Spring Forward: Collaborating to Build and Assess a Collection of Learning Objects

Stephanie A. Jacobs
University of South Florida Libraries, stephanie.jacobs@gmail.com

Audrey Powers
University of South Florida Libraries, apowers@usf.edu

Author ORCID Identifier: https://orcid.org/0000-0002-7427-5950

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Spring Forward: Collaborating to Build and Assess a Collection of Learning Objects

Stephanie A. Jacobs, University of South Florida Libraries, sajacobs@usf.edu
Audrey Powers, University of South Florida Libraries, apowers@usf.edu

Abstract
Delivering innovative information literacy instruction to an ever-growing student population requires some resetting of previous practices and ideas. Collaboratively developed interactive learning activities that address library skills and the research process presented in a flipped-classroom style may represent a useful innovation in this area. This paper addresses the ongoing project at the University of South Florida (USF) Tampa Library in which interactive digital learning objects are developed, embedded into all sections of a university course via the online learning management system, assessed, and reworked.

Introduction
With a decreasing number of teaching librarians and a ballooning student population, the librarians of the USF Tampa Library see more barriers to delivering face-to-face information literacy instruction today than in previous years. The USF Tampa Library’s Research & Instruction unit has 12 teaching librarians, who collectively serve over 50 areas of study and more than 50,000 students. The collection is trending digital, and in some respects, our instruction is as well. The use of digital learning objects (DLOs) to communicate information literacy concepts has increased every year since 2015.

An overview of DLOs and their purpose: Digital learning objects are designed to help learners develop understanding and competence in a particular area. They can be interactive tutorials, videos, entire websites, or combinations of any of these: lecture, video, exercises, quizzes, games, multimedia, and more. DLOs have a defined instructional value that can be used in a variety of ways to improve teaching and learning, and they enable librarians to deliver information literacy instruction in a flipped environment (not face-to-face). Wan Ng defines the flipped classroom as “using videos to shift students’ passive learning in traditional instructor-centered, lecture-based classroom to outside the classroom [while] in the formal classroom space, students engage in individual and collaborative activities that foster deep understanding and higher-order thinking” (Ng, 2014). The merits and efficacy of the flipped-classroom model continue to be debated among students, teachers, and researchers. On the subject of student satisfaction with flipped-classroom methods, Draus, Curran, and Trembus (2014) note that “the literature on the use of instructor-generated video represents generally consistent themes; students perceive that there is value in this content and generally report greater satisfaction. However, there seems to be little evidence that this translates into improved outcomes in terms of class participation and grades.” These observations and findings echo the experiences and outcomes from this project, the implementation of our collaboratively developed interactive learning activities for History of Visual Arts I & II at the University of South Florida.

Evolution and Process
In the spring of 2015, the USF Tampa librarian for the College of the Arts (CoTA) observed that many of the students from History of Visual Arts I & II were contacting her very close to the due date to declare that they could not find any information on the topics they had selected for their research papers. The CoTA librarian replicated their searches and found that indeed many of the art history databases provided by the USF Tampa Library were not turning up results on these particular subjects. As Powers (2018) wrote in Teaching Research Outside the Classroom: A Case Study and Assessment, “searching the basic standard research tools appropriate for art history yielded little to no information about their subjects, but the use of Google Scholar revealed sources that led to databases containing articles related to their esoteric topics.” Trying several different and somewhat more complex searches within Google Scholar provided better results. Creating instructions for the students, including screenshot examples of successful searches, the CoTA librarian e-mailed the students step-by-step instructions on how to search for the information they needed. Afterward, a video about specific searching techniques for the History of Visual Arts classes was created using JING and embedded in a newly created course guide using LibGuides. (See Figure 1.)
The course guide focused on navigating and using library resources, including specific and directed information on locating and searching in specialized databases for art history sources. During the fall 2015 semester, the professor gave the students extra credit for having a consultation with the CoTA librarian with the caveat that the students were required to review the course guide before a consultation could be scheduled. A quiz based on the course guide was developed and embedded into the class page within the course management system. Extra credit was offered both for taking the course guide quiz and for meeting with the CoTA librarian.

The course guide was subsequently revised. The objectives and corresponding quiz for the fall 2018 semester centered more explicitly on guiding the students toward the highest grade possible. Therefore, the course guide begins with “How to get an A on your research paper.” The objectives from the student perspective are briefly outlined with specific emphasis on locating, citing, and labeling appropriate resources and images for their papers. (See Figure 2.)

**Figure 1. Original course guide objectives.**

**Figure 2. Revised course guide objectives.**
The USF Tampa Library subsequently hired a blended instructional design (BID) librarian, with the goal of updating, focusing, and expanding the library’s collection of DLOs. This work began with a refinement of the library’s collection of instructional videos, and over time expanded into the creation of interactive library learning activities of the type discussed in this paper, as piloted in the History of Visual Arts courses. Beginning in fall 2017, the BID librarian, the CoTA librarian, and the course instructor collaborated to establish the content for these planned modules and the two librarians developed the structure. Developing these modules required examination and clear articulation of the learning objectives. The BID librarian worked with educational content that the CoTA librarian had previously created for face-to-face instruction, endeavoring to translate that content into an interactive digital format. Organizing the content into outlines helped the librarians ensure that no elements were overlooked. (See Figure 3.)

