

Streamed video in an academic library: expectations, challenges and response

David Wells
Manager, Resources
Curtin University Library
d.wells@curtin.edu.au

Diana Blackwood
Faculty Librarian, Health Sciences
Curtin University Library
d.blackwood@curtin.edu.au

Abstract

Streamed video is the latest type of content to gain the attention of educators and librarians. This paper examines the take up of this new resource type at Curtin University Library with particular attention to the use of individual streamed titles on the Kanopy platform. It includes reflections on the academic areas which are so far most engaged with streamed video materials, on the particular complexities they present for acquisitions departments, and on usage statistics for the first year of effective operation.

Introduction

Curtin University is committed to providing a student-centred learning environment and encourages teaching areas to provide flexible learning opportunities that will meet the needs of the University's large and diverse student population. The Centre for eLearning has been established to provide pedagogical and practical support to individual staff, Schools and Faculties to consider how they can progressively increase student engagement in the online environment.

Streaming video is the latest type of content, after ejournals and ebooks, to emerge as a popular medium and to gain the attention of educators and librarians. Streamed video can be used to replicate a lecture, or to demonstrate a process or practice, and can be played to all learners at the same time (synchronously) or viewed asynchronously, on demand, and can be accessed 24/7.

The literature presents many examples of successful uptake and use of streaming video in a variety of academic settings (Strom 2002; Shephard 2003; Mullins-Dove 2006; Engilman et al. 2007; Franklin et al. 2007; Hahm et al. 2007; Ranaldo et al. 2007). However, to date there has been less written about the acquisition and management of streaming video collections (Eng & Hernandez 2006; Handman 2010; Schroeder & Williamsen 2011). This medium poses particular challenges in an acquisitions context in terms of licensing and delivery.

As early as 2006, academics at Curtin University started requesting streamed video content (Blackwood 2009). Their reasons for using this content in addition to traditional learning materials, were to provide opportunities for deeper learning (Mitra et al. 2010), to deliver visual materials simultaneously, to increase the accuracy in assessment skills, and to translate abstract concepts into everyday work contexts.

There was an expectation that the Library would take up the challenge of providing this content, and be responsible for the payment of licensing fees and the administration of licence agreements, as is currently done for electronic journals, databases and ebooks.

Options and Choices since 2006

Initial requests from academics were for streamed versions of videos and DVDs in the Library's audiovisual collection that they had previously used to support their teaching. The Library negotiated streaming rights for some of these titles and made streamed versions available through the University's iLecture system. The greatest early interest came from the Faculty of Health Sciences and in particular from the Schools of Physiotherapy, Psychology, Social Work and Nursing & Midwifery. This interest was as much about the advantages of online availability (for students off campus and on clinical placement) as about the usefulness of video as a medium in the Health Sciences area. Online videos are extremely useful in demonstrating techniques such as handling stroke patients and taking blood pressure, in helping students with their observational and assessment skills with real patients in clinics, and in translating abstract concepts through illustration with everyday examples – all skills central to health education. That streamed video as a medium has proved popular with students is indicated by qualitative feedback received about a set of in-house material produced by the School of Physiotherapy. Comments include: 'The videos were amazing!!!', 'I thought these were a great idea and were utilised by most

students I have spoken to', 'The Elbow and Wrist/Forearm videos really helped with learning of the hand placements for PAMs (Passive Accessory Movements)'

As the volume of requests increased and the negotiation of suppliers' streaming rights started to become time-consuming for acquisitions staff, the Library engaged Kanopy, one of our major video suppliers, to take over this task on our behalf. One particular focus in this context was to obtain rights for titles in the audiovisual collection that had already demonstrated high use.

Purchase of individual streamed video titles was supplemented by the acquisition of several online video packages in areas of core interest. In 2009, the Library purchased Informit Media's *TV News*, the first major collection of online video content to become available in Australia. This database provided access to Australian Television news and current affairs programs as well as TV documentaries. There was an enthusiastic response from academics regarding the availability of current Australian material that they had often first viewed in their home environment and then wanted to pass on to their students.

Alexander Street Press was founded in 2000 with the goal of publishing large-scale digital collections in the area of humanities and social sciences. The first of these acquired by the Library was *Ethnographic Video Online* in 2010, and this was soon followed by the purchase of several other Alexander Street Press titles, as well as collections from other publishers. These included *Psyche Visual* and *WAS Visual* from Audio Visual Archives, and *Videatives*, covering the fields of psychological and sexual health, and children's thinking and learning.

