

GRAINS OF LEARNING: LEARNING OBJECTS & LIBRARY INSTRUCTION

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I'd like to begin today with some role playing and a familiar scenario. You are part of a one-shot, 50-minute library orientation class—getting to know the librarian and the services of the library. The instructor hasn't tied your library session into any assignment. We'll also assume that, as the librarian handling this class, I haven't taken a more active role in reframing the goals or outcomes of this library visit.

I've already given you our classroom library handout, a quick overview of the library's policies, and we've explored the library's website. We've done a database search or two, and perhaps I've taken time to have us email ourselves a sample article. Since we're in a computer lab, you've been listening, watching, and clicking along dutifully.

At this point in our scenario, I might suggest that we end our session with a short discussion on evaluating resources. [LOEX participants are led through the *Evaluating Resources for the Technical Report* learning object.] During this exercise students are asked to decide if seven sources are acceptable or unacceptable for use in a fictional paper on Artificial Intelligence (http://www.wisc-online.com/objects/index_tj.asp?objID=TRG2703).

LEARNING OBJECT EXPERIENCE

The initial reaction to the learning object experience is usually positive; it is short, quick, engaging. I have used this learning object several times with students from a variety of programs and classes. Over time I modified my discussion of the resources and the correct answers, but as for delivery, I've most often used the "shout-out-the-answer" method we tried today. With each use I gained experience with pacing and got better at gauging student responses and their reactions. And, depending

on my goal, the learning object activity worked well. I'll revisit the idea of the goal or outcome of the instruction session when we discuss additional uses for learning objects a little later in the presentation.

Let's take a moment and explore how else I might have used this learning object. [LOEX participants are encouraged to suggest additional ways to incorporate *Evaluating Sources for a Technical Report* into a learning plan.]

Suggested Activities Include:

- Learner-driven individual and small group activities: pre-test to check learner's prior knowledge of the content; progress check after content has been presented; re-testing to check application of their evaluation skills.
- Instructor-led large and small group activities: students note their answers to the interactive portion of the learning object and turn in the results; students discuss/list the evaluation criteria used to make a judgment on each source.
- Online or correspondence course: the learning object might be used as an assigned activity, a pre-test, or review. (Langan, T., *Learning*, Langan, T., *Putting*)

As a librarian at a Wisconsin Technical College, my introduction to learning objects was through the work done by the Wisconsin Online Resource Center and their development of Wisc-Online. Our opening learning object is from their online repository.

WISC-ONLINE

The Wisconsin Online Resource Center, a consortium of the 16 two-year Wisconsin Technical Colleges, is a digital library of Web-based learning resources that are free and accessible to students and

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instructors via the Internet. Anyone may register, view, and use the over 2,000 learning objects currently online. The learning objects all have a unique URL address/link that may be copied into a webpage, an online course resource page, or a PowerPoint. Students open and view the learning object directly from the link. There is no need to visit the main Wisc-Online website. (Chitwood, K., May, C., Bunnow, D., & Langan, T., 2000).

LEARNING OBJECTS DEFINED

So what exactly is a learning object? It appears answering that question is as difficult as answering, “What is a librarian?” Many people have tried. David A. Wiley, a pioneer in this area, is credited with the broadest and most succinct definition. Learning objects are “any digital resource that can be reused to support learning” (Wiley, 2000). This sounds reasonable, but that definition would include almost anything and everything online, as a learning object. A lengthier definition, often quoted by educators working with learning objects, is based on the definitions offered by Wisc-Online. Learning objects are “reusable, portable, web-enabled learning chunks—small bits and pieces of learning activities and assessments that can be used alone or combined and re-combined to customize courses and parts of courses” (Chitwood, K., et al., 2000). They are searchable, based on a clear instructional strategy, and provide easy access to just-in-time, just enough, just-for-you learning. (About Wisc-Online, 2005).

There is an extended body of literature on the protracted debate over learning objects’ precise definition. (Downes, n.d., Wiley, 2000) While it makes for interesting reading, that level of background is not needed to understand and use them. Wisc-Online’s definitions will serve our needs.

