about how to design information literacy instruction that will be effective for both instructor and student.

The *Framework for Information Literacy for Higher Education (Framework)* is a new document. Although its creation took quite some time, its actual usefulness to the instruction of information literacy has yet to be tested. Because the *Framework* is conceptual in nature, there is very little practical information for instructors to apply in their classrooms. Because the document is a “framework,” there are many gaps that must be filled in by individual instructors. The skin that will cover the *Framework* must be homegrown. The means by which this will happen is left to the individual institutions to determine. The *Framework* document urges librarians to work with faculty and administrators across their campuses to create a program of information literacy that will be incorporated into the curriculum in every subject on every level.

The *Framework* offers a description of the expert in information literacy but does not provide a roadmap to show how that person became an expert. The *Framework* describes what someone who is becoming information literate might think or do. It does not describe how to provide instruction for the beginner in information literacy,

nor does it provide any guidance about instruction that will propel students over the six thresholds identified.

The six threshold concepts themselves are not easy to interpret. In some ways they mirror the learning objectives of the *Information Literacy Competency Standards for Higher Education (Standards)*. In striving to conceptualize the mechanics of the *Standards*, the clarity of language and the concrete nature of the examples in the *Standards* have been lost. The *Framework's* threshold concepts seem both hard to understand and hard to teach to.

This book offers a starting point for instructors of information literacy in understanding and teaching the six threshold concepts listed in the *Framework* document. The first chapter discusses the history of the development of the *Framework* document and briefly deconstructs the six threshold concepts. Then each threshold concept is unpacked in separate chapters along with exercises that can be incorporated in information literacy classes. The final chapter looks at learning, memory, and transfer of learning and provides some advice about how to design classroom exercises that will best help students master basic skills and concepts.

It is my hope that this book will help instructors create a local program of instruction for information literacy. Many of the exercises are designed for beginning students of information literacy. Others will be more useful for intermediate students. Some exercises can be used in the one-shot time frame whereas others are designed for longer class sessions and semester-long courses. Librarians have long been experts in adapting instruction ideas to fit their local need. I hope readers of this book will find some ideas they can work with to further the creation of information literate students.

Decoding the *Framework for Information Literacy*

THE **FRAMEWORK FOR INFORMATION LITERACY FOR HIGHER EDUCATION** is the product of a long process. In the late 1990s, the Association of College and Research Libraries (ACRL) responded to a need for students and instructors to move beyond demonstrating databases and learning which buttons to push. Students needed a more conceptual approach that would help them focus on the identification and retrieval of information they needed, rather than on which button to push in a specific database. ACRL created the *Information Literacy Competency Standards for Higher Education* as a guide for information literacy instruction:

These standards were reviewed by the ACRL Standards Committee and approved by the Board of Directors of the Association of College and Research Libraries (ACRL) on January 18, 2000, at the Midwinter Meeting of the American Library Association in San Antonio, Texas. These standards were also endorsed by the American Association for Higher Education (October 1999) and the Council of Independent Colleges (February 2004).¹

The purpose of the standards for information literacy in higher education was described as follows:

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 con-

struct 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. Information literacy is a key component of, and contributor to, lifelong learning. Information literacy competency extends learning beyond formal classroom settings and provides practice with self-directed investigations as individuals move into internships, first professional positions, and increasing responsibilities in all arenas of life. Because information literacy augments students' competency with evaluating, managing, and using information, it is now considered by several regional and discipline-based accreditation associations as a key outcome for college students.²

The *Information Literacy Competency Standards for Higher Education* document contains a definition of information literacy. The document briefly discusses the relationship between information literacy and technology, higher education, and pedagogy. It describes the goals of assessing competency in information literacy and the relevance of assessment of information literacy skills and concepts. The five standards and twenty-two performance indicators were used successfully during the next decade to explain information literacy to nonlibrarians, to help instructors plan lessons, and to implant a culture of assessment in higher education. Many institutions of higher education accepted the *Standards* and incorporated them in the curriculum across campus. Several of the national accrediting agencies added language concerning information literacy requirements to their standards.

