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Apples to Oranges: Comparing Streaming Video Platforms

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Abstract

Librarians rely on an ever-increasing variety of platforms to deliver streaming video content to our patrons. These two presentations will examine different aspects of video streaming platforms to gain guidance from the comparison of platforms. The first will examine the accessibility compliance of the various video streaming platforms for users with disabilities by examining accessibility features of the platforms. The second will be a comparison of subject usage of two of the larger video streaming platform providers (Alexander Street Press and Kanopy) done at Indiana University Bloomington, a large public university.

Educational Streaming Video and Accessibility

The presentation on "Educational Streaming Video and Accessibility" examined many of the commercial providers (vendors) of educational streaming video who provide offsite video servers and player platforms for higher education and endeavored to list what accessibility features each of these vendor's streaming player platforms contained. While not every vendor was examined, most of the major vendors for educational streaming video and some of the smaller ones were examined. It should be noted that there are also many other vendors that provide only the licensing rights for the library or the university to stream the videos from their own server.

The legal need for video streaming titles to be accessible in higher education stems from two main federal regulations and their revisions and updates, though somewhat indirectly. It should be noted that educational streaming video did not really take off until after 2000, so many of the laws meant to provide equal and fair access to people with disabilities may not specifically mention streaming video. The Rehabilitation Act of 1977 Sections 504 and 508 and the Americans with Disabilities Act of 1990 are two federal laws that affect higher education (there are others that focus more on K-12). Much of the information provided below is summed up from two white papers, and readers are encouraged to visit these sights for a more detailed explanation.

- 3PlayMedia (2015). Sections 508 and 504: Closed captioning and web accessibility requirements. Retrieved from http://info.3playmedia.com/wp-section-508.html

- 3PlayMedia (2016). How ADA impacts online video accessibility. Retrieved from http://info.3playmedia.com/wp-ada.html

Section 504 of the Rehabilitation Act was passed in 1977 "in essence, affording individuals with disabilities the same rights as groups protected by the Civil Rights Act of 1964" (3Play Media, 2015). In 1990, Section 504 extended this to many public-sector organizations, including those entities that receive federal funding. In 1998, Section 508 set the requirements for alternate accessible information technology including video or multimedia projects. This is tied even more closely to requirements for higher education with laws and programs such as The Assistive Technology Act of 1988 (revised in 2004), which "will not provide funding to states unless they guarantee that all programs, including colleges and universities, will comply with Section 508" (3Play Media, 2015).

The Americans with Disabilities Act (ADA) of 1990 (updated in 2008) affects both public and private entities. Title II affects public institutions of higher education, and Title III affects private colleges and universities. The ADA states this about discrimination (Americans With Disabilities Act of 1990, 1990)

Sec. 12132. Discrimination

Subject to the provisions of this subchapter, no qualified individual with a disability shall, by reason of such disability, be excluded from participation in or be denied the benefits of services, programs, or activities of a public entity, or be subjected to discrimination by any such entity.

While ADA doesn't specifically mention video streaming and accessibility, it is typically the law used in lawsuits in which video streaming accessibility is a concern such as the following (3Play Media, 2016):

- 2011, National Federation of the Blind v. Penn State University

- 2012, National Association of the Deaf, et al. v. Netflix

- 2015, National Association of the Deaf, et al. v. MIT/Harvard University (being litigated)

It is important to keep in mind that there are also many state regulations, laws, and organizational requirements that can affect the need for accessible streaming videos at higher educational institutions. Many institutions have adopted varying levels of the Web Content Accessibility Guidelines (2008) as the standard for their institution (https://www.w3.org/WAI/WCAG20/quickref/).

Accessibility Features

For the purpose of this examination of the accessibility of vendors' video streaming platforms, the following features will be examined:

Captions

Captions and subtitles are words that appear as "spoken" on the video's audio track. While sometimes used interchangeably, *as in this examination*, there is a difference. Subtitles are just the dialog, while captions can include words, music cues, and sound effects. Closed captions are captions (or subtitles) that can be turned on or off by the viewer. Open captions, are captions (or subtitles) that are always on, sometime referred to as "burned in." In addition to aiding the hearing-impaired,

captions and subtitles are often used to translate the language of a foreign language video.

Printable Transcripts

As the name describes, these refer to the transcript of the video's audio dialog, sometimes with sound effects and music cues noted, that can be printed by selecting a button. These are often outputted as a PDF file.