The acquisition of these packages has proved very popular among Curtin students and academics. Use of the Alexander Street Press collections, for example, has shown exponential growth from 2010 to 2011, with the number of pages accessed in *Counseling & Therapy in Video* increasing from 404 to 4184 and *Ethnographic Video Online* growing from 617 to 3823. Nevertheless, the areas that had shown the greatest initial interest in streamed video, schools within the Faculty of Health Sciences, were not well served by them. Health was not a major focus for Alexander Street Press and the providers of occupational health and safety material that we were able to identify did not provide practical hosting options. Consequently, academics were still requesting individual programs and titles.

By 2009, Kanopy, in addition to providing streaming files for individual institutional use, had begun to conduct extensive research into streamed video licensing and delivery, having received considerable numbers of requests from universities for this type of content. In 2010, they developed their own remotely hosted platform and catalogue of videos for which they had negotiated streaming rights. This platform was launched to Curtin clients at the beginning of February 2011. Kanopy-hosted material was immediately adopted by several academics in Health Sciences, and also taken up extensively in the field of art.

Kanopy Streamed Video – Who is Using it and Why?

As at September 2011, we have 124 active streamed video licences, though of course not all of these were available immediately, but have built up since the original implementation. Content has continued to be concentrated mainly in the areas of art, and of nursing and allied health, though there is also some material in business related areas and in other areas of the humanities and social sciences. So

far, no material has been purchased in the field of science and engineering, partly because of a lack of interest from the Faculty, and partly because comparatively little relevant streamed video material is currently available. In general the focus has been primarily on providing high-use content and on material required for academic units with large numbers of external students who do not have easy access to physical DVDs available in the library.

Art	75
Other Humanities and Social Sciences	21
Health Sciences	18
Business	10

Table 1. Breakdown of streamed video by broad subject area

While we have not gathered extensive qualitative feedback from students on their use of Kanopy material, several academics who are enthusiastic supporters of the Library's online video collection have provided comments on their experiences and those of their students.

Karen Rickman, who teaches an online Art unit for Open Universities Australia (OUA), has been instrumental in recommending a number of streamed videos not only for her own unit but also for other lecturers and tutors in Curtin University's OUA Art and Department of Design & Art. Most of the streamed videos for this course have been purchased from Kanopy and are available from the Kanopy platform. In some cases, when the required video is no longer in circulation (out of print), the Library has streamed its existing copy through the Curtin iLecture system. All streamed videos are listed in Curtin Library's e-Reserve system and because OUA Art students are directed to e-Reserve for their required readings, exposure to the video links available there is ensured.

Rickman has stated that the streamed videos provided by the Library are an invaluable resource for her students, not only because of the visual nature of the course but also because the Library supplies only online resources to OUA students. She has also commented that although there are other art videos and interviews freely available on the internet, they do not provide the same range and depth of scholarly information as the carefully selected streamed videos, particularly in terms of art history and Indigenous Australian art.

Videos have been promoted to students by placing a link to the appropriate weekly video in Blackboard along with a discussion question that needs to be explored by students. This approach of providing context to online videos is discussed by Mitra et al. (2010) who explains that unless the relevance and purpose of the video material is explained to students, engagement with the material may not be as effective.

For her unit *Art in the Age of Revolution 1750-1850*, Rickman has found that students appreciate the visual aspect of the videos and the way in which they contextualise the period. Other students have found the videos useful as a means of artist research and this in turn has influenced their art practice.

Rosalie Thackrah from the School of Nursing & Midwifery embedded three online videos in Blackboard for a large core curriculum unit *Imagining Health in Social and Cultural Contexts*. Of the three online videos, two were watched in class and one the students watched themselves. Concepts from all the videos were discussed in class as a way of providing context. In Semester 1, there was no assessment in relation to watching the videos. However, in Semester 2 the academic, who was not convinced that the students were watching the whole of the videos by their responses to discussions in class, revised her approach. She informed the students that there would be an in-class test on one of the videos but did not tell the students which one it would be. The usage statistics for one of these titles on the Kanopy platform, *Birth Rites* was high in Semester 1 but the average viewing time was relatively low. After the assessment in Semester 2, the viewing time noticeably increased (see Tables 11 and 12).

Leah Irving, who is an instructional designer for the Faculty of Health Sciences, was instrumental in requesting a number of videos to support the teaching of interprofessional education in the Health Sciences curriculum. The videos she selected were amongst the first to be made available on the Kanopy platform. She has commented that, for the most part Kanopy is a really useful application and from the instructional design point of view, is easier to use than videos streamed through the University's iLecture system. She also comments that the Library taking care of copyright issues means fewer complications for academic staff.

