ACRL Framework for Information Literacy for Higher Education

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Contents

Introduction

Frames

- Authority Is Constructed and Contextual
- Information Creation as a Process
- Information Has Value
- Research as Inquiry
- Scholarship as Conversation
- Searching as Strategic Exploration

Appendix A: Integrating the Framework to Support Information Literacy Across Campus

- Introduction for Disciplinary Faculty and Administrators
- For Disciplinary Faculty: How to Use the Framework
- For Administrators: How to Support Information Literacy with the Framework

Appendix B: Background of the Framework Development

Appendix C: Resources

Introduction

History of the Framework

The *Framework for Information Literacy for Higher Education* (Framework) positions information literacy (IL) as an educational reform movement with a foundation in a rich, complex set of core ideas. Throughout the evolution of information literacy as a distinct concept, academic librarians and their partners in higher education have historically developed learning outcomes, tools, and resources that institutions have deployed to scaffold information literacy concepts and skills within their curricula. The publication of the Framework in 2015, with its focus on threshold concepts, enabled the expansion of information literacy's reach. The Framework provides ideas and vocabulary to express core dispositions that cross disciplinary boundaries while enabling deep exploration of disciplinary information literacy knowledge practices. The Framework serves as a catalyst for dynamic and varied partnerships between librarians, disciplinary faculty, and administrators around information literacy, and opens the way for considering IL's role in concepts, such as analytical and integrated thinking, critical practice, inclusion, civic engagement, and communication practices.

Information Literacy in the Current Environment

As higher education undergoes rapid and unpredictable change, our dynamic information ecosystems also continue to evolve. The ubiquity of emerging technologies, such as artificial intelligence (AI), is reshaping how we interact with information, raising practical, social, critical, and ethical considerations. Educators are faced with the challenge of considering established practices and pedagogies in light of the impacts of emerging technologies, as well as related literacies, such as digital, data, media, and visual literacy, and civic and community engagement. As traditional boundaries between knowledge creation processes and resulting information outputs become blurred and complicated by information generated or mediated by automated systems, a need is emerging to expand concepts such as scholarship, research, and authority. Additionally, emerging technologies present complex ethical challenges for information use and creation which call for close examination through information literacy lenses.

Along with the changes in information ecosystems, our understanding of how people interact with and learn about these complex systems is also evolving. More inclusive pedagogical shifts are needed to accurately reflect diverse learner realities and support lifelong learning. Building information literacy requires engaging not only the cognitive and metacognitive dimensions, but also the affective dimension of learning. Addressing this internal dimension is critical for learners to understand how biases and emotional responses influence the processes of creating and consuming knowledge. Learning about information is a journey shaped by diverse experiences, contexts, and information needs where learners develop an increasingly complex and nuanced relationship to information along the way. We recognize that learning about information does not always happen on a rigid novice-to-expert continuum, nor does learning begin with a blank slate and end when one has achieved "mastery." While terms like "novice" and "expert" still serve as useful designators to describe learners, especially for assessment purposes, the

Framework itself focuses on the broader evolution of learning that occurs differently across a variety of spaces and contexts. Learners continue to develop as active participants in creating and disseminating knowledge, in understanding and navigating the contours and changing dynamics of the world of information, and in creating and using information, data, and scholarship ethically. Learning occurs both before and after crossing the thresholds represented in the frames.

This more expansive view of the individual learning journey also requires an acknowledgement of diverse knowledge systems and cultural contexts that shape how information is created and shared. There are many distinct cultural ways of knowing that enrich our collective understanding. The concept of research can include the workplace and everyday life as well as traditional academic settings; additionally, research practices themselves often represent a series of conventions which can be critically examined. Beyond academic work, information literacy is essential across all contexts where people seek, evaluate, and use information to make decisions, solve problems, and participate in their communities.

In higher education, where learners are asked to navigate complex information environments, information literacy serves as an ideal thread which can be woven through interdisciplinary contexts. IL can highlight unique approaches to information within disciplines and professions, as well as ask critical questions about the creation and dissemination of knowledge within those fields. Teaching faculty and librarians can design curricula and assignments that foster enhanced engagement with core ideas about information, scholarship, and critical thinking both within and across disciplines. Librarians can identify core ideas within their own knowledge domain that can enhance learning for students, help create cohesive curricula for information literacy, and collaborate more extensively with teaching faculty in teaching, learning, and curriculum planning. Librarians can also play a pivotal role in connecting information literacy to broader academic learning goals through approaches such as critical pedagogy.

Theoretical Background of the Framework

The Framework is intentionally called a framework because it is based on a cluster of interconnected core concepts, with flexible options for implementation, rather than on a set of standards or learning outcomes, or any prescriptive enumeration of skills. At the heart of this Framework are conceptual understandings that organize many other concepts and ideas about information, research, and scholarship into a coherent whole. These conceptual understandings are informed by the work of Wiggins and McTighe,[1] which focuses on essential concepts and questions in developing curricula, as well as by *threshold concepts* developed by Meyer and Land.[2] Threshold concepts can be thought of as portals through which the learner must pass in order to develop new perspectives and wider understanding.[3] Threshold concepts are core or foundational concepts that, once grasped by the learner, create new perspectives and ways of understanding a discipline or challenging a knowledge domain. Such concepts produce transformation within the learner; without them, the learner may not progress in that field of knowledge. Although threshold concepts do envision learners as "novices" and "experts," the focus on liminality, or the unstructured spaces in which the learning journey toward a threshold occurs, serves as a flexible paradigm in which to position information literacy learning processes.[4] The threshold concepts themselves—in this case, the frames—serve as a markers or guideposts for that learning. The positioning of the frames as threshold concepts for information literacy draws primarily from the work of Townsend et al.[5]

Additionally, threshold concepts reinforce information literacy teaching and learning as an intentional and equitable practice.

