Chapter 3: **Information Literacy**

Information literacy is at the heart of a FYE librarian's work; it is the foundation for students to develop strong research skills, write thoughtful papers, and achieve success in the classroom. We know the majority of students do not arrive on campus with strong IL skills, and many have ingrained misconceptions that need to be corrected. Librarians have a number of opportunities they can use to teach students including one-shots, embedded librarianship, FYE seminars, and more—all with varying levels of buy-in and understanding from faculty. In this chapter we will explore new research and innovative case studies, lesson plans, active teaching techniques to strengthen your library's instruction strategy, and more.

In this section you will find:

- **Building a First Year Information Literacy Program: Best Practices and Sample Lesson Plans**
  A compilation of ideas, strategies, and lesson plans by Ray Pun, First Year Student Success Librarian, California State University, Fresno.
- **A comprehensive Q&A with Lisa Hinchliffe**
  We asked, she answered! An interview with Lisa Hinchliffe on her study *Predictable Information Literacy Misconceptions of First-Year College Students*.
- **Predictable Information Literacy Misconceptions Infographic**
  An Information Literacy infographic covering the nine misconceptions in Lisa Hinchliffe's study by Marissa Ewing, Northwest Arkansas Community College.
- **Continue the Conversation**
  See what your peers are saying about Information Literacy! **#LibraryFYE**
- **Additional Resources**
  Further materials and supplemental reading about information literacy to help you take your FYE program to the next level.

Building a First Year Information Literacy Program:
Best Practices and Sample Lesson Plans

By Ray Pun, First Year Student Success Librarian, California State University, Fresno

First Year Information Literacy in One-Shot

Many of us have taught one-shot workshops for first-year writing classes, communications classes, or freshmen seminars. To make the most of these workshops, integrate creative activities to help engage with students and their learning processes. Some librarians have deconstructed the "one-shot" model, embedding themselves in a given class multiple times during the semester (we will get to embedded librarianship sessions later in the section). For those who are committed to teaching one-shot workshops, the sample lesson plans* below can help you integrate the ACRL Frames.

Lesson Plan #1

DELIVER RESEARCH BASICS 101 IN A ONE-SHOT

Prior to Class	✔ Speak with the instructor to gather information about the class. Ask for a copy of the syllabus or specific assignment you're supporting. ✔ Design a general or specialized workshop to support the research assignment. ✔ Plan to hold the class in a computer lab. *Note: If labs aren't available, instruct students to bring their laptops or, if possible, allow them to borrow one from the library.*
In-class Activities	**Introduce library resources, research guides, offerings and/or services** ✔ Consider using the Cephalonian Method when going through library resources. The images can be related to parts of the library or school. You can spend time during the activity explaining what the images represent. ✔ Introduce non-library services such as the writing center or tutoring center and explain how these services can help with writing papers. **Test Students' Memory** ✔ Help students remember resources found on the library's website by having them draw the website from memory and discuss the drawings with a partner. ✔ After the discussion, you can show students the website again and explain what is available in different sections. **Engage Students in Early Morning Workshops** ✔ Consider an activity in which students move around and feel engaged. ✔ To start the workshop, have students answer a question on a piece of paper: *'what does research mean to me?'*

*These lesson plans are not prescriptive and can be repurposed or adapted in different contexts in the FYE.

DELIVER RESEARCH BASICS 101 IN A ONE-SHOT *(cont'd)*

In-class Activities

- » Divide the class into two groups, one on each side of the room.
- » Have them fold their paper into paper airplanes and throw them across the classroom.
- » Each group member will pick up an airplane from the other side and read it aloud to stimulate discussion.

Explore Topics and Keywords

- ✔ In many classes, students are asked to develop topics or identify suitable keywords to use when searching for resources.
- ✔ A great visual tool to stimulate keyword searching is Credo's Mind Map.
- ✔ You can also use a whiteboard to create a 'mind map' with the students and have them generate keywords around a topic.

Keep Large Classes Engaged

With larger classes (more than 50 students), it may be hard to keep all students engaged and on the same page.

