Introduction

What is it that students need to know and be able to do by the time they graduate from Montana State University? What experiences, both in and out of the classroom, are crucial in helping students become critical thinkers and life-long learners? As the complex information ecosystem becomes progressively more central to our contemporary personal and professional lives, it is clear that information literacy is fundamental in helping students become critical thinkers and life-long learners and is a shared responsibility of all at MSU who engage with learners.

According to the Association of College and Research Libraries (ACRL) Framework for Information Literacy for Higher Education (2015), “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.” Information literacy provides a foundation for life-long learning, the ultimate goal of education, and is common to all disciplines, learning environments, and levels of education. In the Association of American Colleges & Universities report College Learning for the New Global Century information literacy is discussed as an essential learning outcome students need to prepare for twenty-first century challenges.

As information professionals, librarians are uniquely positioned to guide the process of integrating information literacy within the university curriculum and to ensure that students are prepared to address local and global issues and to make a difference in the cultural and economic fabric of Montana and the world. In order to facilitate this integration, the Library developed the Montana State University Information Literacy Curriculum.

ACRL Framework for Information Literacy in Higher Education

The ACRL Framework for Information Literacy for Higher Education (2015) is “organized into six frames, each consisting of a concept central to information literacy (threshold concepts), a set of suggested knowledge practices (demonstrations of ways in which learners can increase their understanding of these information literacy concepts), and a set of dispositions (the affective, attitudinal, or valuing dimension of learning)” that together comprise “conceptual understandings that organize many other concepts and ideas about information, research, and scholarship into a coherent whole.” The complete Framework can be found at: http://www.ala.org/acrl/standards/ilframework.

ACRL Frames:

Research as Inquiry
Research is iterative and depends upon asking increasingly complex or new questions whose answers in turn develop additional questions or lines of inquiry in any field.

Searching as Strategic Exploration
Searching for information is often nonlinear and iterative, requiring the evaluation of a range of information sources and the mental flexibility to pursue alternate avenues as new understanding develops.
Information Creation as a Process
Information in any format is produced to convey a message and is shared via a selected delivery method. The iterative processes of researching, creating, revising, and disseminating information vary, and the resulting product reflects these differences.

Authority is Constructed and Contextual
Information resources reflect their creators’ expertise and credibility, and are evaluated based on the information need and the context in which the information will be used. Authority is constructed in that various communities may recognize different types of authority. It is contextual in that the information need may help to determine the level of authority required.

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

Information has Value
Information possesses several dimensions of value, including as a commodity, as a means of education, as a means to influence, and as a means of negotiating and understanding the world. Legal and socioeconomic interests influence information production and dissemination.

Scope
This curriculum applies to all facets of the Library’s instructional services program, including the following components:

- Credit-bearing Library Science (LSCI) courses
- Integrated instruction via liaisons
- Research consultations
- Point-of-need assistance at the Research Center

At every opportunity, librarians seek to serve as research consultants and pedagogical guides to facilitate the successful delivery of information literacy content by teaching faculty in the disciplines. Liaison librarians work collaboratively with faculty in all the departments, schools, and colleges to tailor information literacy instruction. Liaison librarians target research and writing courses in all majors. Librarians may:

- Collaborate with faculty and department curriculum committees to integrate information literacy instruction into the curriculum and learning outcomes of the academic unit.
- Provide consultative services to teaching faculty to develop research assignments.
- Promote instruction in the use of library resources to students and faculty, integrating the tiered Information Literacy Curriculum.
- Serve as embedded librarians within classes during sessions focused on research assignments.
- Create web-based subject resources for faculty, students, and staff.
- Provide one-on-one research consultations for faculty, staff, and students, both individually and in small groups.
- Provide assistance at the Research Center on a regular schedule.

Information Literacy Curriculum
Developing information literate students is the central mission of the MSU Library’s instructional services program. The Information Literacy Curriculum has been developed with the following aspirational goals in
mind. These aspirational goals were informed by the new framework’s dispositions and “address the affective, attitudinal, or valuing dimension of learning” and are reflected in the accompanying rubric.

**Getting Started with Research and Inquiry**
Students will be able to design research projects as a process of inquiry by using authentic questions, curiosity and a willingness to challenge previously held beliefs in order to make new discoveries.

**Exploring Strategically**
Students will be able to demonstrate persistence, flexibility, and patience when finding information. Learners will recognize that sources of information vary greatly, including in format, perspective and values.

