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## Framing up Digital Literacy: Reviewing and Reframing Information Literacy Modules

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# Framing up Digital Literacy: Reviewing and Reframing Information Literacy

## Modules

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**Abstract**

When it comes to updating Information Literacy modules, it can be a daunting task to know where to start. This article will explore utilizing the ACRL Information Literacy Framework to identify skill gaps in the modules, create learner-centered experiences, and incorporate 21st-century literacy skills.

Keywords: Information literacy, online learning, library instruction evaluation

## Introduction

From 2008–2012, the Library at a large metropolitan university created a series of Information Literacy Modules that faculty could easily integrate into their courses and curriculum. The InfoLit Mods, as they are commonly known, were designed to help students develop the foundational skills needed to actively participate in a scholarly community. The modules' learning objectives were based on the Association of College & Research Libraries' (ACRL) Information Literacy Competency Standards for Higher Education (Association of College & Research Libraries [ACRL], 2000), which have since been rescinded and replaced by the Framework for Information Literacy for Higher Education (American Library Association [ALA], 2016). Due to the shifting information landscape of the past few years, librarians at this institution have decided that a major update to the modules is in order, and this article details the planning stages of the project.

The authors will outline a review of the evaluation process of the existing modules, attempts to align module content with the Information Literacy Framework, and plans for developing updated content. While the full set of modules (University of Central Florida [UCF], 2018) covers topics ranging from "Avoiding Plagiarism" to "Conducting a Literature Review," several specifically address media literacy including "Evaluating Web Sites" and "Understanding the Information Cycle." In light of the recent national focus on fake news and media bias, media literacy skills have become increasingly important. The goals of this project are to create a comprehensive series of modules that are grounded in the ACRL Information Literacy Framework, are designed with the learner in mind, sustainably support student learning in meaningful ways and are meeting the instructional needs of faculty, and incorporate 21st century library skills.

### **History of the Modules**

In 2006, based on a white paper written by librarians, Information Fluency was chosen as the University's Quality Enhancement Plan. The Quality Enhancement Plan (QEP), part of the reaffirmation of accreditation by the Southern Association of Colleges and Schools Committee on Colleges, is a multi-year project intended to impact student learning across campus (University of Central Florida, 2006). With information literacy being one component of Information Fluency, the Libraries played a major role in the implementation of the QEP. A new library department, Information Literacy & Outreach, was created to support the QEP efforts, and an Information Literacy Librarian was hired with funds provided by the University's QEP unit, the Office of Information Fluency. Although the department name changed in 2017 to Teaching & Engagement, information literacy is still one of the focuses of this team. More about the history of the Information Literacy & Outreach department, the Information Literacy Modules, and the QEP at the University can be found on the Libraries' Teaching & Engagement department LibGuide (<http://guides.ucf.edu/Modules>) and the Information Fluency web page (<http://if.ucf.edu/>).

The modules were created between 2008 and 2012 and are the product of a collaboration between the Information Literacy & Outreach department of the Libraries, and the University's Center for Distributed Learning (CDL). As the modules were being designed, CDL was developing a learning object repository which would eventually become Obojobo, the platform for the Information Literacy Modules. The Office of Information Fluency, in addition to funding an Information Literacy Librarian position, also provided funding for an Instructional Designer to contribute to module development.

The modules are based on the Association for College and Research Libraries (ACRL)'s Information Literacy Competency Standards for Higher Education (ACRL, 2000), which were in effect from 2000-2016, when they were rescinded and replaced by the Framework for Information Literacy for Higher Education (ALA, 2015). One motivation for updating the modules is to reflect the knowledge practices and dispositions outlined in the Framework.