As online tutorials do not function precisely the way a face-to-face instruction session can, the modules are designed to scaffold the knowledge students come away with, using quizzes that are directly tied to the student learning outcomes. The DLOs follow instructional design best practices such as striving for design that is not “cute” or hyper-current, will not feel dated too quickly, and does not talk down to the students. Laying out concepts as simply, clearly, and quickly as possible, and considering the length of the videos and individual learning objects were also important factors in the design process. Formal study confirms it is important to keep the content short and to the point in order to reduce student...
disengagement: “Students suggested that pre-class videos should be kept short and engaging” (Long, Logan, & Waugh, 2016). The USF Tampa Library’s instructional YouTube channel metrics indicate users are willing to watch approximately two minutes of a video before disengaging. These videos and modules were designed to move quickly and to build on what the students already know, reinforce ideas and skills previously introduced, and allow viewers to construct their own understanding through experiential learning and reflection.

Assessment

The primary assessment for this project was an evaluation of student performance on the research papers for History of Visual Arts I & II. The research papers for this course were first assessed by the CoTA librarian in the spring of 2016, prior to the creation of the DLOs. That semester, 41 students made an appointment for a consultation; however, 25% did not attend their consultations even though extra credit was offered. The results of this assessment revealed that students who came for consultations did 10% better on their research papers than those students who did not come for consultations (Powers, 2018).

The DLOs were piloted in History of Visual Arts I & II during the fall 2017 academic semester and those research papers were assessed by the CoTA and BID librarians. All of the DLOs (including the course guide and course guide quiz, and all of the interactive learning modules and module quizzes) and the face-to-face consultation were employed in the course. Extra credit was offered for completion of some or all of them, but none of them were mandatory. For the 2017 assessment the student papers were grouped according to the number of learning activities completed and an equal number of papers from each group were reviewed. The CoTA librarian created a rubric (see Figure 4) in which the following criteria were used to assess the information literacy skills learned:

**Citation Criteria:**
- Information was gathered from a variety of quality sources
- Citations were properly documented

**Research Paper Criteria**
- Information was relevant to the topic
- Citations used supported the thesis of the research

Data from the learning management system showed that students preferred the interactive modules—20% of the students viewed them as opposed to completing other DLOs or attending face-to-face consultations. The data collected from this assessment showed that the students who completed the entire series of DLOs received the highest grades on their research papers for History of Visual Arts I & II. (See Figure 5.)

After reviewing and assessing the research papers, it became clear that there was a need for additional modules about citing sources. Further collaboration with the art history professor was needed to develop additional DLOs, which were added to the course for

<table>
<thead>
<tr>
<th>Citation Criteria</th>
<th>HVA I with consultations</th>
<th>HVA I without consultations</th>
<th>HVA II with consultations</th>
<th>HVA II without consultations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information from a variety of quality sources</td>
<td>50%</td>
<td>40%</td>
<td>10%</td>
<td>0%</td>
</tr>
<tr>
<td>Citations properly documented</td>
<td>30%</td>
<td>20%</td>
<td>0%</td>
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<tr>
<th>Research Paper Criteria</th>
<th>HVA I with consultations</th>
<th>HVA I without consultations</th>
<th>HVA II with consultations</th>
<th>HVA II without consultations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information relevant to topic</td>
<td>100%</td>
<td>80%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Citations support the thesis of researched topic</td>
<td>100%</td>
<td>80%</td>
<td>100%</td>
<td>100%</td>
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Figure 4. Rubric.
the fall 2018 academic semester. The additional DLOs included:

- How to read citations to identify the type of source needed
- Where to look to determine if the library has a source
- Why citing sources is important in a research paper
- How to locate the appropriate citation manual to cite sources correctly

Additional assessment is forthcoming.

**Conclusions**

The completion rate for all learning activities indicates that the offer of extra credit is not universally effective in achieving student engagement with DLOs; however, completion of the learning activities did appear to correlate with higher rates of success on final papers. This enabled the librarians to present a successful case to the professor that the DLOs should be mandatory.

Since the term “module” was confusing to the professor because it is used as a term in the course management system, it was agreed to use the term “learning activities” when communicating to the students, faculty, and teaching assistants. In addition, the librarians recognized that the project faced some limitations, including a lack of control over class requirements and no opportunity to predetermine student research abilities and writing skills.

Future assessment of the fall 2018 research papers will be based on the new class structure where non-art majors will take the course online and the art majors will have face-to-face instruction. The assessment and analysis of the research papers will change based on this new structure.

**References**