The Framework also draws significantly upon the concept of metaliteracy, namely from the work of Mackey and Jacobson,[6] which expands the scope of traditional information skills (i.e., determine, access, locate, understand, produce, and use information) to include the collaborative production and sharing of information in participatory digital environments.[7] This approach requires an ongoing adaptation to emerging technologies, such as AI, and an understanding of the critical thinking and reflection required to engage in these spaces as producers, collaborators, and distributors. Metaliteracy addresses behavioral, affective, cognitive, and metacognitive engagement with the information ecosystem. Metacognition[8] is an awareness and understanding of one's own thought processes; it focuses on how people learn and process information, taking into consideration people's awareness of how they learn. This type of critical self-reflection is crucial to becoming more self-directed in a rapidly changing information ecosystem.

Information Literacy: Definition and Framework Structure

Definition of Information Literacy

Information literacy is the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning.[9]

Structure of the Framework

The Framework is organized into six frames, each consisting of a concept central to information literacy, a set of knowledge practices, and a set of dispositions.

Frames are the threshold concepts that provide ways to frame core ideas in information literacy teaching and learning

The six concepts that anchor the frames are presented alphabetically and do not suggest a particular sequence or hierarchy in which they must be learned.

- Authority Is Constructed and Contextual
- Information Creation as a Process
- Information Has Value
- Research as Inquiry
- Scholarship as Conversation
- Searching as Strategic Exploration

Knowledge Practices are the proficiencies or abilities that learners develop as a result of their comprehending a threshold concept. Knowledge practices demonstrate ways in which learners increase their understanding of information literacy concepts.

Dispositions are a tendency to act or think in a particular way. More specifically, a disposition is a cluster of preferences, attitudes, and intentions, as well as a set of capabilities, that address the affective, attitudinal, or valuing dimensions of learning.[10]

Neither the knowledge practices nor the dispositions that support each concept are intended to prescribe what local institutions should do in using the Framework; for this reason, they are not written as learning outcomes per se. Each library and its partners on campus can deploy these frames to best fit their own situation, including designing measurable learning outcomes as needed. For the same reason, these lists should not be considered exhaustive.

Other Terms Used

Learner: any person who is developing information literacy practices. We refer to learners as developing or evolving along a continuum of increasing complexity or nuance in relation to information.

Research: an expansive term which encompasses a range of inquiry, discovery, and knowledge creation activities, ranging from a simple act of seeking out information to creating original empirical research.

Emerging technologies: a term used to refer to automated systems which generate or mediate information, including all types of artificial intelligence. Due to the rapidly developing nature of these technologies, we chose to use this umbrella term instead of naming specific, proprietary, or current systems.

Conclusion

The Framework provides a foundation for librarians, teaching faculty, and other institutional partners to design instruction, assignments, courses, and curricula; to connect information literacy with student success initiatives; to collaborate on pedagogical research and involve students in that research; to address the integration of emerging trends and technologies, such as AI and digital literacy; to foster lifelong learning, ethical, civic, and community engagement with information; and to create wider conversations about learning, faculty development, the scholarship of teaching and learning, as well as the assessment of learning on local campuses and beyond.

Notes

[1] Grant Wiggins and Jay McTighe. *Understanding by Design*. (Association for Supervision and Curriculum Development, 2004).
[2] Jan H. F. Meyer et al. “Editors’ Preface.” In *Threshold Concepts and Transformational Learning*, edited by Jan H. F. Meyer et al., ix–xlii. (Sense Publishers, 2010).
[3] Jan H. F. Meyer et al. “Editors’ Preface.”
[4] Amy R. Hofer et al., eds. *Transforming Information Literacy Instruction: Threshold Concepts in Theory and Practice*. Libraries Unlimited, 2019
[5] Lori Townsend et al. “Threshold Concepts and Information Literacy.” *portal: Libraries and the Academy* 11, no. 3 (2011): 853–69; Amy R. Hofer et al. “A Threshold Concepts Approach to the

Standards Revision." *Communications in Information Literacy* 7, no. 2 (2013); Lori Townsend et al. "Identifying Threshold Concepts for Information Literacy: A Delphi Study." *Communications in Information Literacy*, 10, no. 1 (2016).

[6] Thomas P. Mackey and Trudi E. Jacobson. *Metaliteracy: Reinventing Information Literacy to Empower Learners.* (Neal-Schuman, 2014).

[7] Thomas P. Mackey and Trudi E. Jacobson. "Reframing Information Literacy as a Metaliteracy." *College and Research Libraries* 72, no. 1 (2011): 62–78.

[8] Jennifer A. Livingston. "Metacognition: An Overview." Online paper, State University of New York at Buffalo, Graduate School of Education, 1997. http://gse.buffalo.edu/fas/shuell/cep564/metacog.htm.

[9] Because this Framework envisions information literacy as extending the arc of learning throughout students' academic careers and as converging with other academic and social learning goals, this definition of information literacy emphasizes dynamism, flexibility and adaptability to various educational contexts and emerging technologies and digital literacy, individual growth, and community learning.

[10] Gavriel Salomon. "To Be or Not to Be (Mindful)." Paper presented at the American Educational Research Association Meetings, New Orleans, LA, 1994.

Authority Is Constructed and Contextual

Information resources reflect their creators' expertise, credibility, and the context in which the information is created. Resources are evaluated based on the information need and the context in which the information will be used. Authority is constructed: various communities create and recognize different types of authority when seeking or encountering information. It is also contextual: the information need of the individual or community may help to determine the form of authority required to fulfill that need.

Learners come to understand that authority is a type of influence recognized or exerted within a community. Learners develop increasing familiarity with a field and understand that they will need to ask critical questions of authority. They are open to new perspectives, to additional voices, to reviewing their own biases (including emotional reactions to information), and to changes in schools of thought. They understand the need to determine the validity of the information created by different authorities and to acknowledge systematic biases that privilege dominant institutions while devaluing or dismissing the experiences of marginalized communities, especially in terms of worldviews, race, gender, sexual orientation, and cultural orientation. An understanding of these concepts enables learners to critically examine all evidence—be it a short video or a peer-reviewed conference proceeding—and to ask relevant questions about the origin, context, and suitability for the current information need. Learners come to recognize the expertise that authority represents while critically evaluating the systems that have elevated that authority and the information created by it. They also understand how emerging technologies, such as artificial intelligence, can appear neutral or authoritative; however, the lack of transparency of data collection practices and algorithms can reproduce biases and misinformation. Learners know how to seek authoritative voices and understand that historically unrecognized and underrepresented voices can be authoritative. Learners may initially rely on surface-level indicators of authority, such as type of publication or author credentials, before they begin to recognize schools of thought, discipline-specific knowledge, and the ways in which context and power shape who or what is considered authoritative.