Irving reports that a few glitches have been experienced by students who had trouble accessing video content. There has also been some anecdotal feedback from a few students saying they found the videos easy to access. The variety of response on this issue may reflect different computing capability among the student group.

Courtenay Harris is the unit co-ordinator of another large core curriculum unit *Foundations of Professional Health Practice* and has used two Kanopy videos in her unit, which have been heavily used. The videos are shown in class to support concepts and are also used by external students at home. They are not assessed, but do provide content for the unit, which is then assessed. The videos are linked in Blackboard from the Library's Catalogue and e-Reserve records. Students have commented that they find the visual nature of the video assists their understanding of the concepts being explored and Harris feels that they reinforce student learning. Technical problems have been experienced on occasion – these include being unable to show the video in full screen and the audio being too quiet.

Technical Services Issues

Whenever libraries adopt new types of materials into their collections, it is inevitable that existing acquisitions and cataloguing practices and workflows need to be reviewed. Streamed video packages like *Theater in Video* could be accommodated fairly easily by existing structures, as they could be treated in the same way as licensed ejournal or ebook packages, either as one-off purchases or as subscriptions, with catalogue records supplied by the vendor. The handling of individual streamed video titles as supplied by Kanopy, however, entails further complexities both with the realignment of library budgets and the development of appropriate acquisition and renewal mechanisms (Handman 2010; Schroeder & Williamsen 2011).

From Curtin's perspective the central challenge has been that while from the point of view of academics and students the streamed video material is equivalent to physical DVD purchases, Kanopy licences for this material are only available as one or three year subscriptions. This represents a potentially significant increase to the Library's recurrent expenditure. It was to manage the ongoing cost commitment that the principle was established of restricting streamed video to high-use content and to material required for academic units with large numbers of external students. Streamed video is seen as 'reserve' material and promoted specifically to defined groups of users. For similar budgetary reasons we elected for a standard licence term of one year rather than three.

When we initially implemented Kanopy, pricing comprised a licence fee, plus an additional charge based on the number of times a streamed video title was viewed. If the viewing limit had not been reached when the licence fee was due for renewal, remaining views were carried forward to the next licence period. This introduced a considerable element of uncertainty into the budget required to maintain subscriptions, as we have as yet no experience from which to estimate future usage. Fortunately, however, Kanopy have subsequently been able to remove the usage-based charge, relying now solely on a fixed subscription price.

The Library allocated a maximum annual sum for the purchase of Kanopy licences. To date this sum has not been reached, and purchasing has been largely restricted to a small number of academic fields. Streamed video is still a new service. As more areas become engaged, it may be necessary to find strategies to limit its use in order to remain within budget. This is an issue for which we do not yet have a satisfactory resolution.

From an internal management point of view, we have treated individual streamed videos as 'monographs'. They are discrete items, processed and catalogued by the Library's Monographs Team. However, because of the licensing arrangement with Kanopy, the streamed video has several aspects of 'seriality'. For example, individual titles are given 'standing order' type order records, allowing the budget commitment to be rolled over from one year to a next, and the budget used for purchase is defined as a 'serial' budget to ensure that ongoing commitment is monitored appropriately.

Most particularly, the Kanopy streamed videos are subject to a renewal process, which in this respect makes them much more like journals than like books. This renewal process is at present complicated by the fact that because of the gradual way in which Kanopy has been implemented the subscription expiry dates are scattered throughout the year. To minimise the effects of this on the renewal workload we plan to renew titles probably in two groups per year regardless of their actual expiry dates, in February and July. Given budgeting constraints, very close attention will be paid to usage statistics at renewal time, and underperforming titles will be rejected.

Kanopy Streamed Video – Statistical Analysis

At the end of September 2011, the Kanopy streaming service has been effectively available for eight months, and it is possible to gain a view of the extent to which it has effectively been taken up by Curtin clients and how it is being used. It should be noted that these are very preliminary statistics, as use of streamed video was perhaps not yet fully embedded in teaching and learning practice at all stages of the

year, and the number of titles available has increased during the survey period. The data does nevertheless allow some preliminary conclusions to be drawn. All statistics are derived from data available through the Kanopy administrative interface or 'Dashboard'.

Table 2 shows overall usage for the seven-month period 1 February to 30 September 2011.



Table 2. Number of video plays by month

This graph suggests a slow though not dramatic increase in usage for the first four months since implementation, with a marked increase in the rate of usage from July onwards. This suggests that by the second half of the year Kanopy material has been integrated effectively into relevant academic programs. The slight dip in usage in June and July corresponds to the university's mid-year break. We would anticipate that usage will continue to increase for the remainder of 2011 and into 2012.