Interactive Transcripts

Interactive transcripts are dialog text that is displayed next to the video and follows along by time code as the video plays. Interactive transcripts also allow the user to search the text for words or scroll through the transcript and, by clicking on a word, instantly go to that spot in the video.

Player Keyboard Controls

This feature is more for those with vision disabilities or motor control difficulties affecting the use of a mouse than hearing disabilities. They are used to control the play and pause of the video and, in some cases, fast forward, rewind, or other controls. Many platforms do not have them, or they are very limited requiring the user tab through the entire screen to get to the controls. Some have a more advanced tabbing that only cycles through the video player controls, as is seen from the vendor Films on Demand. The vendor SAGE, did not use tabs but had a very efficient set of keyboard commands using "alt + control + *key*" in which *key* was any number of variable commands.

Audio Description (Descriptive Video)

Audio description or descriptive video allows an extra audio channel or sound track to play at the same time as the traditional audio. This new audio describes what is visually happening on the video apart from the dialog or sound effects. This enables the listener to know, for example, that "red, molten lava is erupting from a volcano and is flowing down its slope." For early learners through grade 12, the Described and Captioned Media Program (DCMP) is freely available. Funded by the U.S. Department of Education and administered by the National Association of the Deaf, it allows the free use of a library of over 4,000 described and captioned education media. It can be found at http://dcmp.org.

Vendor[2]	Captions[3]	Printable Transcripts	Interactive Transcripts[4]	Player Keyboard Controls	Audio Description
Adam Matthews	Yes	Yes	Yes	Yes[5]	
Alexander Street Press	Yes		Yes	Yes[5]	
Ambrose Digital	Yes		Yes		
Biomedia Associates	Yes				Yes
Chip Taylor[9]	Yes				Yes
Digital Campus (Swank)	Yes				
Docuseek2	Yes		Yes		
Film Ideas	Yes				
Films on Demand	Yes	Yes	Yes	Yes[6]	
JoVE	Yes[7]		Yes		
Kanopy	Yes	Yes	Yes	Yes[5]	
New Day	Yes				
Passion River	Yes				
Sage	Yes	Yes	Yes	Yes[7]	

Figure 1. Accessibility features by vendor.[1]

[1] Platforms were tested in October 2016 and may have changed over time.

[2] Other vendors do exist, these were the ones examined.

[3] Very few have 100% titles captioned, but most are working toward it and will caption uncaptioned titles on request.

[4] Some do not have 100% of the titles with interactive transcripts due to older material, or they are very new and pending.

[5] Very basic controls using tab to cycle through.

[6] Advanced controls using tab to cycle through, similar to YouTube but stays focused on the player.

[7] Advanced keyboard controls using "alt + control + key."

[8] All in the future will be captioned.

[9] Currently do not have a player but are working on one and can provide caption files along with video files.

As stated earlier, many vendors will only be able to license the streaming title to run on the library's/university's own servers. If the vendor supplies the streaming files, it is advisable to request the streaming video's caption file if available. If a caption file is not available, ask for an additional streaming file with the captions "burned in" (open captioned). If the library or institution is responsible for digitizing the files, ask for terms that allow the library or institution to make them accessible, such as the ability to create or outsource the creation of captions or request multiple streaming versions if an open captioned version is needed. Remember that most vendors are willing to work with individuals' institutions to provide the product needed.

Sample Licensing Language Example

- Licensee may create additional streaming files with open or closed captions or audio description provided that it does not exist on the streaming file.

- Licensee may create and distribute transcripts.

Conclusion

All vendors seem aware of higher education's need to have streaming videos that are accessible. Most are currently working to ensure all new titles have captions/subtitles, but 100% captioning/subtitling has not been achieved yet by all vendors. There is a willingness of many vendors to caption/subtitle titles by request of the licensing institution, if the title does not yet have them. Encouragingly, some are creating videos with other accessibility features such as interactive transcripts and descriptive audio. One negative thing this examination did reveal was the lack of many platforms to have good (or any) keyboard controls for users with vision disabilities or motor control disabilities that make it difficult to use a mouse to control the player.

References

3Play Media. (2015). Sections 508 and 504: Closed captioning and web accessibility requirements. Retrieved from from http://info.3playmedia.com/wp-section-508.html

3Play Media. (2016). How ADA impacts online video accessiblity. Retrieved from http://info.3playmedia.com/wp-ada.html

Americans With Disabilities Act of 1990, Pub. L. No. 101-336 § 12132, 104 Stat. 328 (1990).

