Article delivery using ReadCube Access: a report on use in five US libraries

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Abstract

Purpose – This paper aims to update information on ReadCube Access and briefly reviews its history. The study also reports on the use of ReadCube Access by five US academic libraries.

Design/methodology/approach – A series of questions was distributed to selected academic libraries using ReadCube Access. Survey recipients were asked to describe the library and the institution served, how long ReadCube Access has been in use, how many journals from Nature Publishing Group (NPG) were licensed and how many journals were being provided using ReadCube Access. Participating libraries were also asked to provide information about the purchase options offered to end-users, were asked to report on ReadCube Access usage and were requested to compare that usage to interlibrary loan (ILL) requests for NPG journals. Finally, the libraries were asked to share any comments about ReadCube Access they wished, including end user feedback and comments from library staff.

Findings – ReadCube Access is shown to be cost-effective and more heavily used than interlibrary loan. End-users are enthused by the instantaneous delivery of articles, and most libraries are generally pleased with the sustainability of this unmediated service. Some end-users are confused and annoyed by the differences in using ReadCube Access compared with the familiar use of subscriptions. A failing of ReadCube Access is that it only offers content from one publisher.

Originality/value – This paper fulfils an identified need for an update on ReadCube Access and a study on the experiences of various libraries using it.

Keywords New technology, Electronic document delivery, University libraries, Patron-driven acquisitions, ReadCube Access, Unmediated document supply

Paper type Case study

Introduction

ReadCube[1] is a content-delivery platform of software and services that includes desktop[2], Android[3] and iOS[4] applications for personal bibliographic management, the ReadCube Web Reader, ReadCube Access and other products.

ReadCube was developed by scientists at Harvard University starting in 2007 and was launched by Labtiva in 2011. The goal of ReadCube's developers was to create software to make research more efficient and make the world of researchers more connected. ReadCube is now a Digital Science product and owned by the Holtzbrinck Publishing Group.

The ReadCube bibliographic management client offers researchers next-generation reference management and incorporates an enhanced PDF viewer. The client allows the end-users to discover, locate and download PDF content, using ReadCube to organize the content into libraries. ReadCube supports full-text searching across the user's PDF libraries, and it allows researchers to synchronize their libraries between multiple devices. The client also recommends similar articles to the researcher and is very efficient at locating content. As a viewer, the ReadCube client enhances native PDF: the researcher can create notes and store them within the article, text can be highlighted, references are hyperlinked, figures can be browsed independently and any associated supplemental materials can be downloaded and stored with the document. ReadCube also offers a Web browser plugin that will send articles from a Web browser directly into the client applications.

The ReadCube Web Reader has essentially the same viewer features, but it is integrated into publishers' Web sites. Links to the Reader are found within the article display pages of participating publishers. Numerous publishers now offer their content through the ReadCube Web Reader, including Nature Publishing Group (NPG), Palgrave, Wiley, Canada's

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NRC Research Press, Annual Reviews, De Gruyter, and Springer, but not yet Elsevier.

The ReadCube desktop client, the mobile apps and the Web Reader are all freely available, but ReadCube offers users the option to upgrade to ReadCube Pro for $5 per month or $50 per year. ReadCube Pro gives researchers access to unlimited cloud storage and allows them to more easily synchronize their library across all devices. Advanced article metrics are also included with ReadCube Pro that provide information on where an article is mentioned on the Internet, how many times it has been cited in other academic articles and data on when the article was the most popular.

Starting in 2012, NPG, the University of Utah and ReadCube cooperated on the development of ReadCube Access. ReadCube Access is a patron-driven acquisition system for articles that works with the ReadCube client and the ReadCube Web Reader. ReadCube Access was designed to help libraries supplement existing subscriptions and offer researchers unmediated, instantaneous access to scholarly literature at a cost lower than or competitive with interlibrary loan services. Although the focus of this article is the use of ReadCube Access service within libraries, ReadCube Access is also being used by publishers like NPG and Wiley to serve individual researchers and commercial organizations who may not have access to an institutional library.

Libraries may use ReadCube Access to subsidize their users' access to NPG journals after establishing a deposit account with ReadCube. Libraries are free to choose which individual NPG journals to subsidize and at what level. Currently, there are over 100 NPG titles available, and as new journals are established, ReadCube adds access to them. ReadCube Access is IP-based, and users can access articles either on-campus, through a virtual private network (VPN) or through a proxy server. ReadCube Access works with a library's link resolver to identify articles available through subscription or via an aggregator and refunds the library's charges when a user selects one of these articles. The service also provides usage statistics and other management reports which can be downloaded in a CSV file.

