The Expanding Role of Online Video in Teaching, Learning, and Research

Abstract

Chapter 1 of Library Technology Reports *(vol. 50, no. 2), "Streaming Video Resources for Teaching, Learning, and Research," will explain who is using online video and why it is important for information professionals to know how to find and use it in library instruction and research education. Recent surveys and research about online video, as well as some literature on the literacies surrounding video, will be covered. The chapter also includes some tips and tricks for viewing online video and best practices for using popular search engines in the search for online video.*

Introduction: Why Online Video?

In less than ten years, the availability of digitally converted or born-digital media, especially video, has grown exponentially. Libraries and librarians are constantly navigating, and helping their patrons navigate, this digital shift. Online and streaming video has saturated the consumer market for popular television shows and movies, and the market is fragmented. My first full-time job was as a video store clerk. I had those shelves memorized, and I can remember when DVDs were introduced to reluctant patrons and staff. I still haven't been able to part with the impressive VHS collection I acquired during that job! Now I find I am still drawn to visual formats, but instead of memorizing shelves, I am constantly on the lookout for online video resources that can benefit my patrons or colleagues. Collecting and accessing videos and media has always been complicated for librarians—fair use limitations and allowances, individual versus institutional rights, closed-circuit rights, public performance rights, streaming rights, and other questions of licensing, copyright, and access, make this area murky. Navigating the availability of titles and needed formats is also complicated. This report will cover many video resources, available for free and for fee, that are ideal for use in library instruction, research education and outreach, curriculum, and embedding into content and learning management systems.

The scope of this report will be mostly consumption: searching for, viewing, sharing, and embedding online video in teaching, learning, and research.

Why Is Online Video Important, and to Whom?

To start, let's think about how nontextual resources are being used in higher education. Ithaka's S+R US Faculty Survey 2012 provides an overview of faculty research and teaching behaviors. In the report, video, film, and nontextual resources are at the same level of importance to faculty research as textual reference materials such as encyclopedias.[1] Video is a great supplemental resource for faculty, but it is also becoming more and more important in their primary scholarly research—especially as more and more special collections and archives digitize their audiovisual holdings.

In the survey, faculty members were asked how important film and video resources are to their scholarly research. Close to 40 percent of humanities faculty responded that these materials were very important; in social sciences, the response was less than 20 percent; and for the sciences, about 10 percent considered these materials very important.[2]

In terms of teaching, faculty members use video and film for both lower- and upper-level undergraduate assignments. When asked about the types of materials used in their assignments for lower- and upper-level

undergraduates, the disciplines varied again. Film, video, artwork, and other nontextual sources were used often or occasionally with lower-level undergraduates by close to 85 percent of humanities faculty; in the social sciences, about 70 percent; and in the sciences, about 35 percent.[3] For upper-level undergraduate assignments, humanities led with a little over 80 percent using nontextual sources often or occasionally; social sciences, about 58 percent; and sciences, about 30 percent.[4]

In terms of the higher education community, the need for and use of the material vary depending on how faculty will be using them—for their own scholarship, or for the teaching, learning, and research of different communities.

The Online Video 2013 summary of findings from Pew Research Center's Internet and American Life Project reported that the percentage of American adults who were Internet users who watch or download videos had grown from 69 percent in 2009 to 78 percent in 2013.[5] Video-sharing sites like YouTube have been the main driving force in the increasing percentage of online adults that post, watch, or download videos. Since 2006, the percentage has grown from 33 percent to the current figure of 71 percent.[6] Among online adults, rates of online video viewing are highest among users ages 18–49 and those with higher and household income levels.[7]

According to the July 2012 edition of *Library Journal*'s "Patron Profiles: Media Consumption and Library Use," DVD borrowing in public libraries has fallen sharply: 17 percent of respondents to the 2012 survey said that streaming services—from providers such as Netflix, Hulu, Apple, and Amazon—were their primary source for movies.[8]

Both the K–12 and the Higher Education editions of the New Media Consortium's 2012 *Horizon Report* confirm that the role of online or blended learning continues to increase and come of age.[9] The use of video no longer stands out for distance and traditional learners. It is expected to be integrated into the curriculum—lectures, primary content, methods of analysis, and instruction are in nontextual formats. The "flipped" classroom, which uses video lecture and materials outside of class so that class time can be spent on active projects and engagement, is a popular model for student learning.