Table 3 shows the top ten videostreams by number of times played for the whole of the survey period February to September 2011.

It is notable that although art material represents the largest number of streamed video titles available to Curtin clients, it is health videos that are receiving the highest number of views. This reflects not only the greater number of students enrolled in the relevant health units, but also the different ways in which videos are used in the two disciplines, with a small number of health units requiring all students to view a small set of core material, while art students have a broader viewing discretion across a wider range of videos. It is also notable that while usage of the most heavily used titles is quite high, the number of very highly used videos is small and usage tapers off very quickly into a 'long tail'.

Video	Total Minutes Viewed	Total Plays	Average View Time (mins)	Length of Video (mins)	Average Percent Viewed	Discipline
Carole Laurin: Reflections on Interprofessional Care	7,697.81	380	20.26	52.90	38.30	Health
Birth Rites	4,803.37	187	25.69	52.07	49.34	Health
How the Australian Health System Works	3,199.18	175	18.28	23.65	77.29	Health
Selling Sickness	3,212.91	125	25.70	52.23	49.21	Health
Student Experiences in Interprofessional Education	1,051.68	105	10.02	12.13	82.61	Health
Art Lives: William Hogarth	1,612.68	73	22.09	50.40	43.83	Art
David and Turner	1,081.31	53	20.40	47.20	43.22	Art
Twice Five Plus the Wings of a Bird	1,312.01	51	25.73	49.90	51.56	Humanities
The Art of Francis Bacon	1,226.67	47	26.10	53.00	49.25	Art
Straight Talking	325.90	39	8.36	25.98	32.18	Business

Table 3. Top ten streamed video titles by number of times played, Feb-Sept 2011

While table 3 presents one perspective on usage, it should be noted that the most frequently used streamed video title was viewed on average for only 38.3% of its length. Table 4 presents an alternative hierarchy of use based on the average percentage viewed.

Video	Total Minutes Viewed	Total Plays	Average View Time (mins)	Length of Video (mins)	Average Percent Viewed	Discipline
The Multiplication of Styles 1700–1900	23.12	1	23.12	25.88	89.34	Art
Student Experiences in Interprofessional Education	1,051.68	105	10.02	12.13	82.61	Health

How the Australian Health System Works	3,199.18	175	18.28	23.65	77.29	Health
Turner At Tate	790.69	20	39.53	58.43	67.65	Art
theEYE: Dryden Goodwin	273.81	15	18.25	27.15	67.22	Art
Up In The Sky: Tracey Moffatt in New York City	196.01	12	16.33	26.43	61.79	Art
Art Lives: Jackson Pollock	556.90	18	30.94	50.98	60.69	Art
The Nude in Art with Tim Marlow: The Enlightenment	336.56	24	14.02	23.32	60.12	Art
Art Lives: Vivienne Westwood	1,025.90	34	30.17	50.27	60.02	Art
theEYE - Tracey Emin	154.89	10	15.49	26.48	58.50	Art

Table 4. Top ten streamed video titles by average percentage viewed, Feb-Sept 2011

This table again suggests a difference in the way streamed video is used in different disciplines. Art titles now dominate over those in the area of health. Thus, while individual art titles are used by fewer students than the health titles, the implication is that they are studied rather more closely.

Table 5 summarises the overall viewing data for the period February to September 2011.

N =	124
Total minutes viewed	42,336.98
Total plays	2,247
Average time viewed	12.31 mins
Average length of video	47.74 mins
Average percentage viewed	29.25%

Table 5. Summary of data, Feb-Sept 2011

The average time an individual streamed video title was viewed was just under twelve and a half minutes, or 29.25% of the total. This figure is lower than we might have hoped, but probably reflects an initial slowness among the relevant unit co-ordinators to embed the Kanopy material effectively within their teaching programs. As we will see below, this view is corroborated by comparison of first and second semester usage statistics.

Examination of the full year to date statistics also allows us to draw other conclusions about patterns of student behaviour. On the data available, as shown in

Table 6, most usage occurs towards the beginning of the week, and although streamed video was partly intended to address the needs of students unable to study according to traditional teaching timetables, weekend use is nevertheless notably lower than that during the week.