**Evaluating Authority and Value**
Students will be able to assess content when encountering varied and sometimes conflicting perspectives in order to find authoritative sources. They will recognize that authority may be manifested in unexpected ways and that they bring their own biases and worldview to the research process.

**Contributing to the Scholarly Conversation**
Students will be able to participate actively in the research conversation, acknowledging multiple facets of conversation, and treating other participants with respect by properly citing past research and accurately representing creators’ intended meanings.
### Getting Started with Research and Inquiry

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<td>• Determine an appropriate scope of investigation and narrow/broaden topic and inquiry questions based on personal interest, findings, assignment details and timeline.</td>
<td>• Formulate questions for research based on information gaps or reexamination of existing, possibly conflicting, information.</td>
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<td>• Translate inquiry questions into keywords and search terms that are effective for searching. (UM)</td>
<td>• Summarize the changes in scholarly perspective over time on a particular topic within a specific discipline.</td>
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<td>• Persist in information searches despite challenges and sometimes conflicting information. (UM)</td>
<td>• Evaluate the value of inquiry as a way of knowing.</td>
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<td>• Recognize when help is needed and display willingness to seek help from appropriate experts. (UM)</td>
<td>• Display a willingness to confront prejudices and seek information sources that do not agree with their prior knowledge and position.</td>
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<td>• Recognize that as new academics they are becoming contributors to the ongoing scholarly conversation.</td>
<td>• Apply and/or adapt research methods from others in the discipline that are appropriate for the need, context, and type of inquiry.</td>
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<td>• Recognize their rights as a member of the academic community to freedom of intellectual inquiry and inviolate privacy in accessing library collections and services. (UM)</td>
<td>• Connect original inquiry with the scholarly conversations in the discipline and understand participant’s roles and responsibilities.</td>
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### Exploring Strategically

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<td>• Match information needs to appropriate search strategies and tools.</td>
<td>• Design and refine needs and advanced search strategies as necessary, based on search results.</td>
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<td>• Apply a range of effective strategies to find related sources.</td>
<td>• Use a variety of research methods, based on need, circumstance, and type of inquiry. (UM)</td>
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<tr>
<td>• Design and refine needs and basic search strategies as necessary, based on search results. (UM)</td>
<td>• Identify appropriate associations, publications, and scholars in the discipline. (UM)</td>
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<td>• Recognize and assess the value of distinctness of information resources (e.g., website resources, online journals, print material). (UM)</td>
<td>• Use advanced search strategies and discipline-specific search tools and language. (UM)</td>
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<td>• Use different types of search language (e.g., controlled vocabulary, keywords, natural language) appropriately.</td>
<td>• Collect and organize sources in order to effectively manage, share, and cite research.</td>
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- Utilize divergent (e.g., brainstorming) and convergent (e.g., selecting the best source) thinking appropriately when searching.
- Recognize and explain issues of access or lack of access to information sources. Critically examine information privilege and discuss informational imbalances. (UM)

Evaluating Authority and Value

- Use research tools and indicators of authority to critically evaluate information, assessing the reliability, validity, accuracy, authority, timeliness, impact and point of view or bias of information sources. (UM)
- Trace citations and links back to original sources. (UM)
- Recognize the cultural, physical, social and historical contexts of an information source in order to understand how they influence the content.
- Acknowledge biases that may privilege some sources of authority over others. (UM)
- Assess the fit between an information product’s creation process and a particular information need.
- Critically evaluate contributions made by others in participatory information environments.
- Identify gaps in research; compare and contrast research arguments, data, studies and methodologies. (UM)
- Distinguish different types of authority, such as subject expertise (e.g., scholarship), societal position (e.g., public office or title), or special experience (e.g., participating in a historic event).

Contributing to the Scholarly Conversation

- Organize information in meaningful ways, appropriate to audience and context.
- Give credit to the original ideas of others through proper attribution and citation.
- Accurately represent creators’ intended meanings when quoting, paraphrasing and contextualizing their work.
- Synthesize ideas gathered from multiple sources.
- Draw reasonable conclusions based on the analysis and interpretation of information.
- Combine new knowledge with prior knowledge to create original scholarship. (UM)
- Articulate the purpose and distinguishing characteristics of copyright, fair use, open access, and the public domain.
- Understand the increasingly social nature of the information ecosystem where authorities actively connect with one another and sources develop over time.
- Make informed choices regarding their online actions in full awareness of issues related to privacy and decide where and how their information is published, posted, viewed, shared and/or reused.