Critical Literacies of Online Video

Film and video have long been research and teaching tools. The journal *Media & Values* began in 1977 and was one of the first journals dedicated to the analysis of media materials and the teaching of media literacy.[10] Media literacy is defined as "the ability to access, analyze, evaluate, and communicate information in a variety of forms, including print and non-print messages."[11]

For the purpose of this report, I am going to use the term *metaliteracy*. In summary, that only scratches the surface. The ACRL is currently revising its standards on information literacy to include nontextual objects and formats and to incorporate the language and purpose of other core literacies, such as digital, media, visual literacies, etc.—metaliteracy. In their 2011 paper "Reframing Information Literacy as a Metaliteracy," Jacobson and Mackey define metaliteracy as "an overarching and self-referential framework that integrates emerging technologies and unifies multiple literacy types. This redefinition . . . places a particular emphasis on producing and sharing information in participatory digital environments."[12]

The coauthor of that paper, Trudi Jacobson, is also cochair of the ACRL Information Literacy Competency Standards Review Task Force. In 2012, the task force submitted recommendations to the ACRL Information Literacy Standards Committee to continue the work of revising and evaluating the current ACRL Information Literacy Competency Standards for Higher Education. The revised information literacy standards will recognize and incorporate information literacy, media literacy, visual literacy, digital literacy, etc., as an overall, overarching metaliteracy framework.[13]

The core argument is that all these literacies, as well as others, are important, but that the original standards of information literacy are still relevant as well. Metaliteracy is an intersection and framework where subject content, technology, format, text, nontext, and participatory culture are all incorporated to ensure competencies in our learners. For example, format knowledge is part of the metaliteracy scope. As stated in Jacobson and Mackey's paper, knowledge of format is getting increasingly important for online users. It is especially important for online media and video users. The Internet Assigned Numbers Authority provides lists of officially registered media types and subtypes. There are too many to mention here. Flash (.flv), MPEG-4 (.mp4), MPEG-3 (.mp3), and Quick-Time (.mov) are a few well-known video and audio file formats. Knowledge of the formats and their limitations on platforms, browsers, and operating systems can be useful to the online video researcher.

Internet Assigned Numbers Authority: Media Types: Video
www.iana.org/assignments/media-types/media-types.xhtml#video

Copyright Resources

Most video-hosting websites that allow uploaded content from users are protected by the Online Copyright

Infringement Liability Limitation Act (OCILLA), a provision of the Digital Millennium Copyright Act, Section 512.[14] This provision is designed to shelter service providers from the infringing activities of their customers. The Internet service is required to delete any infringing content if notified and asked to do so by the copyright holder. It is important that researchers and instructors know that multimedia content can be fluid and is often not a permanent resource.

For aid in navigating copyright and fair use law, several sites can help. For example, the Center for Media and Social Impact at American University published a Code of Best Practices in Fair Use for Online Video. This document helps creators, distributors, and educators interpret the copyright guidelines surrounding fair use and online video content. It is just one of several documents CMSi has published on behalf of educators, librarians, and filmmakers.

Code of Best Practices in Fair Use for Online Video
www.cmsimpact.org/sites/default/files/online_best
_practices_in_fair_use.pdf

Many of the born-digital or public domain content websites also adhere to Creative Commons licensing. CC is an important initiative in creating the balance between web technology, creation, licensing, and current copyright law. Its mission statement says, "Creative Commons develops, supports, and stewards legal and technical infrastructure that maximizes digital creativity, sharing, and innovation."[15] The creators can choose a license that best suits their needs. CC gives creative owners control of how their content can be used in terms of commercial use, open access, limited use, etc.

Creative Commons also asks users to contribute to its content directories. These directories list organizations that provide services using Creative Commons licenses. For example, Flickr.com is a photo-sharing website that allows users to license their photos under Creative Commons licenses. Flickr hosts millions of CC-licensed photos on its site and allows users to limit their searches to images with Creative Commons licenses. Vimeo, a user-upload video service similar to YouTube, also encourages users to tag their created videos with creativecommons so the videos can be browsed and searched for easily.