- ✔ Peer-to-peer activity is great to keep all of your students engaged - after explaining what a scholarly article is and where to find one online, you can have students team up to look for scholarly articles.
- ✔ Consider using open collaborative tools in this activity such as Google Sheets or Padlet. Using these tools, students can input citations or list databases, keywords, or responses to the questions that you have created.
  - » This activity can help students engage with the class by adding their information to the spreadsheet so that others can see it.

Helpful Tip: Make sure Google Sheets is editable for all and assign individual cells for the class to fill.

Integrate and Map Frames into Workshops

There are numerous ways to introduce the ACRL Frames in your workshops. (Check out the **Additional Resources** section at the end of the chapter for more ideas!)

- ✔ One way to use the ACRL Framework is to map out core concepts of a given assignment or the learning outcome(s) of the class/syllabus. This can help you design activities or facilitate discussions under these synthesized guidelines.
  - » **Example 1: Scholarship as Conversation frame** - If you are having students learn about the anatomy of a scholarly article, put them into pairs to discuss what a scholarly article is and see who is or isn't having a scholarly conversation.
  - » **Example 2: Information as Value frame** - Use a "think + pair + share" activity to teach academic integrity and plagiarism. Present a series of examples of plagiarized, semi-plagiarized, and paraphrased statements, and have students work through them as a group.

DELIVER RESEARCH BASICS 101 IN A ONE-SHOT *(cont'd)*

After-class Activities

Get feedback

- ✔ Save the last 5-10 minutes of class time for students to fill out a survey about your class and what they've learned so you can make workshop improvements.
- ✔ Ask students to complete a one-minute reflection on an index card indicating what they understood or still don't understand.

Debrief

- ✔ Have students share and discuss their experiences and findings after the research/searching activity. The instructor may also want to share follow-up assignments in the class.

FAKE NEWS DETECTION

Prior to Class

- ✔ Speak with the instructor to gather information about the class. Ask for a copy of the syllabus or specific assignment you're supporting.
- ✔ Design a general or specialized workshop to support the research assignment.
- ✔ Plan to hold the class in a computer lab.

Note: If labs aren't available, instruct students to bring their laptops or, if possible, allow them to borrow one from the library.

In-class Activities

"Gamify" Library Instruction

- ✔ **Digital tools** - From Kahoot! to Padlet, there are many digital tools that include information literacy tutorials with interactive features for gamifying library instruction.
- ✔ **In-person games** - If you have limited technology, create a scavenger hunt. Have students follow a series of clues around the classroom about the different types of resources available in the library.

Teach Fake News Detection

- ✔ Provide news items for students to explore on their own. Use sources such as clickbait sites, satire, *The Onion*, etc.
- ✔ **Exercise Idea 1** - Professor Melissa Zimdars from Merrimack College created this open source list showing sites that present fake news. Have students examine sites on the list and compare the information found on them to information in library databases. This can teach the class to analyze sources critically.

FAKE NEWS DETECTION *(cont'd)*	
In-class Activities	✔ **Exercise Idea 2** - For this assignment, students create fake Twitter accounts and disseminate information from fake-news websites in the social media world, watching to see the traction fake information gets. This can teach them about the repercussions and confusion spreading "fake news" can cause and how social media is changing information and news today. *Activity support: Consider using the RADAR Framework Loyola Marymount University Library created to evaluate fake news.*
	Teach Primary and Secondary Literatures in the Sciences
	✔ Consider an interactive activity to teach students how a scholarly article is constructed, based on explaining different parts of its anatomy: abstract, introduction, thesis/research questions, conclusion, and references. ✔ **Activity Example** (works well in small and large classrooms) - Print out a series of scientific articles relevant to the course, cut each article into different pieces, and put into envelopes. Students will work in groups to put the article in their envelope back together with scotch tape. Once all groups have completed the activity, have them find the article's abstract and paraphrase it. Afterwards, explain what a primary or secondary article in the sciences is. Finally, students should explain the article they have and identify which type of article it is. ✔ From this exercise, students should gain a better understanding of how a scholarly articles are constructed and know how to find them in library databases.