Indiana University Bloomington Libraries' A Year in Review, 2015

Indiana University (IU) is a publicly supported institution. Founded in 1820, Indiana University Bloomington is the flagship campus of IU's eight campuses statewide. Innovatilon, creativity, and academic freedom are hallmarks of our world-class contributions in research and the arts.[1] The Bloomington campus is located in the bucolic region of southern Indiana, with an enrollment of about 49,000 undergraduate and graduate students and over 2,000 tenure, nontenure, and academic professionals. The university serves over 16 academic schools and provides access to over 700 programs.

The library system on the Bloomington campus consists of 22 branch, auxiliary, and departmental libraries plus one storage facility. An additional storage facility is currently under construction. The Herman B. Wells Library serves as the primary and largest library facility on the IUB campus with over 1 million visitors per year.

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[1] Indiana University About Homepage, https://www.indiana.edu/about/index.html

Overview of Departmental Use of Film in Classrooms

Beginning in the mid-1970s through the mid-2000s, VHS cassettes and DVD films from the collection were heavily used primarily by the departments of communication and culture (film studies), English, history, and women's (gender) studies. Over the years, as the medium evolved from VHS to DVD to online streaming, so has word-of-mouth spread to more departments seeking easy solutions to provide students with on-demand access to films.

Over the past 10 years, there have been great strides to not only serve the aforementioned departments but to also meet the demands of providing streaming access to the departments of anthropology, comparative literature, French and Italian, Latin American studies, religious studies, social work, Spanish and Portuguese, and sociology. However, it is often difficult to find required or requested films in foreign languages due to copyright and/or rights holder certification from the various online streaming providers. I believe this will continue to be a problem due to legal issues stemming from foreign countries and their legal laws governing audiovisual materials.

A Comparative Subject Analysis: Alexander Street Press and Kanopy, 2015

The IUB Libraries currently subscribe to five major online streaming platforms. They are Alexander Street Press, Docuseek2, Kanopy, Films on Demand Academic, and Swank Motion Pictures. Figure 1 outlines the primary provider, number of titles in each collection, title hits, and patron usage of those resources. I chose to provide a comparative subject analysis between Alexander Street Press and Kanopy because they provided the largest number of accessible films in their collections and can be a contributing factor as to why these two platforms received the largest numbers of hits.

Media librarians and professionals still grapple with what exactly constitutes a hit, that is the amount of time a film is viewed, "just browsing," or subject search terms only. I can't say with certainty if there will ever be a consensus among platform providers, but for this article, I constitute a hit as a patron who clicked on a film title either for one second or for one hour.

Alexander Street Press (ASP) Overview

Alexander Street Press is a multidisciplinary online streaming database with various licensing and purchasing models. It contains predominately documentaries, audio files, and text documents. As the site boasts, "the collection contains over 60,000 video titles and is strong in the fields of counseling, anthropology, history, diversity studies, theater, film, music, dance, news, current affairs, and the social sciences." [2]

As this article is about the IUB Libraries, I am providing statistics related to the Herman B. Wells Library. The IUB Libraries subscribe to 36 of 60 available collections. The Wells Library participates in collaborative, consortium price models. All ASP collections are licensed in perpetuity for the life of the film, and of the 47 subjects made available to IUB patrons, only 27 of the 47 subjects received 100 or more hits. The top 20 ASP subjects viewed in 2015 included world music, classical music, black studies, anthropology, American music, health policy, dance, theater, newsreels, American history, counseling and therapy, world history, criminal justice and safety, film studies, sports medicine, American civil war, art and architecture, black history, politics and current affairs, and LGBT studies.

