Special Collections Gone Digital: Applying Visual Literacy to Searching Digital Collections

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November 29, 2016
Abstract

Many institutions are choosing to digitize their archival collections in order to make them more accessible and increase their usage. An important component of understanding digital objects is visual literacy, a type of digital-age literacy. Visual literacy describes the set of skills used to locate visual information, analyze the content and impact of that information and understand how that information is created and shared. The access component of visual literacy can be incorporated into teaching search skills for digital collections. Students can be taught to how digital collections are organized, how to use search tools, how to implement search strategies to retrieve objects and how to analyze and judge the merit of their content. Using digital collections in the classroom gives students access to primary source documents, teaching them to approach content analytically and developing problem-solving skills.
Introduction

Primary source material has always been an important tool in conducting scholarly research. It encourages students to approach history in a new way, forcing them to practice recursive reading and do some original thinking about the past (Lindquist, 2011, pg. 224). Because accessing print archives can be difficult and labor-intensive, more institutions are making efforts to digitize entire archival collections or portions of archival collections. Digital collections offer increased access to primary resources as well as allowing the addition of more descriptive details and contextual information. Quite simply, digitization “brings a collection to life on the web” (Huwe, 2009, pg. 15).

The digitization movement is one indication of the transition from the traditional information literacy to a ‘new literacy’ in which images exist side-by-side with written text, sometimes as independent entities (Lehman, 2015, pg. 35). An important component of this new literacy is visual literacy, the analysis of digital objects and visual information. The first dimension of visual literacy, Access, involves the online search process and both the recall and precision aspects of an online search. Digital objects can be difficult to handle, and students benefit from visual literacy instruction with regards to searching digital collections. According to William Badke in an Online Searcher article, “the devil [of online searching] lies in the subtle nuances – the things many people don’t grasp about the nature of search” (Badke, 2015, pg. 71).

This paper describes the transition of special collections from physical to digital, explains the fundamentals of visual literacy and discusses the incorporation of visual literacy into online search instruction.
Special collections, from physical to digital

Institutions and libraries of every size are embarking on digitization projects of archival collections and materials that hold historical significance. There are many reasons to digitize library materials. At their core, digital collections preserve and build “unique subsets of primary resources… to make them accessible” (Choi, 2006, pg. 138). Digitization drastically decreases barriers to access; users can view materials that otherwise require a formal request process and researchers who cannot examine a collection in person are able to do so. An equally important strategic benefit of developing digital collections is to showcase the materials owned by that library. Providing limited or full web access to collections with research value may give a library a prominent role within certain scholarly and research communities (Huwe, 2009, pg. 14).

Digitizing archival collections also increases their usage because library users are aware of their existence and have remote access to them. Even partial digitization has these effects. In those cases, digitization serves as a way for patrons to browse their library’s archives before requesting to view certain items in person (Valentino, 2014, pg. 26). The University of Miami noted that as they increased content of their archival collections online, they saw increased numbers of requests for full collections and for digitization of related content (Jackson, 2014, pg. 15). As Huwe notes in his 2009 article “Exploiting Synergies,” collections receive a surge of what he calls ‘Web Wow!’ attention when they appear online (pg. 14).

There is also a cost motivation for digitizing special collections. After the initial cost of digitization, online collections are cheaper to maintain. Because archival collections can be previewed and browsed online, those items can instead be housed in cost efficient setups such as high-density storage, only to be accessed when requested (Burke, 2016, pg. 11).
How digital collections are created and organized

A digital collection is a complex combination of a service, an architecture, a set of information resources and a set of information retrieval tools (Choi, 2006, pg. 13). The homes of digital objects and collections are called digital repositories. There are several stages in creating a digital repository; the architecture and technological components of a repository’s creation are beyond the scope of this paper, as the end user does not directly see those pieces of the puzzle.

A typical workflow, such as the one in place at the University of California at Berkeley, is one in which library staff scan the selected material, add metadata in accordance with Metadata Encoding and Transmission Standard (METS) guidelines and then migrate the object to its online software. The final product is a single object that combines the actual content, metadata, administration information and technical information (Huwe, 2009, pg. 15).