Embedded Librarian and First Year Information Literacy in Multidisciplinary Studies

Teaching information literacy to FYE students should not be limited to teaching databases. There are a number of creative ways to engage with students' learning and critical thinking skills that richly connect to other fields and studies. Below is a lesson plan with themes and activities to consider when broadening your teaching program. Regardless of the subject, these activities can be scaffolded and built into multiple sessions if needed.

Lesson Plan #3

PROVIDE IL IN MULTIDISCIPLINARY FRAMES

Incorporate Critical Pedagogy and Social Justice in Instruction

- The Critical Library Pedagogy Handbook is a great place to uncover teaching strategies focused on social justice topics.
- One assignment can focus on students' understanding of different perspectives on specific groups or issues, such as LGBTQ groups or undocumented and other immigrants. Have students conduct research, finding a primary and a secondary source on the group's experiences.

  You can also direct students to think more broadly about the legal, economic, political, and cultural assumptions regarding marginalized communities. Some discussion starters include:
  - Why is it important to have multiple perspectives?
  - If we had a single perspective, what would be missing?
  - What else do we know or want to know related to this perspective?

- The goal of this assignment is to encourage students to think, reflect, and research these issues and perspectives, understanding the gaps in resources and their misinterpretations, and identifying how to reconcile opposing views or claims.
- If an assignment like this is out of scope for your work, you can use social justice topics when demonstrating how to use a search engine in a library database—it's a good first step to start students thinking about societal issues and finding related available resources.

Social justice is an important consideration for library instruction - students learn how to use information to dismantle inequity, systematic racism, and biases.

Address Multiple Literacies, Such as Visual and Data Literacy

You can address many underlying issues that connect directly to the ACRL Frames using visual literacy exercises and a series of questions.

- **Exercise 1** - Have students search for images in a library database such as Credo and explain the meaning behind the images using the questions below:
  - What do they mean?
  - What do they tell us?
  - When was the image created?
  - For whom was it made?
  - What are the cultural, political, or economic assumptions of the visual?

PROVIDE IL IN MULTIDISCIPLINARY FRAMES *(cont'd)*

Have each student find an image and discuss its relevance with a partner. During this exercise, show students where to find free images, how to cite images, and address the issues of copyright, fair use, and licensing.

- **Exercise 2** - In a related exercise on data literacy, similar questions can be asked regarding charts and graphs students are tasked with finding.
  - » Once students find a data set in a database, they can talk about it with their class partner and answer the questions listed in Exercise 1.
  - » Explain that while the data they find may not always give a complete picture or story, it is always necessary to ask further questions.
  - » Be sure to show students how to cite graphs/charts in their papers too.

These two sample exercises can support interdisciplinary studies, addressing important research sources: images and numbers.

Integrate Special Collections and Wikipedia Into Your IL Work

- Collaborate with colleagues in other departments to expose unique resources from your library's archives or special collections. Bring special objects or documents for students to look at, think about, and ask questions about, such as:
  - » What is the time period of the object?
  - » What is the context of the object's authorship?
  - » What is its purpose?
- Have students conduct Wikipedia research on these items and locate notable gaps in the information on the site. This activity will demonstrate that not every object or document is well-represented digitally.
- Many instructors tend to shun Wikipedia, but it is a rich tool for teaching research skills.
  - » **Activity Idea:** Students can participate in a Wikipedia "editing session" using special collections or print/digital reference sources, including Credo, to improve Wikipedia entries.
  - » Although plenty of entries need help, consider focusing on specific biographical areas, such as women's history or diverse artists and scientists. Focusing on people tends to connect students more with the research they are conducting.