Knowledge Practices

Learners who are developing their information literate abilities:

- identify different types of authority, including (but not limited to) subject expertise, societal position, lived experience, or positional authority, and evaluate how these forms of authority are established, used, and potentially misused in different contexts;
- investigate and critically evaluate sources to determine their credibility, understanding that research and information can be misrepresented or created for the purpose of misleading others;
- understand that many disciplines have acknowledged authorities, but that these authorities can be challenged for legitimate and non-legitimate reasons;
- recognize that authoritative content may be packaged formally or informally and may include sources of all media types;

- acknowledge they are developing their own authoritative voices in a particular area and recognize the responsibilities this entails, including seeking accuracy and reliability, respecting intellectual property, and participating in communities of practice;
- understand the increasingly social nature of the information ecosystem in which individuals and groups actively connect with one another and sources develop over time;
- recognize that search algorithms may not be transparent, and critically evaluate any information they retrieve;
- understand that emerging technologies, such as Generative AI, are not inherently authoritative, nor are they capable of critically evaluating information.

Dispositions

Learners who are developing their information literate abilities:

- develop and maintain an open mind when encountering varied and sometimes conflicting perspectives;
- motivate themselves to find authoritative sources, recognizing that authority may be conferred or manifested in unexpected ways;
- develop awareness of the importance of assessing content with a skeptical stance and with a self-awareness of their own biases and worldview;
- recognize traditional academic notions of granting authority, such as citational practices, and identify who these practices may systematically exclude as well as what they may leave out;
- seek out ideas and worldviews from populations that have historically been systematically excluded from academic notions of authority;
- recognize that algorithms and information generated through emerging technologies are not neutral, and might produce and amplify biased and flawed information;
- understand how implicit or explicit bias, including confirmation bias, can impact the types of information we consider authoritative;
- are conscious that maintaining these attitudes and actions requires frequent self-evaluation as well as understanding one’s emotional awareness when seeking information.

Information Creation as a Process

Information is produced to convey a message and shared via selected delivery methods. Information formats can be dynamic and evolving, or static and complete. The iterative processes of researching, creating, revising, and disseminating information vary, and the resulting product reflects these differences. The information creation process refers to examining ways in which a piece of information came to be as well as the way the researcher/learner will be using the information.

Information creation processes could result in a range of information formats and modes of delivery, so learners look beyond format when selecting resources which meet their needs. The unique capabilities and constraints of both the person and their chosen creation process, as well as the specific information needed, determine how the resulting product is used. Learners recognize that information creations are valued differently in different contexts, such as academia, the workplace, or everyday life. Elements that shape information creation, such as a pre- or post-publication editing or reviewing process, may be indicators of quality. The dynamic nature of information creation and dissemination requires ongoing attention to understand evolving creation processes. While there is a distinct difference between the human information creation processes and that of artificial or computer intelligence, a dynamic relationship exists between both creation processes. The environmental, human and societal impact of artificial intelligence and other computer intelligence should also be part of the conversations around their creation process and use. Recognizing the nature of information creation, learners look to the underlying processes of creation, as well as the subsequent product, to critically evaluate the usefulness of the information. Learners begin to recognize the significance of the creation process, leading them to increasingly sophisticated choices when matching information products with their information needs.

Knowledge Practices

Learners who are developing their information literate abilities:

- articulate the capabilities and constraints of information developed through various creation processes;
- assess the fit between an information product's creation process and a particular information need;
- articulate both traditional and emerging processes of information creation and dissemination in various contexts;
- recognize that information may be perceived, utilized and accessed differently based on the format in which it is packaged;
- recognize that information creation processes are not neutral; deliberately examine for biases and assess for political, social, and environmental implications;
- identify how information formats function by noting whether the information is stable or changing (i.e., static or dynamic);
- map knowledge of capabilities and constraints to emerging information products;
- recognize information created by computer intelligence, such as AI-generated information, and the ways that it draws upon human-created information in its creation process.

Dispositions

Learners who are developing their information literate abilities:

- are inclined to critically consider the context, intention and the motivation behind the information created;
- develop, in their own creation processes, an understanding that their choices impact the purposes for which the information product will be used and the message it conveys;
- value the process of matching an information need with an appropriate format;
- develop an awareness that the creation of information may emerge through communicating in a range of formats or modes;
- recognize the ambiguity surrounding the potential value of information creation expressed in emerging formats or modes;
- recognize the differences in the quality and usefulness of information produced directly by humans or by artificial intelligence and evaluate each accordingly;
- resist the tendency to equate format with the underlying creation process;
- understand that different methods of information dissemination with different purposes are available for a learner's use.

Information Has Value

Information is situated within a larger knowledge system and is valuable in how learners negotiate and understand the world. Information possesses several dimensions of value including as a means of education, as a means to influence, and as a commodity. Legal and socioeconomic interests influence information production and dissemination.

The value of information is manifested in various contexts, including but not limited to production of knowledge, publishing practices, access to information, the commodification of personal information, and intellectual property laws. Information can be collected, discovered, or generated through many processes or methods, whether human or machine generated. However, transforming information into knowledge and meaning making is a human process. Learners may struggle to understand different values and dimensions of information if they first encounter the concept of intellectual property through plagiarism warnings and citation rules. As users and creators of information, learners begin to view themselves as active participants in a knowledge community, and to consider how their interactions with artificial intelligence and other emerging technologies change the environment of information production.

Learners begin to recognize that the contextual value of information changes to reflect the volatile nature of a changing society. The dimensions of value are particularly impacted by changing views of facts and truth; changes in the publishing industry; changing levels of trust for public institutions and establishments; platform economics; surveillance capitalism; the commercialization of personal data; and new information technologies that generate information or misinformation. Value may be wielded by powerful forces in ways that marginalize or censor certain voices, or that present disinformation as truth. However, value may also be leveraged by individuals and organizations to affect change and for civic, economic, social, or personal gains. Learners discover that the individual is responsible for making deliberate and informed choices about when to comply with and when to contest current legal, structural, socioeconomic, cultural, and other practices concerning the value of information.