The crucial determinant of whether or not a digital collection will be searchable and ultimately usable is its cataloging. Cataloging for digitized materials must be detailed, and everything should be as well-described as possible. This guarantees that users will be able to use the repository’s access tools effectively and make informed selections about which materials fit their information needs (Jackson, 2014, pg. 13). Proper metadata allows objects to be searched by metadata tags, year, title, item type or any other search parameter set up.

At the repository level, digital collections may be separated into thematic websites or individual project websites which enable curators to “interpret collections with related material and present them in a simple yet elegant fashion” (Huwe, 2009, pg. 15). Grouping several collections into a repository means that search can cover the full database or only specific collections. For thematic collections, the institution can create a customized set of information resources and services designed to support the collection’s objects and its metadata categories.
Good digital collections mean nothing if they do not appear in a logical order and are retrievable through a search.

Visual literacy: Making sense of images

While information literacy instruction has traditionally emphasized text-based materials, digital collections allow for a variety of objects types to be gathered in the same place. An important type of information literacy involved in using digital collections is visual literacy. The definitions of visual literacy vary wildly depending on its context; broadly, visual literacy encompasses the set of skills used to locate visual information, analyze the content and impact of that information and understand how that information is created and shared (Lehman, 2015, pg. 35). Visual literacy occupies a place within digital-age literacy, a category that includes other literacies such as economic, technological, multicultural and global. Digital-age literacies are closely tied to the idea of inventive thinking. Inventive thinking places an emphasis on learning higher level critical thinking skills in order to interact with an increasingly technology-based world, and its skills include adaptability, self-direction, curiosity, creativity and risk-taking (Whitworth, 2007, pg. 41).

There are five dimensions integral to becoming visually literate: Access, Analyze, Create, Reflect and Act (Davis, 2013, pg. 26). The first dimension, Access, is the dimension that addresses online search skills and confidence. Access comprises of an understanding of how digital collections are organized, the knowledge of how to use search tools, the search skills used to retrieve relevant information and the ability to analyze and judge content’s merit. The first two competencies combine to cover the recall aspect of searching, and the second two describe precision. Much of this boils down to possessing the requisite search skills to navigate digital
collections. Digital objects are searchable by their metadata, and understanding metadata tags and how they can be used in search queries is the key to retrieving those objects in a search.

Students then also need to understand how to handle digital objects so that they can create, copy and manipulate that object to fit their information needs (Matusiak, 2010, pg. 62). The last Access competency, judging the merit of retrieved content, uses a different but equally important skill set. A visually literate searcher must learn to approach digital objects and critically think about their context, content and biases. Davis suggests asking questions such as “What is the purpose of the content?” “What groups or individuals constitute the intended audience?” “Is the delivery of content in tandem with its purpose?” “Are different media elements working together to form a cohesive structure?” (Davis, 2013, pg. 33).

Visual literacy shares many characteristics with traditional information literacy but can be differentiated by the fact that it requires analysis and engagement with the content. It may be that information professionals overlook educating students on visual literacy because the nature of images makes them easier to understand, and many students can rudimentarily interpret images. Some objects, however, have multiple layers of meaning, something that library instruction can help uncover (Matusiak, 2010, pg. 61). As digital objects becomes more complex, visual literacy instruction will become more and more important.

Teaching digital collections: Online searching

Instruction on digital collections can be split into two separate teaching modules: searching (recall) and understanding (precision). Searching teaches students the first two competences of Access: organization of digital collections and how to use their search tools. Digital collections are not always searchable in the same way as other electronic resources. They
are not always integrated and ‘coherent’ with existing library resources, so students may have
trouble finding them or knowing that they exist (Choi, 2006, pg. 140). Searching should be
taught with an emphasis on the context of each collection, as its objects dictate its search
parameters and metadata fields. Choi terms this as ‘contextual knowledge,’ something that
greatly benefits information seeking in the digital environment (pg. 139). A focus on specific
search tools and metadata parameters are essential in helping students understand and use a