Other Considerations and Thoughts on Teaching First Year Information Literacy

Universal Design and Accessibility:

Universal design and accessibility are about inclusion and a focus on a holistic approach to instruction for all types of learners. The conversation around accessibility has historically focused on individuals' disabilities and challenges, but modern instructional-design methods take into account how people learn. Today, universal design and accessibility are about understanding motivation, cognition, and communication—how an individual achieves those goals—and situation. Whether a student's disability is temporary or permanent, universal design and accessibility strive to introduce ways to make learning attainable for anyone in any circumstance. Consider the following:

- Ask questions to make sure information is being transferred and to see if students need more time to process the information.
- If you are showing websites, check the website beforehand and make sure the instructions are clear. Clarify what website students should be going to by writing it on a whiteboard or having a handout prepared.

Equity and Access:

Not all students have access to a computer outside the library, a laptop to bring to class, or internet at home. How can you teach these students to access resources outside of the classroom? The library may be able to help address these issues:

- Does your library have laptops or a wifi hotspot for students to borrow?
- Can hours be expanded to accommodate students who work during the day and take classes at night?

Collect answers to these questions through surveys or focus groups to make informed decisions to facilitate possible learning opportunities for all students.

Digital Learners:

A lot of the activities listed in the lesson plans above are for in-person learning. If there are online programs at your school, consider holding online meetings to meet distance students' research needs or design digital badges to reward their learning progress. A digital-badging system can provide incentives for both in-person and online learners, and may specifically help online learners focus on their learning progress in a decentralized online environment.

Explore the ACRL Digital Badge Interest Group for more ideas or information about digital badging.

International Students:

Do you have a plan for supporting international students' research needs? One idea is to offer a series of drop-in workshops or embedded consultations with the Office of International Student Services to support students who are not used to American-style research, resources, and expectations. This can help you build rapport with these students and further promote the library's resources.

Teaching-Faculty Collaborations:

Information literacy workshops should be developed collaboratively with teaching faculty to help facilitate the learning process for students. Many times, faculty want librarians to take control of the classroom without their input. However, working with faculty to scaffold these workshops can strengthen content, learning, and IL integration in the class. Try these ideas to increase collaboration with faculty:

- Build a learning community for teaching faculty to learn more about the pedagogies of information literacy. These professional development opportunities can help strengthen the relationships between librarians and teaching faculty.
- Work with faculty to conduct curriculum mapping—identify course knowledge and objectives to align them with information literacy skills.

A Comprehensive Q&A with Lisa Hinchliffe

Lisa Janicke Hinchliffe, Professor/Coordinator for Information Literacy Services and Instruction at the University of Illinois at Urbana-Champaign, joined us to answer some questions relating to her forthcoming study, *Predictable Information Literacy Misconceptions of First-Year College Students*. In this interview she discusses how a better understanding of student misconceptions around information literacy could lead to more effective FYE programming and better research assignments, and shares her hopes for further areas of inquiry into this topic.

C **Your study addresses first-year students' misconceptions about information. How do you define misconceptions?**

LH The study used a definition of misconceptions based on the explanation offered by Wiggins and McTigue in their book Understanding by Design, in which they say that "such misunderstandings, as opposed to confusion or inattention, typically flow from prior experience and a plausible inference based on that experience." In other words, a misconception is a belief held by students that is incorrect but is held to be true based on prior experience. We also distinguish misconceptions from things not-yet-known. Lack of knowledge is not a misconception though it is an absence of understanding.

C **What were the most significant misconceptions you found, in terms of changing how librarians approach information literacy education?**

LH At this point we do not yet know how librarians will use the results of our study. I am looking forward to hearing feedback from the library community about which of these misconceptions are most problematic or prevalent as well as how librarians use the results of the research. This is really just the beginning of this line of research.

"This is really just the beginning of this line of research."

"I would ... recommend that instructors use [the research] as a lens to reflect on their own experiences as instructors and on their lesson plans"

C **Did you notice any different assumptions for traditional first year students vs. non-traditional first year students?**

LH The research study did not probe that aspect of this topic but it would be a great follow-up study. In many ways, this research raises more questions than it answers. There are many possibilities for studies to build upon our findings.