It is clear from this chart that the top five ASP streaming collections are used primarily by faculty and students enrolled in music (opera), ethnic studies, and anthropology.
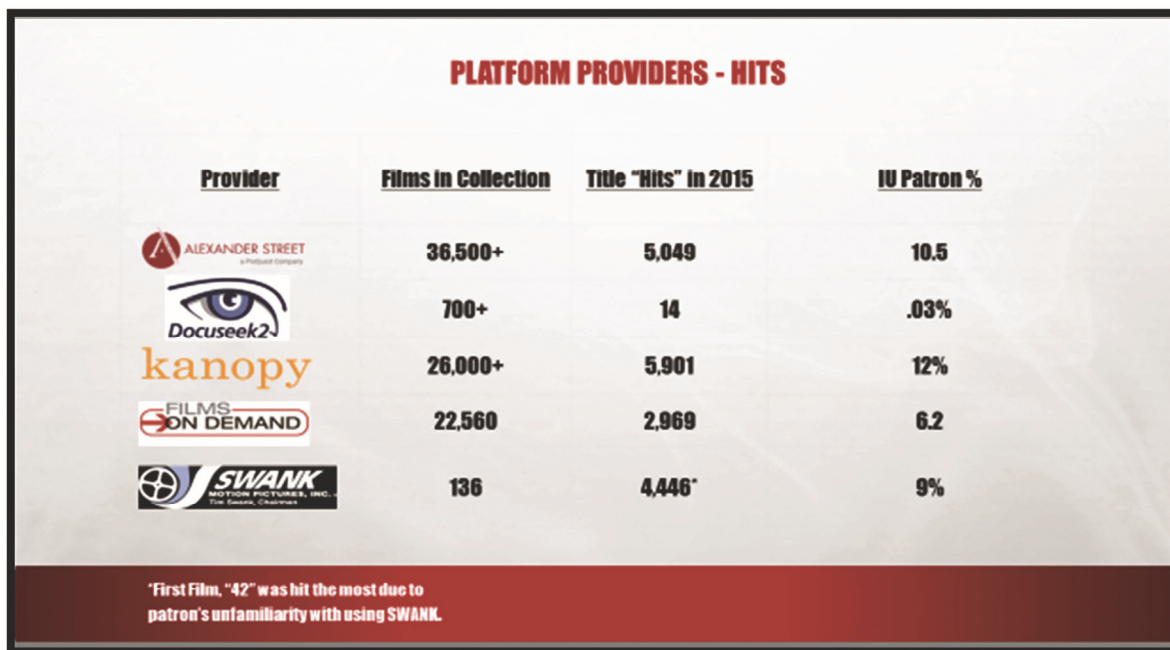

Figure 1. Online streaming platform providers.

[2] http://alexanderstreet.com/page/about-us

World Music (4,325)	Classical Music (3,459)	Black Studies (803)	Anthropology (720)	American Music (648)
Health Policy (466)	Dance (452)	Theatre (361)	Newsreels (342)	American History (324)
Counseling & Therapy (226)	World History (203)	Criminal Justice & Safety (193)	Film Studies (169)	Sports Medicine (159)
American Civil War (136)	Art & Architecture (119)	Black History (111)	Politics & Current Affairs (80)	LGBT Studies (73)

Figure 2. Top 20 ASP subjects searched and hits received.

Buzzworthy (1,946)	Drama (1,129)	African American History (634)	TV Documentaries (457)	Sexual Assault (661)
Gender Rep in Media (593)	International Women's Day (426)	Arts Education (229)	Women's Studies (397)	Japanese Cinema (305)
1950s (374)	International Cinema (361)	Indie Favorites (349)	1980s (334)	Iberian Cinema (218)
Men's Studies (247)	African American Rep in Media (166)	Beauty (209)	Violence (201)	Female Director (174)

Figure 3. Top 20 Kanopy subjects searched and hits received.

Kanopy Overview

Kanopy is also a multidisciplinary online streaming database with various licensing and purchasing options. Kanopy is "proud to stream more than 26,000 films to over 3,000 higher education campuses worldwide, reaching millions of students around the globe. Their reach is now to extend to public libraries across the world."[3] Kanopy provides access to primarily English and foreign language feature films, some feature shorts, and documentaries. It is popular among media librarians for its film studies collection, such as the Criterion Collection and gender studies-related films, which are heavily supplied by Media Education Foundation. Again, as this is a comparative study done for the IUB campus, I subscribe to Kanopy's patron-driven acquisition (PDA) model, which costs this librarian approximately 2 cents per film per year. Of the approximate 576 subjects available, only 40 of the subjects received 100 or more hits. The top 20 Kanopy subjects viewed in 2015 included buzzworthy (popular), drama, African American history, TV documentaries, sexual assault, gender representation in media, international women's day, arts education, women's studies, Japanese cinema, 1950s, international cinema, indie

favorites, 1980s, Iberian cinema, men's studies, African American representation in media, beauty, violence, and female director.

It should be noted that both online streaming databases contain some overlap and cross-references within subject areas. Therefore, the number of hits might be slightly exaggerated and are counted twice, or thrice in some categories. For instance, American music is part of the larger world music, and sexual assault can be cross-referenced with gender representation in media, women's, and men's studies.