Knowledge Practices

Learners who are developing their information literate abilities:

- understand that knowledge systems can be culturally constructed, granting agency to the knowledge creators to determine how it is shared, who can access it, and other protective terms of use;
- understand how and why some individuals or communities may be underrepresented or systematically marginalized within the prevailing systems that produce and disseminate information;
- critically reflect on potential aspects of their own information privilege—considering their access to information resources, positionality, and social capital—and realize the sociocultural and historical impacts of information privilege;
- understand that intellectual property is legally and culturally constructed, regulating how creative and intellectual works are protected, distributed, and can be used;
- articulate the purpose of copyright, fair use, open access, and the public domain;

- give credit to the original ideas of others through proper attribution and citation, including the disclosure of AI use;
- acknowledge the hidden value and cost of information access, knowledge production, and dissemination within the current information industry ecosystem;
- consider how dimensions of value differ between AI generated information and information discovered through human processes, such as speed of access, reliability, content quality and discovery processes, and environmental cost;
- understand how information can be intentionally suppressed or censored, or how disinformation created and spread for monetary gain, social influence, or geopolitical power;
- understand how the commodification of their personal information and online interactions affects the information they receive and the information they produce or disseminate online;
- make informed choices regarding their online actions with awareness of issues related to privacy, the commodification of personal information, and AI training content.

Dispositions

Learners who are developing their information literate abilities:

- respect the original ideas and information products of others;
- value the skills, time, effort, and care needed to produce knowledge and make it accessible;
- respect the information traditions of cultural communities, as well as their agency to care for sacred or protected knowledge;
- see themselves as information creators rather than only information consumers;
- maintain a critical mindset when retrieving information through AI search tools and question results since they often yield information of inconsistent value.

Research as Inquiry

Research is iterative and depends upon asking increasingly complex or new questions resulting in answers that, in turn, develop additional questions or lines of inquiry in any context.

Inquiry is a process that is not limited to the academic world and can focus on open or unresolved problems or questions related to personal, professional, or societal needs. Learners recognize that extending knowledge, whether within a discipline or non-academic context, requires collaborative efforts. Many times, this process includes points of disagreement where debate and dialogue work to deepen the conversations around knowledge. As learners acquire increasingly strategic perspectives on inquiry and a greater repertoire of investigative methods, they become better equipped to fulfill information needs more efficiently.

In any research situation, learners cultivate curiosity and understand that initial questions can evolve into more advanced research that explores gaps in knowledge. Through practice, learners come to understand how original research is created through human-led inquiry. AI tools can support the iterative process of questioning, exploring, and refining ideas; however, because AI outputs are derivative, they cannot replace the critical thinking and human-led inquiry central to research. Inquiry encompasses a wide spectrum, typically beginning with information gathering and simple research questions that rely on a basic restatement of existing knowledge. Learners progress toward more advanced capabilities, including the development of sophisticated research questions, the application of complex research methods, and the exploration of a greater variety of disciplinary perspectives.

Knowledge Practices

Learners who are developing their information literate abilities:

- demonstrate curiosity by asking questions, embracing knowledge gaps, and then seeking to learn and understand;
- formulate questions for research based on information gaps or on reexamination of existing, possibly conflicting, information;
- determine an appropriate scope of investigation;
- recognize when help is needed and seek appropriate guidance;
- manage complex research by breaking complex questions into simple ones, limiting the scope of investigations;
- recognize that a variety of research methods may be used, and select appropriate methods based on need, circumstance, and type of inquiry;
- monitor gathered information and assess for gaps or weaknesses;
- organize information in meaningful ways;
- synthesize ideas gathered from multiple sources of information;
- draw reasonable conclusions based on the analysis and interpretation of information combined with their own findings, rather than fitting the information to preconceived opinions;
- understand that there are multiple approaches to research and select those most appropriate to their needs.

Dispositions

Learners who are developing their information literate abilities:

- view research as open-ended exploration and engagement with information;
- value intellectual curiosity in developing research questions and learning new investigative methods;
- appreciate that a question may appear to be simple but still novel and important to research;
- value persistence, adaptability, and flexibility;
- recognize that ambiguity can benefit the research process and that researchers do not abandon difficult or complex inquiry;
- maintain an open mind and seek multiple perspectives while gathering and evaluating information, accounting for personal, economic, political, and systemic biases;
- follow ethical and legal guidelines in gathering and using information;
- demonstrate intellectual humility and acknowledge their own intellectual or experiential limitations.

Scholarship as Conversation

Communities of scholars, researchers, specialists or professionals engage in sustained discourse with new insights and discoveries occurring over time as a result of varied perspectives and interpretations.

The metaphor of conversation is used to describe how systems of knowledge evolve through the ways information and its creators relate to one another. Research in scholarly and professional fields is a specific type of discursive practice, or conversation, in which ideas are formulated, debated, and weighed against one another over extended periods of time in different formats and venues. Instead of seeking discrete answers to complex problems, learners understand that a given issue may be characterized by several competing perspectives as part of an ongoing conversation in which information users and creators come together and negotiate meaning. Learners understand that, while some topics have established answers through this process, a query may not have a single uncontested answer. Learners are therefore inclined to seek out many perspectives, not merely the ones with which they are familiar. These perspectives might be within their own sphere of knowledge, culture, discipline, or profession or may be in unfamiliar areas or other fields or professions or may be in other fields. While learners at all levels can take part in the conversation, established power and authority structures may influence their ability to participate and can privilege certain voices and information.

Developing familiarity with the sources of evidence, methods, and modes of discourse in their own context or culture assists emerging learners to enter the conversation. New forms of informal, scholarly, and professional conversations provide more avenues in which a wide variety of voices-may become a part of the conversation. Evaluating credibility and providing attribution to relevant previous research, or other sources, is also an obligation of participation in the conversation. It enables the conversation to move forward and strengthens one’s voice.