A similar point can be made from an examination of the usage breakdown by hour of the day, shown in Table 7. Usage increases rapidly from around 8 o'clock in the morning until noon and then gradually tapers off in the afternoon and evening, with very little use during the night. This suggests that so far there has been little take up of the streamed video service by Curtin students outside the Perth time zone, and parallels the statistics that have been observed over a long period of time for Curtin's library catalogue. It will be interesting to see if this pattern is sustained into the future, as it may have implications for the planning of programs for non-traditional students.

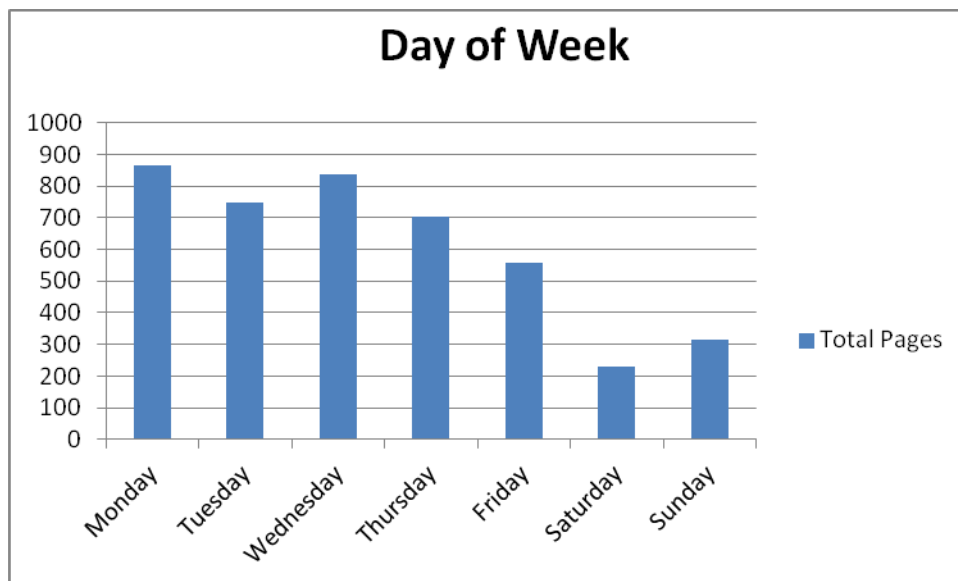


Table 6. Streamed video usage by day of the week

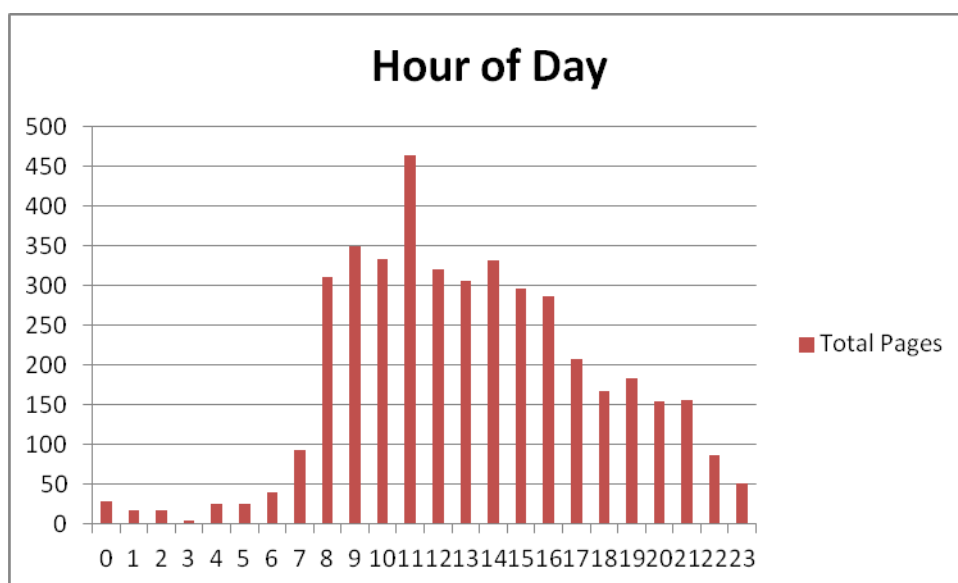


Table 7. Streamed video usage by hour of the day

Statistics are also available on the number of searches done using different web-browsers. Internet Explorer has provided by far the largest number of hits, with Firefox a distant second. The evidence would suggest that so far at least there has been little or no take up using mobile devices.