The modules are housed in the Obojobo authenticated system, with login requiring students' network ID and password. Each module contains a learning objective, content pages including multimedia content, a section of interactive practice questions with immediate feedback, and an assessment. Scores are calculated immediately, displayed to the student, emailed to the student's campus email address, and available for faculty to download or import into their gradebook. Modules that are assigned directly through Canvas, the University's learning management system, sync scores with the Canvas gradebook. There is a badging program tied to the modules, with opportunities to earn a badge for each module completed with an assessment score of 80% or better and to earn higher level badges for completing multiple modules in certain categories. More information on the badging initiative, using the Credly digital credential system adopted elsewhere on campus, is available on the Information Literacy Web site (<http://infolit.ucf.edu/faculty/badges/>).

### **Current Use**

The Information Literacy Modules are used broadly across campus, primarily by faculty assignment. Their use has grown steadily since their introduction. Faculty buy-in and adoption was initially achieved through partnership with the University's Center for Distributed Learning and Faculty Center for Teaching and Learning. Sessions seeking faculty input and feedback into

module topics and content were held throughout the development process, and workshops and orientation sessions have helped spread the word about the modules in intervening years.

The most popular modules historically have been Citing Sources and Avoiding Plagiarism; each has a separate module for APA and MLA style. Other modules include Conducting a Literature Review, Creating a Search Strategy, Evaluating Web Sites, Focusing an Information Search, Moving into Discipline Specific Research, Recognizing a Research Study, Selecting Articles for Academic Assignments, and Understanding the Information Cycle. Use of each module varies. In the 2016-2017 academic year, 13,105 unique students completed a total of 66,258 assessments. This is an increase of 67% more students and 58% more assessments completed over the same time period in 2012-2013. With the University's total student enrollment of approximately 64,000 in Fall 2016 (UCF, 2017), that is approximately 20% of students reached, or 1 out of 5 students completing at least one module in the 2016-2017 academic year. Some instructors allow students to have multiple attempts at a module in order to master the material and improve their score. Some instructors assign multiple modules to their classes, and some students complete modules without them being tied to an assignment. Anecdotally, library staff have also learned that the Citing Sources and Avoiding Plagiarism modules have been assigned as a sort of sanction when students are suspected of plagiarism or incomplete or inaccurate attribution in their class work.

The modules are considered a great success at the University and are certainly one of the most successful and enduring projects to come out of the QEP. While a new QEP topic was chosen in 2016 for the next accreditation cycle, the Libraries' and the University's commitment to maintain the modules has not waived.

Some of the factors that make the modules popular and successful are their scalability, sustainability, and interactivity. With such a large student body, it is difficult to provide library instruction and information literacy education on a large scale, but the modules allow the Libraries to reach a large percentage of students. While the design and production of the modules took several years and maintenance is ongoing, the effort put into the project is certainly worth the outcomes.

The modules are also the impetus behind many partnerships and relationships the Libraries have forged across the university. The most notable and enduring of these partnerships are between the Libraries and the Center for Distributed Learning and the Faculty Center for Teaching and Learning, but also with many academic departments and individual faculty.

Alas, as with any large-scale project, content and technology become outdated. In addition to the simple eventuality of becoming dated, there were other challenges facing the modules. The number of modules had become unwieldy, even with two modules being retired in 2015. The Managing References Using RefWorks and Maximizing Google Scholar modules were difficult to maintain and better served by transitioning to robust LibGuides. In early stages of planning the modules, there were ideas in place to expand the module offerings greatly over the years. In reality, instructors may find the existing 12 modules to be overwhelming and difficult to differentiate when deciding which to assign. Maintenance of the modules has been ongoing over the 10 years since the first modules' debut, but updating content without overhauling modules is difficult with such rapid changes in the information landscape over the past decade. Maintenance of the interactive elements (originally created in Flash) have also proven difficult. Even having a strong relationship with the staff in the Center for Distributed



Learning who originally built the elements, changes in priorities and staffing over the years have led to less time devoted to updating the activities when necessary.

### **Evaluate Existing Modules**

The first step to updating information literacy modules was to decide whether to modify the current modules or start fresh. There are advantages to both options, but it can be difficult to choose what will work best. The following questions can help frame the decision-making process.