Knowledge Practices

Learners who are developing their information literate abilities:

- acknowledge the contributing work of others, the involvement and use of AI tools, and new and emerging technologies in their own information production;
- contribute to discourses at various levels, such as a local online community, a guided discussion, an undergraduate research journal, or a conference presentation/poster session;
- identify barriers to entering discourses via various venues;
- critically evaluate all contributions made by other persons and the tools used in participatory information environments;
- identify that all forms of knowledge, such as oral, text, kinesthetic, material-based, and other forms contribute to a discourse;
- summarize the changes in scholarly perspective over time on a particular topic within a specific discipline;
- Recognize that a given discourse may not represent the only, or even the majority, perspective on the issue;

- identify majoritarian narratives and include representation of counternarratives when studying a topic;
- recognize that a human scholar/researcher and knowledge synthesis tools offer different levels of discursive value, and require different forms of critical evaluation and engagement;
- acknowledge the rhetorical, emotional and other dimensions of formal and informal conversations;
- identify how misinformation and disinformation impact formal and informal conversations.

Dispositions

Learners who are developing their information literate abilities:

- are aware of their social identities in relation to formal and informal conversations, and of their impact on the thought process;
- are aware of censorship, in all forms, that can impact the conversation;
- recognize they are often entering into an ongoing and evolving discourse and not a perfect, finished conversation;
- seek out conversations taking place in their research area;
- see themselves as contributors to the information landscape rather than only consumers of it;
- recognize that discourses take place in various venues;
- suspend judgment on the value of a particular piece of work until the larger context for the conversation is better understood;
- understand the ethical responsibility that comes with entering the conversation through participatory channels;
- recognize that original thought and critical research are functions of humans, and value human-created sources over artificially generated ones for these purposes;
- recognize that knowledge systems tend to include language and processes unique to their context, discipline, or purpose;
- are aware that fluency in these processes can either privilege or disempower individuals' ability to participate and engage in relevant conversations.

Searching as Strategic Exploration

Searching for information is often a nonlinear and iterative process, requiring the use and evaluation of a range of information sources as well as the mental flexibility to pursue alternate avenues as new understanding develops throughout the lifecycle of the project.

Learners use a range of approaches to obtain relevant sources, including searching academic databases, popular online search engines, and other platforms, as well as engaging with individuals and browsing collections. Searching can also be non-technological, involving accessing information through lived experience, human networks, investigation, observation, and/or critical thinking. The act of searching often begins with a question that directs the process of finding needed information. Several internal and external factors, including cognitive, affective, cultural, social, economic, and political dimensions can impact the search experience. More experienced learners realize that information searching is a complex process, in which they utilize multiple search strategies to identify sources depending on the scope and context of their information need.

Engaging in exploration using generative artificial intelligence tends to guide learners towards answers rather than providing search results to sift through and interpret. The biases, limitations, hallucinations, and inaccuracies that are evidenced byproducts of AI to date necessitate that learners consider and navigate the use of these tools with a critical stance. The decision of whether to use AI as part of the search process should be informed by an awareness of inherent risks, such as impact on search skill development, the loss of autonomy in shaping the direction of research, and consciousness of the environmental and societal impacts of AI use. Learners who choose to use AI in the search process exhibit care and flexibility with developing AI prompts that generate varied evidence, while understanding the sycophantic nature of AI chatbots and their propensity to provide agreeable answers that corroborate prompts, and that potentially include fabricated or hallucinated citations.

Knowledge Practices

Learners who are developing their information literate abilities:

- determine the initial scope of the task and types of sources that could address their information needs;
- match information needs to appropriate search tools and information producers;
- recognize that information systems may incorporate metadata, algorithms, rankings, user engagement, or artificial intelligence to display and curate search results;
- utilize divergent thinking (e.g., brainstorming) and consider using potentially relevant resources, such as knowledgeable individuals, to explore and expand on ideas around the information need;
- utilize convergent thinking to narrow results (e.g., selecting relevant sources or applying search filters) when searching, including using identified sources to connect to additional sources;
- distinguish between different types of searching language (e.g., controlled vocabulary, keywords, natural language) and use the most effective methods for each search tool or process;
- may draw upon non-technological methods of searching, such as human networks, direct observation, or lived experience;

- acknowledge that search terms change over time based on the historical and social context of the topics being explored;
- devise and refine search strategies as necessary, based on available tools, search results and the searcher's evolving information needs and interests;
- identify scholars and other individuals, communities, cultures, organizations, governments, and industries, who might produce relevant information about a topic, and then use that knowledge to inform search strategies;
- manage searching processes and results effectively by using appropriate tools or methods to document, save, and organize sources and citations;
- revisit and adjust search strategies as needed and acknowledge that useful information can also come from surprising discoveries and unexpected sources;
- prompt AI systems effectively by framing, context-setting, iterating, and critically evaluating outputs in ways that can be distinct from other search modalities.

Dispositions

Learners who are developing their information literate abilities:

- exhibit mental flexibility and creativity;
- recognize connections between processes of searching and human-led idea generation;
- recognize gaps in search results, as well as when they have enough information to complete the information task;
- realize that searching is iterative: first attempts at searching may not produce adequate results, and searching will evolve as one learns more about their topic;
- recognize that searching can extend throughout the life of the project;
- search with the awareness that search results may contain mal-, mis-, and disinformation;
- reflect on usefulness and relevance of information while examining sources found throughout the search process;
- persist in the face of search challenges, fatigue, and frustrations while recognizing that this can include strategies such as planning, reflection, and getting some distance from the search;
- seek guidance from a range of content experts, including librarians;
- recognize the value of browsing and other unstructured methods of information discovery;
- value that seeking out non-digital resources (e.g., community relationships, books, peers, library workers) may deepen understanding and relationships important for the search process;
- realize that information sources vary greatly in content and format and have varying relevance and value, depending on the needs and nature of the search;
- recognize that lived experiences are diverse and not always reflected in formally published sources; learners may need to change search techniques to account for the multiple ways that information is known, stored, and shared within and across cultures and communities;
- acknowledge that search tools may be designed in ways that diminish the voices of marginalized social groups as represented in the tool's functionality, information organization, and language used in metadata;
- reflect on their own biases to consider how implicit or explicit bias, including confirmation bias, can impact the information seeking process;

- maintain awareness that the homogeneity of AI outputs reinforces cultural, systemic, and racial biases;
- recognize the need to review the accuracy, validity and relevancy of all search results, including information generated by AI;
- remember that prompting generative AI for answers early in the research process may reduce the learner's autonomy or erode critical thinking by allowing AI to direct the course of research;
- consider how AI may generate homogenized answers, often separate from sources of evidence, that do not reflect the breadth of evidence on a topic.