An idea of the way in which student use of Kanopy material has developed since initial implementation can be gained by comparing usage patterns from first and second semester 2011. For this exercise, data has been extracted for the first ten weeks of each semester, covering the periods 28 February-8 May (Semester 1) and 18 July-25 September (Semester 2). As at September 2011 the second teaching semester at Curtin was still in progress, so a comprehensive comparison of the two semesters has not been possible. However, the ten-week survey period examined does provide a useful figure for comparative analysis. Table 8 shows the weekly usage breakdown for the two semesters.

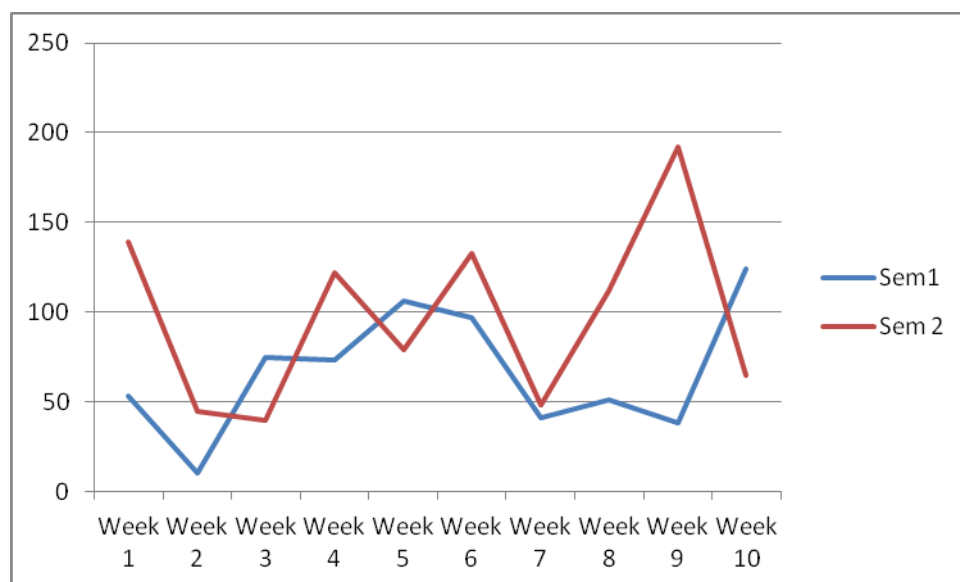


Table 8. Comparison of Semester 1 and Semester 2 usage

While the peaks and troughs of usage vary considerably across the two semesters, the overall higher figures for Semester 2 show the increased 'embeddedness' of the Kanopy material that has already been suggested. While the figures are not conclusive, the graph also appears to show that usage in general gradually increased towards the end of each semester, possibly as assessment dates grew nearer. The different peaks and troughs for the two periods are also likely to be associated with different assessment dates.

Comparison of the summary data for each of the two periods, as presented in Tables 9 and 10, shows a more distinct contrast.

N =	93
Total minutes viewed	10,468.92
Total plays	668
Average time viewed	7.30 mins
Average length of video	46.85 mins
Average percentage viewed	18.87 %

Table 9. Semester 1 summary

N =	94
Total minutes viewed	21,664.03
Total plays	975
Average time viewed	19.87 mins
Average length of video	45.33 mins
Average percentage viewed	48.27 %

Table 10. Semester 2 summary

The number of individual titles viewed in the two periods is virtually identical: 93 and 94. However, the total number of plays has increased by 46% from 668 to 975, and the total number of minutes viewed has increased by 107% from 10,469 to 21,664. Correspondingly, the average length of time each title was viewed has increased by 172% from 7.3 minutes to 19.87 minutes and the average percentage viewed has grown by 155% from 18.87 to 48.27. These figures indicate a considerably greater intensity of use during second semester, reinforcing the idea that the streamed video material has become increasingly important for the learning experience of those students who are engaged with it.

These conclusions are borne out by a comparison of the most popular titles for each of the two survey periods. The top ten by number of plays are shown in Tables 11 and 12.

Video	Total Minutes Viewed	Total Plays	Average View Time (mins)	Length of Video (mins)	Average Percent Viewed	Discipline
Carole Laurin: Reflections on Interprofessional Care	2,337.69	115	20.33	52.90	38.43	Health
Birth Rites	2,093.20	82	25.53	52.07	49.03	Health
How the Australian Health System Works	1,715.40	74	23.18	23.65	98.01	Health

Student Experiences in Interprofessional Education	485.99	35	13.89	12.13	114.51	Health
David and Turner	335.78	18	18.65	47.20	39.51	Art
Constable At Tate	522.45	16	32.65	56.08	58.22	Art
Art Lives: William Hogarth	259.13	14	18.51	50.40	36.73	Art
theEYE - Rachel Whiteread	153.69	14	10.98	26.12	42.04	Art
Straight Talking	100.37	13	7.72	25.98	29.72	Business
The Nude in Art with Tim Marlow: The Enlightenment	126.56	12	10.55	23.32	45.24	Art