Creative Commons Content Directories
http://wiki.creativecommons.org/Content_Directories

Vimeo: Videos Tagged "creativecommons"
http://vimeo.com/tag:creativecommons

Some of the websites and online collections mentioned in this work are proprietary, corporate, or commercial, while others are library, archives, museum, cultural, and educational initiatives from a wide range of institutions. It is important that librarians and educators recognize the differences, as most of these sites are free but can include advertisements, fees for subscription service, or "paywalls" for additional content. I will outline some of these details later in this report. Most of the resources outlined here are for personal, face-to-face, or distance learning use. As always, public performance rights for public screenings vary from resource to resource.

Tips for Searching for Online Video

Whether you are using general search engines, site-specific search boxes, or a specialized video search engine, you should consider a variety of tactics and tips:

- Just as with searching for text, explore using a variety of search terms and synonyms. In fact, this strategy is even more important with video. And if you are uploading a video to a site for user-created content like YouTube or Vimeo, always use descriptive metadata and tags to ensure that other users can find the resources.
- Adding the terms *video*, *multimedia*, *film*, or *movie* can shape your keyword results as well.
- On all websites, look for advanced search and faceted interfaces, which will include additional fields to narrow or focus your search. Date, file or media formats, duration, author, and sources are often options and are especially helpful for video and audio resources.
- Each search engine is different, and many offer specific tips on searching for multimedia content. Check the Help or FAQ links for keyboard shortcuts and useful query formats.
- Don't get settled on one search engine; try multiple engines. Google, Bing, Yahoo, or even lesser known search engines like Yippy can provide different top results to your keywords and lead you to alternate resources. There are many search engines, and using several can help expand your results list effortlessly.
- Most search engines provide options for a family filter or safe search to restrict adult content, but others do not. These options are often available in the Preferences or Settings menu of the search engine or can be moderated in advanced search portals or facets. Use of these options will depend on the situation: research, audience, and personal sensibilities.
- Creating accounts or profiles on search engines allows for greater user functionality in saving, searching, and setting preferences.

- A warning: the Internet is a moving target. Search functionality on sites can change, navigational tools can move around, and websites can disappear, as can content. Use a bookmarking system to save links. If you can't find a previously accessed link or resource, try a Google search. Due to issues and activities surrounding rights management, such as expired licensing and copyright infringement, it is important to know that multimedia content can be fluid and is often not a permanent resource. Seek out permalinks and permaURLs whenever possible. If you have created and uploaded the video, capture it for future use.
- It is possible to capture streaming video, but before you copy, save, or distribute any content online, make sure you have the legal right to do so. Tools like KeepVid allow streaming videos to be downloaded in limited file formats, and YouTube provides instructions for owners and uploaders of YouTube content.
- To troubleshoot content, switching browser platforms or refreshing the page is an option if a video is not playing. Multimedia formats can have limitations based on operating systems, devices, and browsers. Again, Help, About, or FAQ pages are where technical support is primarily found.
- Permitting pop-up windows or allowing cookies on the Internet browser you are using (Firefox, Safari, Chrome, Internet Explorer, etc.) can modify viewing issues. Each browser is different.
- Certain requirements can affect how well you can view or listen to content on your computer, tablet, or mobile device. Operating systems, file formats, software requirements, browser limitations, and network issues can all affect the quality of the sound or image. An error message will most likely appear if there is an issue. If you are not sure how to proceed, a Google search on the error message can lead you to Help pages, user feedback, and solutions. For example, Windows format (.wmv) can be problematic on Apple products and the Flash format (.flv) doesn't work on iPad OS, but some formats can be used across operating systems and browsers—MPEG-4, MPEG-3, and QuickTime (.mov) are just a few examples. Very often, plug-ins are available for limited browsers and platforms. When it is appropriate, opt for streaming over progressive download. Streaming requires less bandwidth.