Appendix A: Integrating the Framework to Support Information Literacy Across Campus

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 threshold concepts, as well as 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 provides a foundation designed to support the conceptualization and teaching of information literacy in higher education by laying out a set of principles. The document is meant to serve as a guide rather than a set of prescriptive rules, allowing for varied interpretations and approaches that may expand beyond its scope.

The Framework has been conceived as a set of living documents on which the profession builds. The key product is a set of frames through which to view information literacy, each of which includes a concept central to information literacy, knowledge practices, and dispositions. The Association of College & Research Libraries (ACRL) encourages the library community to discuss the Framework widely and to develop resources to supplement the core set of materials in the frames.

The frames can guide the redesign of information literacy programs for general education courses, for upper-level courses in students' major departments, and for graduate student education. The frames are intended to illustrate evolving degrees of complexity or nuance in approaches to information over a learning journey in specific areas; movement may take place throughout a student's academic career as well as continuing throughout a lifetime. Mapping out in what way specific concepts will be integrated into specific curriculum levels is one of the challenges of implementing the Framework. ACRL encourages librarians to work with faculty, departmental or college curriculum committees, instructional designers, staff from centers for teaching and learning, and others to design information literacy programs in a holistic way.

ACRL realizes that many information literacy librarians currently meet with students via consultations, workshops, course-integrated online learning, co-curricular design, embedding, and other instructional formats, especially in introductory-level classes. Over the course of a student's academic program, these sessions that address a particular need at a particular time, systematically integrated into the curriculum, can play a significant role in an information literacy program. It is important for librarians and teaching faculty to understand that, while certain information literacy concepts can be addressed in single sessions, the Framework is generally not designed to be implemented in a single information literacy session in a student's academic career; rather, it is intended to be developmentally and systematically integrated into the student's academic program at a variety of levels. This may take considerable time to implement fully in many institutions.

ACRL encourages information literacy librarians to be imaginative and innovative in implementing the Framework in their institution. The Framework is not intended to be prescriptive but to be used as a guidance document in shaping an institutional program. ACRL recommends piloting the implementation

of the Framework in a context that is useful to a specific institution, assessing the results and sharing experiences with colleagues.

Introduction for Disciplinary Faculty and Administrators

Considering Information Literacy

Information literacy is the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning.

This Framework sets forth these information literacy concepts and describes how librarians, as information professionals, can facilitate the development of information literacy by postsecondary students.

Creating a Framework

ACRL has played a leading role in promoting information literacy in higher education for decades. The *Information Literacy Competency Standards for Higher Education* (Standards), first published in 2000, enabled colleges and universities to position information literacy as an essential learning outcome in the curriculum; it promoted linkages with general education programs, service learning, problem-based learning, and other pedagogies focused on deeper learning. Regional accrediting bodies, the American Association of Colleges and Universities, and various discipline-specific organizations employed and adapted the Standards.

Considering changes in higher education, coupled with increasingly complex information ecosystems, the Framework seeks to address the great potential for information literacy as a deeper, more integrated learning agenda, addressing academic and technical courses, undergraduate research, community-based learning, and the co-curricular learning experiences of students from their first year through to graduation. The Framework focuses attention on the vital role of collaboration and its potential for increasing student understanding of the processes of knowledge creation and scholarship. The Framework also emphasizes student participation and creativity, highlighting the importance of these contributions.

The Framework is developed around a set of threshold concepts, those critical gateway or portal concepts which are necessary for further development of learning within a discipline, profession, or knowledge domain. Each frame includes a knowledge practices section used to demonstrate how the threshold concept leads to application in new situations and to knowledge generation. Each frame also includes a set of dispositions that address the affective areas of learning. While the frames, knowledge practices, and domains are not designed as measurable learning outcomes, they can be used to inform the development of specific outcomes if needed.

For Disciplinary Faculty: How to Use the Framework

A benefit to having threshold concepts underpinning the Framework is their potential for enabling collaboration among disciplinary faculty, librarians, teaching and learning center staff, and others. Creating a community of conversations can engender collaboration, innovative course design, and a more inclusive consideration of the learning process within and beyond the classroom. Because information literacy serves as both a disciplinary and a transdisciplinary learning agenda, using a conceptual framework for information literacy program planning, librarian-faculty collaboration, and student co-curricular projects can offer great potential for curricular enrichment and transformation. A faculty member can begin with the following key questions and potential approaches:

- What are the specialized information skills or concepts in your discipline that learners should develop? (e.g., working with primary sources (history), or accessing and managing large data sets (science))
    - Investigate threshold concepts in your discipline to explore how the approach used in the Framework applies to the discipline you know.
    - Look for workshops at your campus teaching and learning center and consider how such practices could be incorporated into your courses.
- What previous experience or knowledge do you expect that learners will bring to information and research assignments that will prepare them to apply concepts and conduct collaborative projects?
    - Assess whether learners bring this knowledge with them to your instructional context; use the Framework to help describe concepts and skills which may be tacit, assumed, or unspoken
- In your academic program or curriculum, how do students typically interact with, evaluate, produce, and share information in various formats and modes?
    - Consider ways to help learners view themselves as information creators as well as consumers, producers, individually and collaboratively.
    - Consider the knowledge practices and dispositions in each information literacy frame for possible integration into your own courses and academic program.
- How might you and a librarian design learning experiences and assignments that will encourage students to assess their own attitudes, strengths/weaknesses, and knowledge gaps related to information?
    - Consider what kinds of workshops and other services should be available for learners involved in multimedia design and production.
    - Partner with your librarians and educational technologists to explore scaffolding possibilities or develop new kinds of multimedia assignments for courses.