Table 11. Semester 1 – Top 10 by number of plays

Video	Total Minutes Viewed	Total Plays	Average View Time (mins)	Length of Video (mins)	Average Percent Viewed	Discipline
Carole Laurin: Reflections on Interprofessional Care	5,005.21	236	21.21	52.90	40.09	Health
Selling Sickness	3,150.00	120	26.25	52.23	50.26	Health
How the Australian Health System Works	1,433.61	90	15.93	23.65	67.36	Health
Birth Rites	1,502.54	46	32.66	52.07	62.72	Health
Student Experiences in Interprofessional Education	277.16	32	8.66	12.13	71.39	Health
Monet and Manet	507.03	27	18.78	47.82	39.27	Art
The Art of Francis Bacon	724.43	25	28.98	53.00	54.68	Art
Highlights of the New Tate Modern	858.24	23	37.31	80.03	46.62	Art
Bauhaus: The Face of the 20th Century	346.15	21	16.48	49.32	33.41	Art
Art Lives: William Hogarth	384.69	18	21.37	50.40	42.40	Art

Table 12. Semester 2 – Top 10 by number of plays

While the titles that appear in the top ten for each period are the same or similar, with significantly greater numbers for health titles than for art, the absolute figures are rather higher for the second period.

Tables 13 and 14 show the top ten titles for each period by average percentage viewed. Note that this figure may be greater than a hundred. This indicates that within a single session at least one viewer watched parts of the videostream more than once. The average percentage viewed is higher for Semester 2 than Semester 1, suggesting higher intensity of use. In the figures for top ten by number of views, it is titles in the area of health that achieve the highest scores in both survey periods. When intensity of use is considered, on the other hand, while health has the highest scores in Semester 1, in Semester 2 the highest scores go to art titles. In Semester 2, the number of plays for the most intensely used titles is notably lower than in Semester 1. More data would be needed before drawing definite conclusions from this phenomenon, but it may be indicative of a variation in the pedagogical use being made of different video material. Such distinctions are crucial to the analysis of learning styles (Conole et al. 2008), and this is clearly an area where further research would be productive.

Video	Total Minutes Viewed	Total Plays	Average View Time (mins)	Length of Video (mins)	Average Percent Viewed	Discipline
Student Experiences in Interprofessional Education	485.99	35	13.89	12.13	114.51	Health
How the Australian Health System Works	1715.40	74	23.18	23.65	98.01	Health
A Dying Shame	46.75	1	46.75	53.03	88.16	Health
theEYE - Antony Gormley	20.12	1	20.12	26.17	76.88	Art
Turner At Tate	455.06	11	41.37	58.43	70.80	Art
Art Lives: Rene Magritte	171.58	5	34.32	50.23	68.33	Art
Night Cries	32.86	3	10.95	18.32	59.77	Soc. Sci.
Constable At Tate	522.45	16	32.65	56.08	58.22	Art
Birth Rites	2093.20	82	25.53	52.07	49.03	Health
The Nude in Art with Tim Marlow: The Enlightenment	126.56	12	10.55	23.32	45.24	Art

Table 13. Semester 1 – Top 10 by average percentage viewed

Video	Total Minutes Viewed	Total Plays	Average View Time (mins)	Length of Video (mins)	Average Percent Viewed	Discipline
theEYE - Sam Taylor-Wood	42.77	1	42.77	31.63	135.22	Art
The Nude in Art with Tim Marlow: The Classical	48.64	2	24.32	23.30	104.38	Art
theEYE - Anish Kapoor	89.47	3	29.82	29.13	102.37	Art
Leonardo and Michelangelo	142.53	3	47.51	46.95	101.19	Art
Interprofessional Education and Collaboration in Primary Care	9.07	1	9.07	9.08	99.89	Health
Art Lives: Paul Cezanne	111.26	2	55.63	55.77	99.75	Art
Development of Self-Feeding in the Normal Child	21.27	1	21.27	21.53	98.79	Health
theEYE - Tony Cragg	25.67	1	25.67	26.20	97.98	Art
Smallest Room in the House	28.49	1	28.49	29.32	97.17	Health
Up In The Sky: Tracey Moffatt in New York City	127.88	5	25.58	26.43	96.78	Health

Table 14. Semester 2 – Top 10 by average percentage viewed.