KeepVid
http://keepvid.com

Download YouTube Videos Instructions
https://support.google.com/youtube/
answer/56100?hl=en&ref_topic=3031507

Search Engines

Google

One of the benefits of using Google is the range of search options it provides, especially for multimedia. As with all searches, it is important to venture past Google's first ten results, but there are ways to refine searches for more accurate results. Google provides a full listing at Google Inside Search. By setting up a Google account, users get more functionality and options when searching via enhanced search features visible only when logged in. Users concerned about privacy should proceed carefully and read the account agreement.

Google Inside Search: Tips and Tricks
www.google.com/intl/br/insidesearch/tipstricks

Google Account Settings
www.google.com/intl/en/policies

Google has both an Advanced Search portal and a Video Search portal. Either can be very helpful when hunting for multimedia content. However, Advanced Search can provide more control over the results at the initial point of search (see figure 1.1). It is important to note that Google search portals and interfaces can change depending on the browser version and compatibility.

Google Advanced Search
www.google.com/advanced_search

Google Advanced Video Search
www.google.com/advanced_video_search

Once on the Google Advanced Search page, there are several fields useful to the multimedia researcher. They are Site or Domain (a shortcut to a domain or specific website), SafeSearch (adult content filter), File Type (shortcut to a specific file type), and Usage Rights (search by copyright information about the content). The Google Advanced Search interface can also be accessed by Google Gear when a user is logged in to his or her Google account on the initial search results page (see figure 1.2).

As mentioned earlier, another option is the Google Video Search interface, which allows you to filter the search by duration, date posted, and source (see figure 1.3).

The following Google shortcuts are particularly helpful for multimedia searches and will work on all Google search interfaces, including YouTube, which is covered in chapter 2.

Advanced Search

Find pages with...		To do this in the search box
all these words:		Type the important words: `tricolor rat terrier`
this exact word or phrase:		Put exact words in quotes: `"rat terrier"`
any of these words:		Type OR between all the words you want: `miniature OR standard`
none of these words:		Put a minus sign just before words you don't want: `-rodent, -"Jack Russell"`
numbers ranging from:	to	Put 2 periods between the numbers and add a unit of measure: `10..35 lb, $300..$500, 2010..2011`

Then narrow your results by...

language:	any language ▼	Find pages in the language you select.
region:	any region ▼	Find pages published in a particular region.
last update:	anytime ▼	Find pages updated within the time you specify.
site or domain:		Search one site (like `wikipedia.org`) or limit your results to a domain like `.edu`, `.org` or `.gov`
terms appearing:	anywhere in the page ▼	Search for terms in the whole page, page title, or web address, or links to the page you're looking for.
SafeSearch:	Show most relevant results ▼	Tell SafeSearch whether to filter sexually explicit content.
reading level:	no reading level displayed ▼	Find pages at one reading level or just view the level info.
file type:	any format ▼	Find pages in the format you prefer.
usage rights:	not filtered by license ▼	Find pages you are free to use yourself.

Advanced Search

Figure 1.1
Google Advanced Search interface

- Adding the word *and* in a Google search is unnecessary since Google automatically searches for all words input into the search box.
- Quotation marks are used when searching for a specific phrase or name. For example, "popular culture" will return only websites where the word *popular* is immediately followed by *culture*. Without quotes, Google will retrieve all websites that contain the words *popular* and *culture* anywhere on the page, which increases the results considerably.
- The word *OR* (Google prefers capital letters) can be used when looking for at least one match among a list of possibilities. For example, searching for cat OR kitten OR cats OR kittens will return all websites that contain any one of these four terms.
- A minus sign (-) will exclude the word or phrase immediately following it. (Note: There is no space before the excluded term.) For example, angora -rabbit will return all websites that contain the word *angora* but not the word *rabbit*. Another great way to use this command is by omitting popular sites (like YouTube and Wikipedia) so that you can dig a little deeper into Google's results. For