For Administrators: How to Support Information Literacy with the Framework

Through reading the Framework document and discussing it with your institution's librarians, you can begin to focus on the best mechanisms to leverage the Framework to support information literacy in your institution. As an administrator, you can consider the following key questions and potential approaches:

- Who are the experts in information literacy on your campus?

    - Seek out information literacy experts on your campus—librarians or others with teaching and research experience in this area—and draw upon their expertise.
- Where are curricular initiatives or opportunities on your campus where information literacy might play a pivotal role?
    - Host or encourage a series of campus conversations about how the institution can consider the Framework as it relates to student learning outcomes and supporting curriculum.
- How can you support faculty development for information literacy on your campus?
    - Provide the resources to enhance faculty expertise and opportunities for understanding and incorporating the Framework concepts into the curriculum.
    - Encourage committees working on planning documents related to teaching and learning (at the department, program, and institutional levels) to include concepts from the Framework in their work.
    - Support research partnerships among librarians, teaching faculty, and other information literacy experts related to the scholarship of teaching and learning.
- How could assessment in information literacy benefit your understanding of student learning on your campus?
    - Provide resources to develop and support meaningful assessment of information literacy of learners at various levels at your institution.
    - Promote partnerships between faculty, librarians, instructional designers, and others to develop meaningful ways for learners to become information creators, especially in their disciplines.

Appendix B: Background of the Framework Development

The *Information Literacy Competency Standards for Higher Education* (Standards) were published in 2000. They brought information literacy into higher education conversations and advanced the field of library and information science (LIS). These Standards, like all ACRL standards, were reviewed cyclically. In July 2011, ACRL appointed a task force to decide what, if anything, to do with the then-current Standards. In June 2012, the task force recommended that the Standards be significantly revised. The 2011 review task force made recommendations that informed the 2013 revision task force, with the charge:

> to update the *Information Literacy Competency Standards for Higher Education* so they reflect the current thinking on such things as the creation and dissemination of knowledge, the changing global higher education and learning environment, the shift from information literacy to information fluency, and the expanding definition of information literacy to include multiple literacies, for example, transliteracy, media literacy, digital literacy, etc.

The task force released the first version of the Framework in two parts, in February and April of 2014, and received comments via two online hearings and a feedback form available online for four weeks. The committee then revised the document, released the second draft on June 17, 2014, and sought extensive feedback through a feedback form, two online hearings, an in-person hearing, and analysis of social media and topical blog posts.

On a regular basis, the task force used ACRL's and American Library Association's (ALA) communication channels to reach individual members and ALA and ACRL units (e.g., committees, sections, round tables, cultural affinity groups, chapters, and divisions) with updates. The task force's liaison at ACRL maintained a private e-mail distribution list of over 1,300 individuals who attended a fall, spring, or summer online forum; provided comments to the February, April, June, or November drafts; or were otherwise identified as having a strong interest and expertise. This included members of the task force that drafted the Standards, leading LIS researchers and national project directors, members of the Information Literacy Rubric Development Team for the Association of American Colleges & Universities, and the Valid Assessment of Learning in Undergraduate Education initiative. Via all these channels, the task force regularly shared updates, invited discussion at virtual and in-person forums and hearings, and encouraged comments on public drafts of the proposed Framework.

ACRL recognized early on that the effect of any changes to the Standards would be significant both within the library profession and in higher education more broadly. In addition to general announcements, the task force contacted nearly sixty researchers who cited the Standards in publications outside LIS literature, more than seventy deans, associate deans, directors or chairs of LIS schools, and invited specific staff leaders (and press or communications contacts) at more than seventy other higher education associations, accrediting agencies, and library associations and consortia to encourage their members to read and comment on the draft.

The task force systematically reviewed feedback from the first and second drafts of the Framework, including comments, criticism, and praise provided through formal and informal channels. The three official online feedback forms had 562 responses; in addition, numerous direct e-mails were sent to

members of the task force. The group was proactive in tracking feedback on social media, namely blog posts and Twitter. While the data harvested from social media are not exhaustive, the task force made its best efforts to include all known Twitter conversations, blog posts, and blog commentary. In total, there were several hundred feedback documents, totaling over a thousand pages, under review. The content of these documents was analyzed by members of the task force and coded using HyperResearch, a qualitative data analysis software. During the drafting and vetting process, the task force provided more detail on the feedback analysis in an online frequently asked questions (FAQ) document.

The task force continued to revise the document and published the third revision in November 2014, again announcing broadly and seeking comments via a feedback form.

As of November 2014, the task force members included the following:

- Craig Gibson, Professor, Ohio State University Libraries (Cochair)
- Trudi E. Jacobson, Distinguished Librarian and Head, Information Literacy Department, University at Albany, SUNY, University Libraries (Cochair)
- Elizabeth Berman, Science and Engineering Librarian, University of Vermont (Member)
- Carl O. DiNardo, Assistant Professor and Coordinator of Library Instruction/Science Librarian, Eckerd College (Member)
- Lesley S. J. Farmer, Professor, California State University–Long Beach (Member)
- Ellie A. Fogarty, Vice President, Middle States Commission on Higher Education (Member)
- Diane M. Fulkerson, Social Sciences and Education Librarian, University of South Florida in Lakeland (Member)
- Merinda Kaye Hensley, Instructional Services Librarian and Scholarly Commons Cocoordinator, University of Illinois at Urbana-Champaign (Member)
- Joan K. Lippincott, Associate Executive Director, Coalition for Networked Information (Member)
- Michelle S. Millet, Library Director, John Carroll University (Member)
- Troy Swanson, Teaching and Learning Librarian, Moraine Valley Community College (Member)
- Lori Townsend, Data Librarian for Social Sciences and Humanities, University of New Mexico (Member)
- Julie Ann Garrison, Associate Dean of Research and Instructional Services, Grand Valley State University (Board Liaison)
- Kate Ganski, Library Instruction Coordinator, University of Wisconsin–Milwaukee (Visiting Program Officer, from September 1, 2013, through June 30, 2014)
- Kara Malenfant, Senior Strategist for Special Initiatives, Association of College and Research Libraries (Staff Liaison)

In December 2014, the task force made final changes. Two other ACRL groups reviewed and provided feedback on the final drafts: the ACRL Information Literacy Standards Committee and the ACRL Standards Committee. The latter group submitted the final document and recommendations to the ACRL Board for its review at the 2015 ALA Midwinter Meeting in Chicago.