C **Your work looks at first-year students overall, but how can an instructor find out what misconceptions are held by a particular student or class?**

LH Rather than using this research as a diagnostic tool for individuals, I would instead recommend that instructors use this as a lens to reflect on their own experiences as instructors and on their lesson plans. In particular, if you are teaching a specific concept or skill and students struggle or are resistant, is that possibly explained by a misconception? If so, it might be necessary to create a scaffolded set of learning experiences that first, has students encounter their misconception and then, introduces the next concepts.

Also, instructors should review their materials to make certain that they are not inadvertently teaching or reinforcing misconceptions. Here's an example with the misconception that 'first year students believe that all library sources and

discovery tools are credible.' I wonder if the emphasis on evaluating Internet-based information resources inadvertently led students to believe that library resources were already evaluated for credibility.

C **You state that, "correcting misconceptions and establishing a foundation of conceptual understandings may be a precursor to Framework-based information literacy instruction." What would this precursor look like?**

LH Some of the concepts in the ACRL Framework for Information Literacy in Higher Education are quite complex. Students may not be ready to engage that complexity if that foundational knowledge they have is flawed by misconceptions.

So, for example, if a student holds the misconception that 'research is a linear, uni-directional process,' then we can imagine them struggling with the concept of 'Searching as Strategic Exploration' that states "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.[1]" The student will have to give up the misconception in order to learn this frame and then develop skills and abilities that flow from the frame.

Similarly, the same misconception will be an impediment to any instruction that is based on the premise that a student recognizes 'Research as Inquiry,' which states that '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.[2]'

C **What are the implications of this study for librarian-faculty collaboration?**

LH As my co-authors and I suggest in the article, **librarians might use the list of misconceptions to work with faculty to design assignments and instruction** that address first year students' misconceptions about libraries, information access, and the research process. Librarians could also use the misconceptions to open a dialogue with faculty about whether they too observe such misconceptions in learners and if they would add any others to the list.

C **How would one explain these misconceptions to faculty who are unfamiliar with information literacy and how it could help their students?**

LH I find that most faculty have an intuitive sense of information literacy even if they don't know the specific term. I would likely start a conversation around the misconceptions by framing it as a discussion about whether they notice students struggling with library research, what do they notice, etc. and then drawing connections between their experiences and the misconceptions.

C **Are the expectations of higher ed institutions too high with regard to incoming students' information literacy skills?**

LH I am not certain that there is a monolithic set of expectations about skills and abilities. I think the most important thing is to remember that students are students - they are in college to learn and so finding out what they need to learn and creating learning experiences that meet their needs is the best approach. We might wish they knew more but if they don't, they don't. Our role is to teach the students we have, not the ones we might wish we had.

[1]Association of College and Research Libraries, Searching as Strategic Exploration, http://www.ala.org/acrl/standards/ilframework
[2]Association of College and Research Libraries, Research as Inquiry, http://www.ala.org/acrl/standards/ilframework

A Comprehensive Q&A with Lisa Hinchliffe

C **Given that librarians have such limited opportunities for instruction, are some of these misconceptions more urgent to address earlier than others?**

LH A key part of addressing the misconceptions is not falling into the trap of thinking that as an instructor you can just assert that there is a truth different than what students believe. Students need to encounter the misconception failing them. So, the misconceptions to address earlier are the ones that would impede their learning earlier, i.e., those that would fail them. This will depend on the campus curriculum and so I can't prioritize these in the abstract but would have to be considered in context of the first-year curriculum.

C **How should research assignments change as a response to this new information?**

LH Some research assignments inadvertently reinforce misconceptions so the first change would be to revise the assignments to avoid doing that! I think the other change that becomes very obvious is the need to create assignments that have scaffolded learning experiences that allow students to encounter the problems with adhering to the misconceptions and then support them in developing accurate conceptions.

C **How persistent are these misconceptions? In other words, do you think they will be easy to correct during instruction sessions, or will they require repeated interventions across multiple settings to break through to students?**

LH It is difficult to predict how persistent a misconception might be as we cannot control other life experiences that might be reinforcing the misconception at the same time that we are trying to teach to correct it. In general though, changing what someone believes is something that requires repeated engagement in comparison to simply adding new facts or skills that are consistent with things that one already believes.