- Does the content meet your new learning objectives?
- Will you publish the updated modules on the same platform?
- Does the format meet expected technology standards?
- Is the content designed using best practices for online instruction?
- Do you have the staff capacity to develop new modules in a timely manner?
- Does current staff have the technical expertise to develop new modules; if not is there administrative support to hire appropriate staff?

### **Learning Objectives**

The Information Literacy Modules were created with the goal of improving student information literacy skills, based on the ACRL Information Literacy Standards. As the information landscape has changed in the last decade, so have skills needed to be effective consumers of information. The ACRL Framework for Information Literacy (ALA, 2015) provides a flexible structure to address information literacy at all levels of academic life. Updating the modules to utilize the ACRL Framework as the foundation for the learning

objectives will help ensure that students achieve the necessary skills and increase the audience for the modules by allowing for more advanced skills to be introduced.

### **Technology**

The original Obojobo platform was an excellent tool when the modules were created; however it no longer meets the expectations of students or the accessibility standards necessary to serve library patrons. Fortunately, CDL is currently working on developing an updated platform, known as Obojobo Next, which utilizes current best practices, allowing it to work on mobile devices as well as provide interactivity without relying on Flash objects. Using the current platform that the modules were developed in is no longer an option.

### **Instructional Design**

The design of the modules utilized the principles of Wiggins and McTighe's (2004) *Understanding by Design* to create effective online learning opportunities, however in many ways they were hampered by the technology of the time. The new Obojobo platform allows for personalized learning options and greater "chunking" of content with more opportunities for student engagement and interactivity. This will allow the designer to fully implement the *Understanding by Design* model.

### **Staff**

Currently the library's Teaching & Engagement department at the University has the instructional design and technological skills to update module content and move them to the new system or create new modules. Given the transition to the ACRL Framework, the development of a new platform to host the modules, the greater flexibility in instructional design provided in the new platform, and the current staff makeup, it was decided that developing new modules was the best option.

### **Steps to Success**

Once it was decided to develop new modules instead of updating the current modules, it was important to develop a plan to ensure that the needs of faculty and students are met, the modules continue the growth pattern of the current modules, and that the new modules align with the ACRL information literacy framework.

### **Collecting Data**

Overhauling a product that is highly successful can be a daunting task. It is important to involve stakeholders in the process to ensure that by “improving” the modules they are not inadvertently made less useful. Stakeholder input will be gathered through a three-phased mixed-methods research project. Phase one will be a survey with a combination of multiple choice, Likert and short answer questions that will be distributed to all faculty at the University. This survey will gather information about how faculty use the modules, content they believe to be essential, gaps in the current content, and why some faculty choose not to use the modules at all. Phase two will be semi-structured interviews with 10 faculty who regularly use the modules and 10 who are aware of the modules but do not currently use them. Initially, survey participants in Phase one will be asked if they are willing to participate in further research. If a full sample cannot be recruited from survey participants, use statistics from the previous five years will be analyzed to identify potential participants. The final phase of this project will be to contextualize the qualitative data gathered in Phases one and two with the quantitative data that can be pulled from the Obojobo platform. This information can be coupled with a larger, ongoing research project being conducted by the Libraries to gauge the impact of library services on student success (Beile, 2017).

Another research study in the planning stages involves analysis of the use of the modules by transfer students. Over 70% of new undergraduates come to the University as transfer students (UCF, Office of the Provost, n.d.), and ensuring their success is a priority for the University. The authors plan to analyze the performance of transfer students on the modules as compared to First Time in College (FTIC) student performance. The new online learning module platform, Obojobo Next, will include an option to have students complete a pre-test to identify which sections of each module they need to complete. Once the pre-test feature is implemented in Obojobo Next, transfer student scores on the pre-test can be compared to FTIC students, and learning gains between pre-test and assessment can be measured. This is just one of many research projects that will be possible in the coming years.

One of the barriers to reaching transfer students is that many of the students are not required to take the Strategies for Student Success or Composition II courses at UCF. Students are typically required to take the “Citing Sources” and “Avoiding Plagiarism” modules as part these courses. In an effort to reach more transfer students, the Library is partnering with the offices of Transfer and Transition Services and First Year Experience to incorporate these modules as tasks in the Transfer Student track of the First Year on Campus student engagement programming.