Even though the two streaming platforms may not use the Library of Congress subject headings, there are subject search similarities between the two providers. Whenever I receive a request for a particular subject area, I always point patrons to other online streaming databases for supplemental viewings and exploration of search terms. For instance, if a patron needs to watch the film "Breathless" by Jean-Luc Godard (available via Kanopy), then I might also recommend that the patron watch the "Marcel Ophuls and Jean-Luc Godard" interview (available via ASP).

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[3] https://www.kanopystreaming.com/about-us

Predicting Online Streaming Use in 2016

As I was researching subject search analysis for 2015, I could not help but question if subject search terms had changed much during the 2016 spring semester. I was a little surprised to learn that the answer was no, not really. As Figure 4 suggests, the ASP database is still being heavily used for music with a sprinkle of ethnographic and PBS titles.

The same can be said about the Kanopy database with a strong emphasis on buzzworthy (popular) films, and women's and ethnic studies.
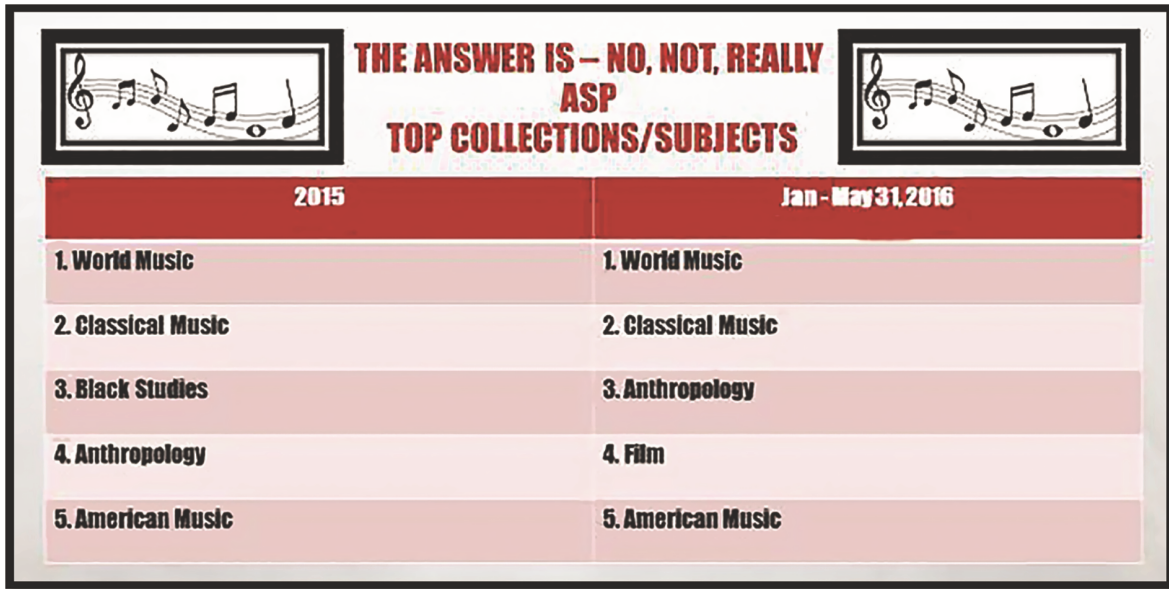
THE ANSWER IS – NO, NOT, REALLY
ASP
TOP COLLECTIONS/SUBJECTS

2015	Jan – May 31, 2016
1. World Music	1. World Music
2. Classical Music	2. Classical Music
3. Black Studies	3. Anthropology
4. Anthropology	4. Film
5. American Music	5. American Music

Figure 4. ASP usage from 2015-2016.