In the 2010s ACRL appointed a task force to update the *Standards* to reflect changes, improvements, and the expansion of the concept of information literacy in higher education. Rather than simply updating the language, the task force changed directions and crafted a new document. This document, the *Framework for Information Literacy for Higher Education*, develops what the task force describes as “a richer, more complex set of core ideas” about information literacy.³ The *Framework* is based on the notion of threshold concepts.

The threshold concept is best known from the literature of economics and the seminal work by Jan H. F. Meyer and Ray Land.⁴ Threshold concepts are defined as

core or foundational concepts that, once grasped by the learner, create new perspectives and ways of understanding a discipline or challenging knowledge domain. Such concepts produce transformation within the learner. Without them, the learner does not acquire expertise in that field of knowledge. Threshold concepts can be thought of as portals through which the learner must pass in order to develop new perspectives and wider understanding.⁵

Meyer and Land suggest five criteria that can be applied to identify threshold concepts. Threshold concepts are:

- Transformative—cause the learner to experience a shift in perspective
- Integrative—bring separate concepts together into a unified whole
- Irreversible—once grasped, cannot be un-grasped
- Troublesome—often counterintuitive; the place where students stumble or get stuck
- Bounded—may help define the boundaries of a particular discipline; are perhaps unique to the discipline

The ACRL task force decided to identify threshold concepts for information literacy and to use threshold concepts as a basis for creating a theoretical and philosophical framework for information literacy. Some of the threshold concepts reflect the research done by Townsend, Brunetti, and Hofer.⁶ Several other threshold concepts emerged as input was received from information literacy practitioners and instructors. A draft of the *Framework* document was released on the ACRL website, and a call for feedback was sent out through various publications. Hearings were held online and at ALA Annual Conferences. As revisions appeared, the process was repeated. Meanwhile, the task force continued to meet and revise. Online forums occurred during the summer and fall of 2014. The final version of the *Framework for Information Literacy for Higher Education* was approved by ACRL in early 2015. (See the appendix for the full text of the *Framework*.)

Despite the task force’s efforts to be inclusive and offer every opportunity for input, the number of people who actually responded was small. Those who responded were mostly librarians from two- and four-year colleges and universities. Little input was received from administrators, from schools of library science, or from students themselves. In addition, the debate about what threshold concepts are, how to identify them for information literacy, and the validity of the six specific threshold concepts that were identified or chosen continues. Still, the *Framework* appears to be a done deal because it has been accepted by the ACRL and has been put in place in the ACRL information literacy library of guiding documents.

Plans to sunset the older *Information Literacy Competency Standards for Higher Education* will leave instruction librarians with only the *Framework* on which to hang their curriculum. This situation could change in the future, but for now, the *Framework for Information Literacy for Higher Education* is the document that will guide instruction in information literacy.

The frames or threshold concepts identified in the *Framework* document are not self-explanatory. They are theoretical in nature and they don’t offer much help to the instructor. In fact the document is quick to point out that “each library and its partners on campus will need to deploy these frames to best fit their own situation, including

designing learning outcomes.”⁷ Although this approach gives absolute freedom to create instruction locally, it also puts the burden of creation on the local library instruction librarians—often people with very little time and very few resources to work with.

The *Framework* does not offer any hints or examples. It describes what an expert in information literacy does in the context of each threshold concept, but it does not suggest how the expert came by the expertise, nor how to introduce and/or develop those practices in the classroom. It describes knowledge practices—things that learners (nonexperts) do along the way to approach becoming an expert, but it does not give any information as to where they will learn or practice the listed abilities, or who will guide them. It lists dispositions—what learners often do to develop information literacy abilities—but it does not suggest the means by which such learners will develop the habits of mind that will eventually make learners into experts. All these considerations are left entirely to each institution to formulate individually. Ideally, of course, each institution will gather a task force that will produce a plan that will incorporate information literacy across the curriculum at increasing levels of complexity, with associated assessments throughout each student’s college career, culminating in a capstone project that will show how well each graduate reflects the information literacy expert described in the *Framework* document. Most institutions will, in reality, be unable to even begin to reach this lofty goal.