example, octopus -youtube.com will omit results from YouTube.
- An asterisk (*) following a search term is a wildcard. For example, dog* will retrieve dog, dogs, doggie, doggone, dogma, etc.
- An asterisk (*) can also be included to complete a phrase or title. For example, martin scorsese * driver retrieves results on the Martin Scorsese film *Taxi Driver*.
- An `intitle:` command searches for words in a title. For example, intitle:batman, with no space before and after the colon, will provide results where batman is in the title of the website. An inurl: command provides similar functionality for searching within the URL of a site. For example, inurl:video will show results of websites with video in the URL.
- The `site:` command searches for a specific website or a specific domain extension (e.g., .com, .edu, .gov, .mil, .org). For example, history site:pbs.org will retrieve pages on the PBS.org website that contain the word *history*, whereas history site:.edu will return results from any .edu sites containing
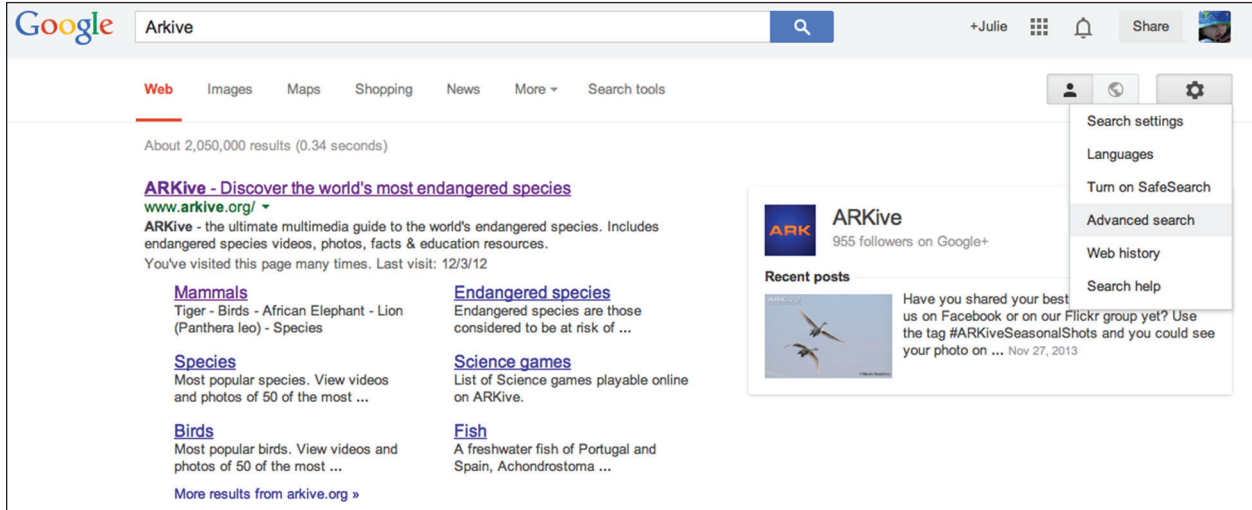
Figure 1.2
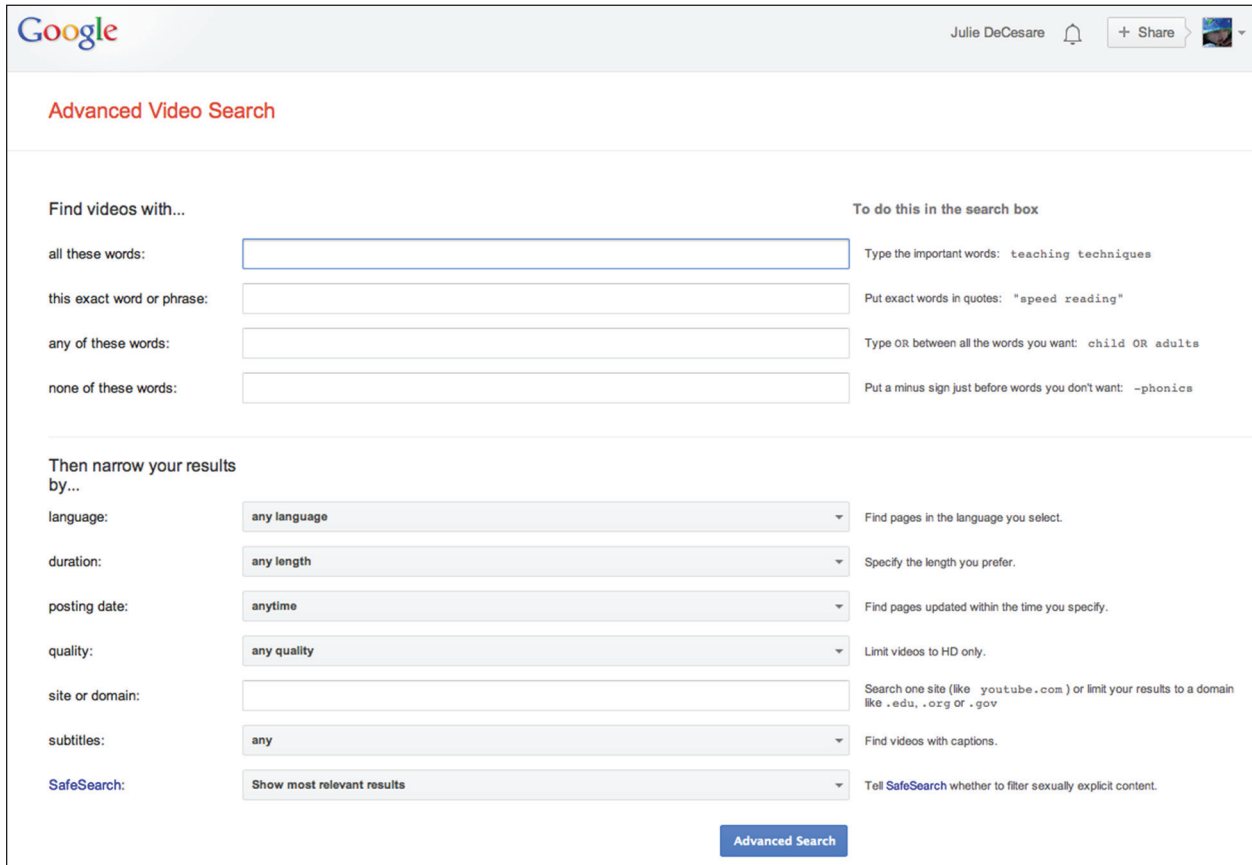Example of Google Gear and Advanced Search access