Note: On February 2, 2015, at the 2015 ALA Midwinter Meeting, the ACRL Board took the official action of 'filing' the Framework document, in accordance with parliamentary procedure. This allows it to be changed without requiring board approval, to foster its intended flexibility and development.

2024–2026 Revision

The ACRL Framework for Information Literacy for Higher Education Review and Revision Task Force conducted a comprehensive review of the Framework beginning in July 2024 and ending in June 2026.

Charge: To review and recommend potential revisions to the *ACRL Framework for Information Literacy for Higher Education*.

The Framework revision process began with a comprehensive literature review, which examined over 200 articles published since the Framework's inception. The review focused on information literacy instruction and the Framework as well as emerging trends in higher education, such as generative AI, and evolving approaches to critical information literacy. The literature revealed areas where the Framework is still relevant, and areas where revision or expansion could better address contemporary challenges.

The task force analyzed the existing Framework and companion documents, focusing on strengths and opportunities for improvement. To gather broad stakeholder input, the task force developed and deployed a survey and conducted focus groups both virtually and in-person at the 2025 ACRL Conference. The survey received 371 responses. Focus groups included seventeen in-person participants and eighty-six virtual participants representing a range of colleges and universities in the United States and Canada.

The next step was reviewing and coding the survey and focus group data to identify emerging themes. These themes indicated elements that participants and respondents felt were important in some way, signaling both helpful existing aspects, as well as concepts they felt could potentially be added or improved upon. Themes from both the survey and focus group data include generative AI, critical information literacy, approachable language and style, pedagogy and practice, inclusion and social justice, supplementary documentation (e.g., discipline-specific, communication guidance/outreach), and specific feedback for frames.

The task force then reviewed all gathered data and employed qualitative analysis to identify key and emerging themes, as well as revision priorities. After reviewing the collected evidence and holding numerous discussions as a full committee, the group drafted a revised Framework that was expanded to address emerging technologies, critical approaches, and evolving information literacy needs in today's higher education landscape.

In April of 2026, the task force released a draft of the revised Framework for public comment, along with a detailed feedback form that included survey-style questions and spaces for more in-depth responses and suggestions, both for each frame and for the document overall. The form was open for approximately four weeks (April 10th, 2026, to May 8th, 2026). In addition, the task force distributed a feedback form focused specifically on critical practice and addressing potentially exclusionary and supremacist language; it also convened three webinars soliciting input from participants on frame revisions.

To get the word out, the task force used selected ACRL and American Library Association (ALA) communication channels to distribute updates to individual members and ALA and ACRL units, such as committees, divisions, and cultural affinity groups. Via these channels, the task force maintained an open dialog and sought public feedback on the Framework revision draft.

The feedback and revision suggestions on the first draft were considered and incorporated into the final draft of the revised Framework, which was submitted to both the ACRL Information Literacy Frameworks and Standards Committee and the Standards Committee for verification on June 12, 2026, and then later to the ACRL Board of Directors for final review.

The task force members included the following:

Sara D. Miller, Librarian for Interdisciplinary Teaching and Learning Initiatives, Michigan State University (Cochair)

Leslie Ross, Assistant Professor and Instruction Coordinator, New Mexico State University (Cochair)

Lorely Ambriz, Head Librarian / Professor, El Paso Community College (Member)

Annie Armstrong, Professor and Coordinator of Teaching and Learning Services, University of Illinois Chicago (Member)

Ian Barba, Librarian, Texas Tech University (Member)

Maria A. Barca, Assistant Professor and Lead Instruction Librarian, Seton Hall University (Member)

Katie Blocksidge, Head, Research and Education Services, Health Sciences Library, The Ohio State University (Member)

Brianna Buljung, Teaching and Learning Librarian, Colorado School of Mines (Member)

Margot Conahan, Manager of Professional Development, Association of College and Research Libraries (Staff Liaison)

Lorna Dawes, Director for the Center for Library Exploration and Research. Brown University. (Member)

Carl O. DiNardo, Assistant Librarian, Research and Instruction, University of South Florida (Member)

Fabio Montella, Associate Professor of Library Services, Associate Professor of History, Suffolk County Community College (Member)

Emily Reed, Research and Instruction Librarian, Penn State University Libraries, Harrisburg (Member)

Olivia Bautista Sparks, STEM Librarian for Molecular and Life Sciences, Arizona State University (Member)

Jennifer Tirrell, Instruction and Assessment Librarian, Soka University of America (Member)

Evelyn O. Ugwu-George, Associate Professor, Information Literacy and Assessment Librarian, Levin Library, Curry College, Milton, MA. (Member)

Silvia Vong, Assistant Professor (Teaching Stream), Faculty of Information, University of Toronto (Member)

Note

[1] Association of College & Research Libraries, *Information Literacy Competency Standards for Higher Education* (2000).

Appendix C: Resources

The resources in this section address the history and theories of the development of the Framework and highlight select Framework-based literature on faculty development, pedagogy, assessment, and critical practice. Practical sites for teaching resources can be found at the end of this appendix.

Threshold Concepts
- Foundational Literature
- Threshold Concepts and Information Literacy

Moving from Standards to Framework
Faculty Development
- Librarian Focus
- Disciplinary Faculty Focus

IL/Learning Theories and Pedagogy
Assessment
Emerging Technologies
Critical Practice
Teaching Resources

Threshold Concepts

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Teaching Resources

Companion Documents to the *ACRL Framework for Information Literacy for Higher Education* (under “Information Literacy and Instruction” heading): https://www.ala.org/acrl/guidelines-standards-and-frameworks-listing-topic

ACRL Framework for Information Literacy for Higher Education Sandbox: https://sandbox.acrl.org/

ACRL Framework for Information Literacy for Higher Education Toolkit: https://acrl.libguides.com/framework/toolkit

Project CORA: https://projectcora.org/

CARLI Toolkit: https://www.carli.illinois.edu/products-services/pub-serv/instruction/ToolkitHomepage