There a number of successful approaches to teaching search skills to students. For large-
scale instruction, a common option is to create tutorials and guides such as LibGuides. Other
instruction tools are FAQ pages, citation guides and personalized services like MyLibrary that let
users ‘subscribe’ to a growing digital collection (Choi, 2006, pg. 135). One advantage to a guide
is that it explains visually how to navigate the collection’s search tools and clarify how an
institution’s various collections overlap and are distinct from one another (Burke, 2016, pg. 10).
These tools can be accessed anytime and anywhere, and they can be viewed or used as many
times as a student needs. Frequent pages in a guide are ones that show users how to use the
collection, define the scope of its subject matter, describe what services and search options are
offered, instruct how to download material and offer technical tips. Successful tutorials often
include screenshots and explain research and metadata terminology. A comprehensive guide also
has the secondary benefit of helping students develop a more complete understanding of the
“cycle of scholarly communication” (Burke, 2016, pg. 10).

Burke suggests a more tailored approach to searching instruction that involves the
librarian and professor working together to create a LibGuide or piece of curriculum for a certain
course. They collaborate to put together a precise resource list, drawing from the university’s
Teaching digital collections: Applying visual literacy

Teaching understanding (precision) of digital collections involves the last two components of Access, the search skills needed to retrieve relevant information and the ability to analyze and judge the content’s merit. Common to every approach to teaching digital collection search skills are the ideas that practice is essential and analysis must be constant. Most instruction teaches students how to think about their query and possible keywords that answer it. Students must use methods such as being as precise as possible, brainstorming synonyms, maximizing the collection’s search features to refine their searches and “all those information professional-type skills” (Badke, 2015, pg. 72). This means that although students are taught by watching demonstrations, they will not really learn until they put lessons into practice. In an article for Online, Carol Tenopir of the University of Hawaii says that she expects students to learn the ins and outs of online searching by doing, using classroom time to teach fundamentals. Assignments for learning search techniques are paired with readings and sets of sample queries to be worked out at home (DiMattia, 2007, pgs. 35-36). Learning by doing involves the inventive skills associated with visual literacy, as students must use problem-solving skills, creativity and experimentation to identify search strategies that solve their query.

The analytical aspects of visual literacy come acutely into focus when judging the quality of retrieved content. One of the goals of visual literacy education is to encourage critical analysis of digital objects. In her 2015 dissertation, Lehman argues that students need to “interrogate their
truth-telling” by looking critically at digital objects and investigating any sources they are considering using (pg. 32). Information overload is a common threat in online searches of any kind and digital collections are no exception, especially as more items are being digitized and added to digital collections. Learning to look at digital objects critically can help students weed large results sets to get a small result set that hits their search goal (Badke, 2015, pg. 72).

Visual literacy in the classroom

An obvious benefit to making special collections available and searchable online is that it offers opportunities for teachers at every level to incorporate archival and primary source documents into their curricula (Phillips, 2002, pg. 56). Working with digital collections lets students mix and match materials from various collections to fit their research interest. Digital collections offer students new ways to engage with their research and course materials and multiple pathways to content (Matusiak, 2010, pg. 66). They will learn to think about resources in different ways and learn to draw conclusions from and support arguments with primary documents. Instead of relying on a published perspective or information in a textbook, students can ‘visit’ archives from all around the world (Lindquist, 2011, pg. 232).

Incorporating visual literacy into classroom instruction also has impacts that reach farther than the specific lesson. Visual literacy relies on inventive thinking skills, stimulating the development of critical thinking, problem solving, analysis and evaluation. Including technology tutorials and lessons in coursework teaches more than just accessing information; it can also contribute to cultivating inventive thinking and educational curiosity (Whitworth, 2007, pg. 64).
Conclusion

At the University of California at Berkeley, a project to digitize their special collections received such positive response that the research team declared that “high-quality collections, handled properly and rigorously, can open doors and influence thinking among nonlibrary colleagues” (Huwe, 2009, pg. 16). Multimodal literacy is on its way to becoming part of information retrieval as technology increases and creates an environment where text, images and audio participate simultaneously (Matusiak, 2010, pg. 63). Many institutions are digitizing their archival collections to increase access and usage, offering teachers and students opportunities to use those materials in the classroom. Instruction in searching digital collections is aided by visual literacy education, which encourages students to think critically and use inventive thinking to approach the search process.
References