For those few individuals who have reached an expert level of information literacy, the *Framework* document is unnecessary. According to the criteria for threshold concepts, those individuals who have crossed the thresholds to become “information literate” cannot unlearn their new way of viewing the subject. Having crossed the threshold, the information literate individual sees his subject matter differently and cannot return to his previous state. This makes it very difficult for those few to convey to the many information literacy beginners how to get across the thresholds identified. The experts must remember back to a time when they did not “know” and identify what they did in order to cross the threshold. Although the conceptual description of the threshold is present in the *Framework* document, the journey across that threshold is left to the imagination. We are given the destination, but we have to create our own map to get there.

The first appendix of the *Framework* gives suggestions for faculty and administrators about how to create a program that will provide information literacy instruction—although because it is a philosophical rather than a practical document, each institution will have to develop its own program for implementation.

The *Framework* is a mechanism for guiding the development of information literacy programs within higher education institutions while also promoting discussion about the nature of key concepts in information in general education and disciplinary studies. The *Framework* encourages thinking about how librarians, faculty, and others can

address core or portal concepts and associated elements in the information field within the context of higher education. The *Framework* will help librarians contextualize and integrate information literacy for their institutions and will encourage a deeper understanding of what knowledge practices and dispositions an information literate student should develop. The *Framework* redefines the boundaries of what librarians teach and how they conceptualize the study of information within the curricula of higher education institutions.⁸

Appendix 1 of the *Framework* suggests a campus-wide approach to information literacy, much like the “writing across the curriculum” movement in higher education. For those lucky information literacy instructors who have the time, the support of administration and faculty, and the political, pedagogical, and personal power to effect change across a campus, this goal is easily accomplished. For vast numbers of librarians and institutions, the goal is extremely challenging. The *Framework* provides the *what* and the *why* but not the *how*. The *how* always contains the vital details about costs, personnel, and policy change. It is rare in most institutions of higher education to have the necessary personnel, funding, and time to create a how-to for planning a program of “information literacy across the curriculum,” much less implement it. Appendix 2 of the *Framework* outlines the processes used to create the *Framework* document. As stated earlier, the processes used were open and tried to be inclusive. The time line shows a long trajectory to the final product. Appendix 3 of the *Framework* offers a bibliography of sources for further reading. None of these appendixes, however, provides any real, practical assistance to the librarian who must deliver information literacy instruction.

The good news is that everything we have previously created to help students learn to be information literate is probably still valid. The frames of the *Framework* are broad and indistinct. They overlap significantly. They are open to interpretation. Although they do not provide guidance in any practical sense of the word, neither do they limit. For librarians who are still teaching students only what buttons to push, it may be time to generalize from that lesson to a more global or conceptual message. Students certainly need to know how to use the tools that will be helpful to them in accomplishing their academic work. However, they also need to know how to acquire, select, and evaluate information beyond the academy. They need to be able to decide what information is valid, reliable, and accurate, whether their source of information is in a library database or on the open web. Perhaps it is time for the how-to instruction for individual databases to move to the realm of online tutorials, leaving more time to instruct students in the conceptual ideas concerning information and its uses. Even if a one-shot session is the only chance a librarian has to help students start their journey toward information literacy, the conceptual can be combined with the hands-on through the judicious use of technology and timing.

THE FRAMEWORK UNPACKED

The following six “frames” comprise the *Framework*:

1. Authority Is Constructed and Contextual
2. Information Creation as a Process
3. Information Has Value
4. Research as Inquiry
5. Scholarship as Conversation
6. Searching as Strategic Exploration

If we look at what each concept covers, it is fairly easy to see that what has gone before is still applicable. Researchers are not born. They learn to be researchers through instruction and practice. Students are not born information literate. They learn through instruction and practice. The instruction offered prior to the birth of the *Framework* still provides the pathway toward the expert status described. Instruction begins with basic skills that can be linked to more general concepts. As the student masters the basics, more conceptual material can be introduced. The *Framework* is conceptual in nature. Those concepts cannot be meaningful to beginners without some practical application and practice. The basic building blocks need to be learned before the concepts make any sense; therefore, much of the instruction designed to address the *Information Literacy Competency Standards* will apply to the threshold concepts in the *Framework for Information Literacy*. Looking at each of the threshold concepts individually may provide some clues about how to guide students toward the goal of information literacy.