Reflection

There is no doubt that the integration of online video content into the Library's collection has been a popular move, and the statistical data suggests that usage will continue to grow both for packaged and individually purchased content, as more units come to embed streamed video into their course materials.

The acquisition of individual streamed video titles in particular presents certain budgetary and administrative challenges, which require adjustments to technical services and collection development practices. The main challenge, as with other media, lies in finding the correct balance between expenditure and value. Regular review of statistics is more than ever a necessary step at the time of licence renewal.

Both academics and students have occasionally reported problems with viewing videos and with video quality. As one of our intentions is to provide 24/7 online access to videos in order partly to cater for offshore and distance education

students, the Library has possibly not done enough to test access issues and image quality particularly at some of our remote sites.

We have so far given little attention to promoting the advanced features of our streamed video database collections such as the ability creating clips and playlists, and this is something that needs to be investigated further through Faculty promotional activities and lectures. We would also like to encourage the integration of the Library's subscribed online video content into Blackboard although we recognise that publicly available sources of video such as YouTube are also heavily used by academics.

One promotional tool that has been developed is a video streaming LibGuide, which can be accessed at <http://libguides.library.curtin.edu.au/content.php?pid=176410>. This lists the streamed video collections held at Curtin, includes a short interactive tutorial on how to access them through the Catalogue, provides links to useful websites for finding online videos and comments on the copyright implications of linking to these. It also notes advanced features of some video streaming collections such as clip-making tools and playlists. The Libguide has only recently completed and so it is difficult to gauge its impact but direct promotion to Faculty through emails and presentations as well as reporting in Faculty meetings has also been effective.

Streamed video is clearly a product that will continue to develop into the future. The Library's ongoing task is to ensure that our subscribed video content is promoted effectively to all areas of the University while closely monitoring return on investment.

Bibliography

Blackwood, D 2009, 'Video Streaming: the current "state of play in an academic setting'. Paper presented at the *ALIA Information Online 15th Conference & Exhibition*, Sydney NSW.

Conole, G, de Laat, M, Dillon, T & Darby, J 2008, "Disruptive technologies", "pedagogical innovation": What's new? Findings from an in-depth study of students' use and perception of technology', *Computers & Education*, vol. 50, no. 2, pp. 511-24.

Eng, S & Hernandez, FA 2006, 'Managing streaming video: A new role for technical services', *Library Collections, Acquisitions, and Technical Services*, vol. 30, no. 3-4, pp. 214-23.

Engilman, WD, Cox, TH, Bednar, ED & Proffit, WR 2007, 'Equipping orthodontic residency programs for interactive distance learning', *American Journal of Orthodontics and Dentofacial Orthopedics*, vol. 131, no. 5, pp. 651-5.

Franklin, JB, Gary, SM, Anthony, JR, Lisa, L & et al. 2007, 'The Impact of Video Streaming on Mathematics Performance', *Communication Education*, vol. 56, no. 2, p. 134.

Hahm, JS, Lee, HL, Kim, SI, Shimizu, S, Choi, HS, Ko, Y, Lee, KG, Kim, TE, Yun, JW, Park, YJ, Nakashima, N & Okamura, K 2007, 'A remote educational system in medicine using digital video', *Hepato-Gastroenterology*, vol. 54, no. 74, pp. 373-6.

Handman, G 2010, 'License to Look: Evolving models for library video acquisition and access', *Library Trends*, vol. 58, no. 3, p. 324.

Mitra, B, Lewin-Jones, J, Barrett, H & Williamson, S 2010, 'The use of video to enable deep learning', *Research in Post-Compulsory Education*, vol. 15, no. 4, pp. 405-14.

Mullins-Dove, TG 2006, 'Streaming video and distance education', *Distance Learning*, vol. 3, no. 4, p. 63.

Ranaldo, N, Rapuano, S, Riccio, M & Zoino, F 2007, 'Remote control and video capturing of electronic instrumentation for distance learning', *IEEE Transactions on Instrumentation and Measurement*, vol. 56, no. 4, pp. 1419-28.

Schroeder, R & Williamsen, J 2011, 'Streaming video: The collaborative convergence of technical services, collection development, and information

technology in the academic library', *Collection Management*, vol. 36, no. 2, pp. 89-106.

Shephard, K 2003, 'Questioning, promoting and evaluating the use of streaming video to support student learning', *British Journal of Educational Technology*, vol. 34, no. 3, pp. 295-308.

Strom, J 2002, 'Streaming video: Overcoming barriers for teaching and learning', in *International Symposium on Educational Conferencing Banff, Canada*.