TYPES OF LEARNING OBJECTS

Learning objects can be assessments, lectures, simulations, or case studies. They can offer drill and practice giving students multiple opportunities to test themselves on the material. They can be animations of a concept, a procedure, a tool.

This variety serves the needs and multiple learning styles of students from diverse backgrounds. The learning objects’ flexibility allows for use in a variety of learning environments. Let’s explore some of that variety by looking at the resources available through Wisc-Online (<http://www.wisc-online.com/default.asp>).

After registering, a user enters the learning object collection. Objects are organized into seven broad subject areas. It is a quick process to examine each of the areas and identify the subdivision or course you’d like to explore. Searching across disciplines, by concepts or content, is easy using the search feature. Searching for objects by type, author, or college is also useful.

A little background on the project’s development will shed some light on the distribution of learning objects in the subject areas, and explain why I think this collection provides opportunities

for others to find useful materials. Wisc-Online’s original grant focused on developing objects for the nine General Education “core” courses in the Wisconsin Technical College System. The WTCS ascribes to a performance-based curriculum development design philosophy called *The Worldwide Instructional Design System* or *WIDS*. Any course written for WTCS is required to use competencies and performance standards as the foundational elements for the course. The competencies for the nine core courses were agreed on statewide in the early 1990s, hence Wisc-Online’s focus on these courses. (Chitwood, K., et al., 2000).

The core courses include:

- Oral/Interpersonal Communication
- Speech
- Technical Reporting
- Written Communication
- Contemporary American Society
- Economics
- Introduction to Psychology
- Introduction to Sociology
- Psychology of Human Relations

These core courses are reflected in the curriculums of colleges and universities around the world, and I suspect the competencies are similar as well. Creating activities or learning chunks that can be used and reused in a variety of ways is what Wisc-Online is all about. Focusing on the types of courses offered at most schools increases the likelihood of a learning object’s transferability. [LOEX participants viewed several learning objects illustrating a variety of types and content areas. (<http://www.wisc-online.com/default.asp>.)]

USING LEARNING OBJECTS

Let’s revisit our opening learning object activity. I mentioned evaluating its success based on my goals for the activity. My goals for my library instruction have changed significantly over the past two years. I no longer go willingly into the catch-all 50-minute library session. Now, planning for every session begins with my asking faculty, “What do you want the students to be able to do after this session?” I focus on information literacy competencies and transferable skills rather than “showing the website” orientations or library visits. I have not used this activity in the past two years because it seemed too limited. It was part of my “old” style of instruction. In preparing this presentation and thinking about the various ways to use learning objects, I realized that this object could work successfully as a supplement to evaluation activities I currently use. I’m looking forward to having students use their evaluation criteria to assess each source as an in-class review.

This brings up an important consideration when looking at learning objects. Remain flexible and open to their possibilities. I’ve discussed learning objects with a number of faculty, and some see only faults with them; others see the possibilities. Over a year ago, a dental histology instructor requested help locating

activities to enliven a dry, difficult subject matter. While there are a few learning objects for dental hygiene, there was nothing in any of the other subject areas that covered her topics. She saw the possibilities: using animation to enliven and illustrate content, a method to provide review and assessment activities to her course. She partnered with another faculty member and obtained curriculum development money to have two learning objects created for their courses. They'll be using them by fall.

Another successful way that I've used learning objects is as an activity resource library. Need an activity on a particular topic or subject area? Working on a transferable competency that might have been addressed by a learning object from another discipline? Communication and critical thinking skills, for example, are core abilities that all disciplines and programs attempt to foster in their students.

Another dental instructor asked me for resources for her class on Nutrition and Oral Health. After I asked about the curriculum and competencies addressed in the class, I realized that an object from the dietary manager training series would be a perfect activity for the dental class. That object was the Understanding the Nutrition Facts Label learning object, we viewed earlier. The instructor loved the activity, but knew she would not be able to use it online. Yet, she wanted to use it as an in-class activity. I suggested she bring in her own cereal labels, and we could scan them. We were able to duplicate the learning object activities in a Word document that she uses as a review and assessment tool.