KANOPY
TOP COLLECTIONS/SUBJECTS

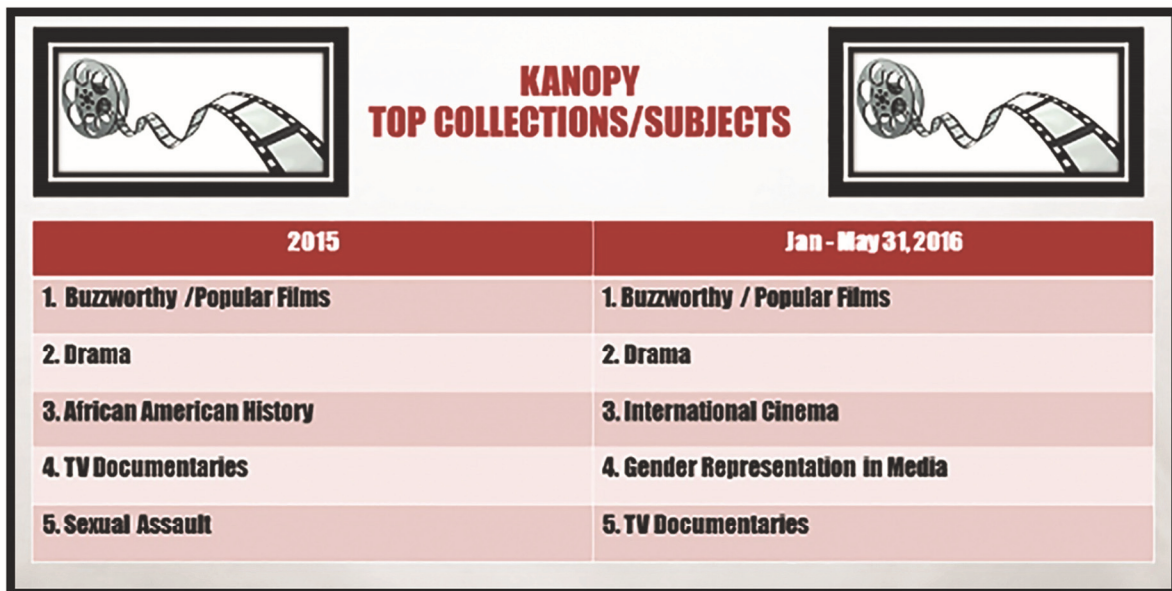| 2015	Jan – May 31, 2016
1. Buzzworthy /Popular Films	1. Buzzworthy / Popular Films
2. Drama	2. Drama
3. African American History	3. International Cinema
4. TV Documentaries	4. Gender Representation in Media
5. Sexual Assault	5. TV Documentaries

Figure 5. Kanopy usage from 2015-2016.

Conclusion

In conclusion, there are some take-away observations how online streaming access plays an integral role in everyday use. The data suggests that subject use is consistent for both ASP and Kanopy databases. Based on the number of hits, it is clear these films are being used and assigned by instructors but not necessarily being viewed in one sitting. Statistics also revealed that although the Jacobs School of Music faculty and students do not physically use media services located in the Wells Library, they are, however, accessing online films in greater numbers than expected.

In 2015, I received over 1,000 requests to provide streaming access to students. That number was significantly reduced to just 320 requests during spring 2016. I believe this is due to outreach initiatives provided to faculty via workshops, LibGuides, and constant e-mail reminders about the available resources media services provides to its patrons.

On a less positive note, I still maintain that providing access to streaming titles is a costly venture. Streaming may reduce or minimize space shelf, but with most online streaming providers, you often pay an annual access fee, which can add up to thousands of dollars over time. Not every institution is equipped to afford streaming access due to a flat-lined or decreased budget. Another pitfall that I have encountered is that, unfortunately, only 1 in 4 requested titles are commercially available in a streaming format.

Still, on a brighter note, Figure 6 is a final comparative study from Figure 1 that shows patron increase use from 2015 to 2016 for the all but one platform provider. I expect to see an even greater number of use after the fall 2016 semester. The opportunity to provide access to online streaming continues to be a valuable resource tool for both teaching, research, and learning.

Finally, my recommendation is to weigh the pros and cons of subscribing to streaming titles and work with your collection development officer. All streaming providers provide free access to trials, and this will help gather feedback and data from teaching faculty to decide if the product is worth the return investment. Your faculty and students will thank you for it.

PLATFORM PROVIDERS – COMPARATIVE HITS

Provider	Films in Collection	Title "Hits" 2015	Title "Hits" 2016*	IU Patron % 2015	IU Patron % 2016
ALEXANDER STREET a ProQuest Company	36,500+	5,049	7,518	10.5	15.7%
Docuseek2	700+	14	187	.03%	0.4%
kanopy	26,000+	5,901	6,559	12%	13.7%
FILMS ON DEMAND	22,560	2,969	2,585	6.2	5.4%
SWANK MOTION PICTURES, INC. Tim Swank, Chairman	136	4,446	6,648	9%	13.8%

*Jan 1 – May 31, 2016

Figure 6. Comparative hits results, 2015-2016.