Figure 1.3
Google Advanced Video Search interface

the word *history*. Again, note the lack of a space before or after the colon.

- The `filetype:` command will bring back only the requested file extension and format. There are dozens of file types (e.g., `.swf`, `.mp3`, `.mp4`, `.wmv`, `.mov`, `.jpg`, `.flv`) for images, audio, and video. For example, filetype:.flv octopus returns any Flash files with octopus in the name.

- The above shortcuts can be combined to make a very precise search. For example, intitle:smithsonian site:youtube.com will return YouTube videos with *smithsonian* in the title.

By incorporating these shortcuts, you make your searches more efficient; they yield a greater amount of quality content that accurately meets search expectations for online video.

Other Search Engines and Resources

Bing has a video search portal, and it also includes a site index for video channels and providers. There are some limitations to the video search, and not all links from the index work. In terms of limitations, there is no advanced search option available once in a channel or a list of video results. Facets allow you to narrow down results by Length, Quality (though this isn't necessarily clear or descriptive to the user), and Most Recent/Popular only. There is no way to "view all" in a channel.

Bing Video Index
www.bing.com/videos/browse/index

The website blinkx is a multimedia search engine that attempts to repurpose technology built for the text web. It uses a unique combination of patented conceptual search, speech recognition, and video analysis software to efficiently, automatically, and accurately find and qualify online video. It doesn't have advanced search capabilities, but it does allow browsing by categories.

blinkx
www.blinkx.com

In terms of expanding your search, consider using other web platforms and tools. Social bookmarking sites like Delicious and Diigo can act as search engines for mined multimedia and online video resources. LibGuides can be used as a search engine for finding already vetted content from subscribing libraries. Searching the LibGuides Community is a great way to find excellent (and already vetted by librarians) digital collections organized by subject categories and subjects.

Delicious
https://delicious.com

Diigo
www.diigo.com

LibGuides Community
http://libguides.com/community.php?m=i&ref =libguides.com

iTunes is another resource I recommend for searching for video content. Many of the collections outlined here have iTunes channels. iTunes U in particular is a great resource for educational content and video lectures from academia, cultural institutions, and libraries.

Notes

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