LOCATING LEARNING OBJECTS

To discover what's out there, I recommend starting with the Center for International Education at the University of Wisconsin—Milwaukee's website. This site has annotated listings of collections of learning objects as well as a detailed bibliography of papers written on this topic. Their collection listings include general, discipline-specific, and commercial repositories. (<http://www.uwm.edu/Dept/CIE/AOP/learningobjects.html>)

Three general collections worth investigating are:

- LoLa Exchange: Learning Objects, Learning Activities. Wesleyan partnered with NITLE (the National Institute for Technology and Liberal Education) to create a national repository of learning objects for use in undergraduate education. Their listings include descriptions for each object/activity. They provide links to resources and do not host the materials; contributors self-describe resources. (<http://www.lolaexchange.org>)
- Multimedia Educational Resource for Learning and On-Line Teaching (MERLOT) is a free and open resource designed primarily for faculty and students of higher education. Because materials are not stored on MERLOT, it requires more time to click through to each resource. Resources are screened and attempts are made to keep links current, but I have found the results are mixed. Contributors self-describe resources.

(<http://cats.merlot.org/Home.po>)

- Wisc-Online hosts the learning objects in their collection; searching, viewing, and linking to them is a breeze. (<http://www.wisc-online.com/>)

A few cautions or lessons learned from searching through many websites looking at objects: First, it will take longer than you think. Learning objects are addictive; they are so short and sound so intriguing, "just one more," becomes a mantra. Second, searching within collections is not created equal. Not all collections use metadata, or controlled vocabulary, or accurate descriptors. Even if they do, they rarely agree (no universal standard enforced), nor are they always reviewed by the host site. Often the person submitting a learning object, activity, or tutorial to a collection clearinghouse is responsible for "tagging" the learning object with descriptors. Descriptors are often inaccurate, incomplete, or used inconsistently. As librarians we're able to weather these challenges better than most users, but be aware of the pitfalls. Wisc-Online is a good example of a site that has strict quality standards, including approved metadata, for its learning objects. That makes searching for objects an easy, consistent process.

DESIGN AND TECHNICAL DEVELOPMENT OF LEARNING OBJECTS

Many, if not most, of the Wisc-Online learning objects are created using Macromedia Flash by technical developers on their staff. The developers are specialists with the software, and now have years of experience creating learning objects. An interior decorator, if asked, would probably say their goal is to bring the client's dreams to reality, and yet, each interior decorator brings a particular style to their designs. The same is true with learning objects and technical developers. It is possible to search the learning object database by author and developer. Many of the learning objects we looked at today were done by one developer.

Donna Marconnet, the librarian responsible for our online tutorials, uses Macromedia Captivate, formerly RoboDemo. Captivate is marketed as easy to use with no programming or multimedia skills required and provides an easy way to develop Flash animation without knowing Flash. Donna has been able to create professional products without spending huge amounts of time learning complex software. The most challenging task is the design of each tutorial, from concept through storyboard to the final product. [LOEX participants viewed an example of a Captivate tutorial. <http://matcmadison.edu/library/library/instruction/Tutorial/Default.htm>]

If you'd like to design your own learning objects, Wisc-Online provides information and support for faculty content builders (<http://www.wisc-online.com/members/resources/builders.asp>). They also offer a number of contracted services, including workshops on Macromedia Flash, and designing, developing, and delivering learning objects, along with template tools. All their services, along with costs are detailed online. Sample estimates for a typical learning object, developed from production-ready scripts and media, are \$500-700. (Chitwood, K., 2005)

CONCLUSION

Learning objects speak to today's diverse learning community. Learning objects work in today's diverse learning environments. Sharing and adapting learning objects makes good economic sense in today's budget climate. Try them, adapt them, I think you'll like them, because I've found that learning objects are fun.

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