"A key part of addressing the misconceptions is not falling into the trap of thinking that as an instructor you can just assert that there is a truth different than what students believe"

C **If librarians are interested in conducting a similar study in their own campus, where should they start? Any recommendations?**

LH My co-authors and I provide our focus group protocol in the appendix to our article. They could adapt that protocol to serve as the basis for a general conversation/brown bag lunch or for a local research project - in either case, using the list of misconceptions as the starting point. I am interested in collaborating on research projects that build off of this study and so would be happy to hear from anyone that might like to work together.

C **Do you anticipate that these misconceptions will continue to change over time?**

LH That is a great question! I would hope that over time we might be able to see fewer misconceptions but it is of course possible that new ones will emerge. Given open access practices are changing, what is available on the open web and how difficult it can be to determine if a preprint has been peer reviewed, it seems entirely possible that we could see the emergence of misconceptions in this area.

Be sure to read the full article by Lisa Janicke Hinchliffe, Allison Rand, and Jillian Collier, "Predictable Information Literacy Misconceptions of First-Year College Students", which will be published later this year in *Communications in Information Literacy*.

TOP 9 INFORMATION LITERACY MISCONCEPTIONS

1. First-year college students believe they are supposed to do their research without assistance.

2. First-year college students perceive the library as only a place to get books or to study.

3. First-year college students believe that all library sources and discovery tools are credible.

4. First-year college students believe that freely available Internet resources are sufficient for academic work.

5. First-year college students think Google is a sufficient search tool.

6. First-year college students believe that accessibility is an indicator of quality.

7. First-year college students believe that research is a linear, uni-directional process.

8. First-year college students think that every question has a single answer.

9. First-year college students believe that they are information literate.

Source: Hinchliffe, Lisa Janicke, Allison Rand, and Jillian Collier. Forthcoming. "Predictable Information Literacy Misconceptions of First-Year College Students." *Communications in Information Literacy* 12 (1).

Continue the Conversation

Interested in learning more about what your peers are working on?

Keep the conversation going using the Twitter hashtag #LibraryFYE

Additional Resources

Below are some helpful and free resources for you to consider to support IL initiatives in classroom instruction.

- **Don't Teach the Framework, Framework the One-Shot:** *by Shawna Thorup: A librarian's guide to embracing the limitations of one-shot instruction sessions to more effectively teach students ACRL Framework concepts.*
- **First Impressions: LJ's First Year Experience Survey:** *This Library Journal (LJ) report delves into the survey of 500 librarians conducted by LJ and Credo, revealing the experiences of FYE/instruction/ academic librarians supporting IL in the first year.*
- **Need visuals to understand or show students how ACRL frames work?** *These infographics provided by Bucknell University Library convey important and relevant questions surrounding each ACRL frame, and work well for teaching purposes.*
- **Choice360's "The Authority Files":** *Important conversations and thoughts in academic librarianship; check out the episode covering The First Year Experience.*
- **ACRL Environmental Scan Report 2017:** *This report includes a section on "Information Literacy Issues" and provides a snapshot of trends and the ongoing implications of information literacy, including tackling fake news and teaching digital literacy.*
- *The* **ACRL Framework for Information Literacy Sandbox** *and* **Project CORA** *are excellent repositories in which to find advice on a wide range of activities, from creating specialized workshops in the sciences using ACRL frames to teaching basic research skills in first year programs.*
- **Truth and Assumptions: Views on the Student Research Process:** *Student and faculty perceptions about student research skills, conducted by Credo in 2016 using survey responses from 1,104 students and 227 faculty members.*
- **Predictable Misunderstandings in Information Literacy: Initial Research Findings:** *Lisa Hinchliffe's webinar outlining the methodology behind her research; including a lively Q&A session with academic librarians.)*

- **Credo In Action: Teaching Information Literacy:** *Three academic librarians share how they use Credo Online Research Service and InfoLit Modules to teach information literacy at their institutions.*