Authority Is Constructed and Contextual

Information literate people consider *who* has created the information they are consuming. The relative expertise of the author should match the importance of getting an accurate and reliable answer. The more important it is to have accurate and reliable information, the more important it is to get the information from a recognized, credentialed authority. An authority in one field of inquiry may have different credentials than an authority in another field, so credentials that give someone authority can be different from one field to another.

Librarians have for many years recommended that beginning students use information generated by individuals whose credentials are relatively easy to find and assess. A PhD or an MD degree is a pretty good indication that an author has expertise in the field. We recommend to students that they seek out people with these kinds of easily discovered credentials until they have enough experience to evaluate other types of credentials on their own. More advanced students might be taught to match their information need with an authority whose credentials are not academic in nature, when that is appropriate. Students can be introduced to a variety of scenarios in which different kinds of authority would be acceptable or even desirable.

Information Creation as a Process

Different types of information are produced in different formats for different reasons. For each of these formats, different rules apply. The speed of publication, the depth of coverage, the size of the organization, the preferences of the editors or owners of the publishing machine, the formal or informal nature of the information, and the available technology all have an impact on the process of creating information in various formats. Because students tend to see all information sources as equal unless instructed otherwise, information literacy instructors recommend that beginning students use library-supplied sources selected by librarians, and we teach students how to use those sources. This strategy provides a safe starting place for students while they are learning how to select their own sources. As students learn about different types of sources, they should also learn about how the format of those sources affects the content.

Fortunately, it is still relevant to point out to students the differences between a newspaper story and a scholarly journal article. It is still relevant to provide a checklist of what to look for in online publications to help identify different types of information. It is still relevant to link the type of publication to its ability to supply the necessary amount of information to answer a specific information need. It is, arguably, even more important now than ever before to teach students to think about what type of source should be selected to inform a specific information need. The type of information needed may necessitate the use of a specific format for that information.

Information Has Value

Information is property and, therefore, it has value. In many countries that value is protected by copyright and acknowledged through citation. Information is often gathered and held by organizations. Some organizations institute a pay wall that limits access to the information (if you can't afford to pay for the information, you can't get it). This restriction gives the information monetary value. The ethical and practical considerations of limiting access to information have in turn resulted in a movement toward open access and other means of making information freely available.

Information literacy instructors have long taught the intricacies of citation and the evils of plagiarism. There is no reason to discontinue this practice. The ethical use of information has been an essential part of what any student should know. Teaching students about pay walls and access may, at this moment, be relevant. In the not too distant future, the distinction between business models and the effect of those business models on the information produced could become irrelevant. The idea that information is a commodity that is owned by someone is not difficult to demonstrate, whether ownership is linked to access or not. Teaching respect for the ownership of information is a long-standing practice in information literacy. Ethical use of information is a concept that students struggle to understand. Instruction in the value of information may help make the rules about using information more understandable. Students should understand the value of information about themselves. Some people share personal

information readily and freely. Others may be less accommodating in sharing personal identifiers. We need to teach students about how third parties collect personal information and about the uses of that personal information by third parties. Students need to understand that privacy can be compromised in numerous ways.

Research as Inquiry

Inquiry involves a process of asking and re-asking questions, identifying new questions, and seeking unanswered questions. To investigate topics one may need to use more than one source and more than one type of source. Information must be organized and considered for applicability to the problem. Researchers must consider the scope of their questions and gather information accordingly. Ideas must be synthesized, and conclusions must be drawn.

This inquiry process is and has always been what research is all about. Librarians and classroom faculty have instructed researchers about this process. They were doing so long before the process was called information literacy. In fact, in the not too distant past, each discipline at most universities had a course called Research Methods in which techniques and processes for research were taught. When this body of teaching moved to the library, it became part of the information literacy continuum. Students need to learn that multiple sources of information exist. As beginners they need to learn how to use one or two before they can begin to consider using multiple sources to address a question. Most students begin and end their research with Google, often because they are not aware that other sources exist. One basic idea that can be conveyed in this part of the *Framework* is that multiple sources of information exist. Although most librarians don't have the time to teach students about every possible source of information, they can certainly demonstrate to students that a wide variety of sources is available.