### **Aligning with the ACRL Framework**

Currently, there are 12 modules offered covering a wide variety of topics. Aligning the new modules with the ACRL Framework will allow us to move from a checklist of skills to focus on ways of thinking about information and utilizing information. With this transition the number of modules needed can be reduced. The current goal for the new modules is to develop

five core modules: Avoiding Plagiarism, Citing Sources, Introduction to Research, The Information Lifecycle, and Analyzing Research as Evidence. Avoiding Plagiarism and Citing Sources will be developed for the American Psychological Association style and the Modern Language Association style for a total of seven individual modules. The modules will be designed utilizing a problem-based framework that demonstrates how these skills will be applied in real life situations to increase the transferability of learned skills.

While the modules can be taken independently, they will be designed based on the idea that a student could take all of them and have a foundational understanding of the facets that influence information literacy. One way to ensure that the full spectrum of information literacy concepts are covered and learning objectives are met is to map the content to the ACRL framework. This is a helpful exercise at the individual module level and the program level. The first step is to identify the learning objectives of each proposed module. After that has been completed, the next step is to identify which frames are represented in the learning objectives for each module and which knowledge practices within those frames can be developed through the learning experience.

After the individual modules have been mapped to the ACRL Framework for Information Literacy, the next step is to combine the maps into a program map. This step allows the designer to identify any frames that are underrepresented in the program. Further, this step will allow the designer to ensure that a progression of knowledge practices is achieved as a student moves through the modules.

There are a number of ways to visually map the curriculum. One method is to create a matrix with the frames and knowledge practices listed horizontally across the top and the modules, including the learning objectives along the left-hand side. The knowledge practices

could be color coded to represent the complexity of each concept. This would allow viewers to quickly identify the potential growth students can achieve as they move through the modules. See Appendix A in the supplementary materials for snapshots of a curriculum map and an individual module map.

### **Conclusion**

With a highly-used but aging set of Information Literacy Modules in place, planning for updates is challenging but necessary. *The Framework for Information Literacy for Higher Education* is a good starting point, and clear goals are needed. Using the plans outlined in this article, the authors intend to redesign a set of modules for the 21<sup>st</sup> century learner that will build on the success of the original Information Literacy Modules at the University.

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## Appendix A: Curriculum and Module Content Mapping

### Curriculum Map to the ACRL Information Literacy Framework

	Authority is constructed				Information has value			
	Define types of authority	Identify credible sources	Discipline specific authority	Authority across mediums	Give credit to the original ideas of others	Intellectual property is a legal and social construct	articulate the purpose and distinguishing characteristics of copyrights	understand how and why some groups may be underrepresented
Citing Sources	X	X			X	X	X	
Avoiding Plagiarism	X	X	X		X	X	X	
Introduction to Research	X	X	X	X		X	X	X
The Information Lifecycle	X	X		X	X		X	X
Evaluating Research as Evidence		X	X	X		X		X

Here is a snapshot of what a curriculum map would look like if you were evaluating the overall information literacy program. Only two of the frames are represented here, because of space constraints, but in a typical situation the map would include all six frames.



## Individual Information Literacy Module Mapped to the ACRL Information Literacy Framework Snapshot

*Citing Sources using APA 6<sup>th</sup> ed.*

	Authority is constructed				Information has value			
	Define types of authority	Identify credible sources	Discipline specific authority	Authority across mediums	Give credit to the original ideas of others	Intellectual property is a legal and social construct	articulate the purpose and distinguishing characteristics of copyrights	understand how and why some groups may be underrepresented
Why we cite	X	X			X	X	X	
What is APA Style					X			
Reference Pages					X			
Types of Reference					X			
Integrating Sources					X			

The left hand column identifies the “chunks” of instructional content, which encompasses the learning objectives of each chunk. As with the Curriculum map, each frame of the ACRL Framework would be represented in a complete module map.