Scholarship as Conversation

Scholarship develops through the interaction of scholars, be it in person, through technology, or by publication. The conversation develops in fits and starts and continues over the long term. Scholars talk to each other and, in doing so, move knowledge and understanding forward. Much of this conversation is invisible to those outside the academy, as it takes place in offices, hallways, and coffee shops and between meetings at conferences. In the past, nonexperts were not expected to contribute to the conversation, but they could benefit by studying the published results of the conversation.

Information literacy instruction in the past has addressed the published portion of the scholarly conversation. Instruction in creating and using bibliographies, citation indexes, and impact ratings speaks to the conversation of scholarship. What is different about the modern scholarly conversation are the new avenues that allow everyone who has an interest to be part of it. Students in the Internet age may participate in scholarly conversations by means of online forums, blogs, interest groups, and so on.

They may publish their own thoughts inside and outside the academy as well. Information literacy instruction can show students how and where this participation happens.

Searching as Strategic Exploration

The search for information usually begins with a general topic. As one learns more about that topic, it is possible to narrow and refine the topic. As one learns still more, it is possible and sometimes necessary to revise search strategies and to use different sources. This process requires the researcher to be flexible, to use critical thinking skills, and to keep an open mind.

Information literacy has long included brainstorming as a means of solidifying and narrowing topics of interest. Information literacy instruction may teach students how to move from a broad topic to a narrow question. Instruction helps students discover possible sources of information. It assists students by informing them about options for searching using keywords, Boolean operators, proximity limiters, and so on. By introducing something as simple as keyword synonyms, information literacy instruction teaches flexibility. In teaching the evaluation of sources, information literacy promotes critical thinking skills. Strategic exploration has long been a practice for information literacy instructors.

THE FRAMEWORK IN ACTION

Much of what has been devised to teach concepts and skills in information literacy applies whether the reference point is the *Information Literacy Competency Standards* or the *Framework for Information Literacy*. The student has to begin somewhere and usually requires guidance and practice. In some cases, this beginning practice is all the instruction the information literacy librarian has time and opportunity to provide. The trick is to incorporate into the basic instruction a persistent question or a habit of mind that will guide the beginning student to the next level on the journey toward expertise. If students learn to habitually ask *why* as beginners, that habit will continue as they reach higher levels of expertise and will help make them more strategic in their searching.

The *Framework for Information Literacy* provides a conceptual structure that requires information literacy instructors to fill in the empty spaces. The document offers a lofty view of what an expert in information literacy looks like. It describes six threshold concepts about which targeted instruction is needed to guide students to the next level of understanding. Information literacy instructors are urged to create this instruction based on their local needs. Because one cannot cross any academic threshold without some basic understanding of how to find good information, the many, many lessons created for information literacy instruction are likely to remain useful as a starting point.

With or without the conceptual *Framework for Information Literacy*, students need to learn how to deal with the ocean of information that surrounds them. In order to be successful workers, parents, and citizens of the world, they must learn how to obtain the information they need from the vastness of the information that is available. They need to be persistent in the search for information. They must learn to evaluate what they find by asking questions and testing the answers they choose. They must learn to question authority and search for bias. Students must learn to be aware of the means by which information is produced and how the means affect the content. They need to be savvy consumers and producers of information of all kinds. Students must understand that they can and should be part of the conversation.

The remainder of this book provides some ideas about how to make students aware of what information is, what forms it comes in, who creates it, and how it can and should be used. The exercises were created with the *Framework* threshold concepts in mind, beginning with basic ideas and working toward more complex concepts. The exercises are designed to create a trajectory that will move students toward each of the named thresholds and perhaps help them across those thresholds. The exercises provide a starting point for instruction in information literacy and will, it is hoped, provoke additional ideas and approaches. As with any other endeavor, it helps to have a place to start and some ideas to start with.

NOTES

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