Researchers affiliated with a ReadCube Access library can rent a digital rights management (DRM)-restricted article for 48 hours ($3.99), purchase cloud access to an article with DRM ($9.99) or download a PDF ($25) that has no usage restrictions. Articles acquired using the rental and cloud options must be read within ReadCube client applications or read online using the Web Reader. Cloud purchases may be printed, but the articles acquired using the rental option may only be viewed and not printed. The unrestricted PDF purchases may be downloaded, saved and used without any constraints.

Sadly for libraries, ReadCube Access is still only offered by the one publisher: NPG, who helped develop it. Other publishers have been asked to participate in offering ReadCube Access services to libraries, but so far none have.

Several articles (England and Jones, 2014; Jones and England, 2014; England and Anderson, 2013; and Weisbrod, 2014) report on the earlier development and piloting of ReadCube Access in libraries. Lancet, (2013),; Fenton (2014) and Hughes (2014)) review ReadCube, the bibliographic management client software. Lancet (2013) also provides a brief review of DeepDyve, a service for individual researchers somewhat similar to ReadCube Access. This article reports on recent experiences using ReadCube Access at five academic libraries in the USA. Examples of ReadCube Access screen displays are presented in Appendix 1. Selected libraries that used ReadCube Access were surveyed, and the survey questions are presented in Appendix 2.

ReadCube Access at the University of Utah Marriott Library

The University of Utah is a large research institution with 31,000 students and 2,000 faculty. It offers 72 undergraduate majors and over 90 graduate programs. The Marriott Library is one of three primary libraries on the University of Utah campus. The University's medical school and law school are served by separate libraries. The Marriott Library has a total budget of about $14,000,000, with a journals' budget of nearly $2,500,000. The Marriott Library subscribes to 79 NPG titles but does not provide access to the full run of all 79 journals.

In the summer of 2012, the Library collaborated with ReadCube and NPG on the development of ReadCube Access, and during the autumn of 2012 and winter of 2013, the first pilot program of ReadCube Access was undertaken. During this first pilot, only 29 journals were offered. Approximately 1,300 faculty, post-doctoral fellows and graduate students in science and mathematics were invited to participate, and the hospital and school of medicine were excluded. The pilot ran for a year using an early version of ReadCube Access that required use of the desktop client to locate and save the article. England and Jones (2014) describe this pilot in detail.

An improved version of ReadCube Access was developed as a result of our experience during that first year of use. This new Web-based version was implemented in October 2013 and is similar to ReadCube Access still used at the Marriott Library today.

During the last fiscal year, July 2014 through June 2015, patrons acquired a total of 1,114 articles using ReadCube Access at a cost to the Marriott Library of $7,966. The average cost per article was $7.15. Fifty-three per cent of the articles were cloud purchases and 47 per cent were rentals. A total of 495 unique patrons used the service. The Marriott Library is currently using ReadCube Access to provide 14 NPG journals and is offering only the rental and cloud purchase option. The unrestricted PDF is not currently offered to patrons as an option.

During the previous fiscal year, 499 articles were acquired by patrons using ReadCube Access at a cost of $4,918. For the Library, the average cost per purchased article during the fiscal year was $9.86. These numbers do not include articles that were already licensed by the Library and were refunded. Also, during a brief trial period in late October and early November, all three purchase options were offered to patrons.

When the unrestricted PDF is offered, people will select the unrestricted PDF version of the article the majority of the time. When the Library made available the unrestricted PDF, usage of the purchase options were:

- 12 per cent rentals;
- 8 per cent cloud purchases; and
- 80 per cent DRM-free, PDF purchases.

During the most recent fiscal year, 18 per cent of the articles used were duplicated purchases. A total of 131 articles were purchased or rented twice, 49 articles were used three times and 22 articles were purchased four or more times. During the previous fiscal year, 9 per cent of the articles were duplicate purchases. A total of 46 articles were used twice, nine were used three times and five articles were used four or more times. In just a handful of instances, the same researcher rented the article more than once or would purchase the cloud option and then change their mind and purchase the PDF version. The Marriott Library has saved many thousands of dollars on expensive subscriptions, so paying more than once for about 16 per cent of the articles is acceptable. It is not unusual for professors and students to look at the same article, or perhaps an entire lab or a work group will view the same article. Duplication of articles also happens with interlibrary loans but likely to a lesser extent. In a study undertaken at the US Environmental Protection Agency Library in Research Triangle Park, North Carolina Webster (2005) reported a 6.1 per cent duplication rate during one 36-day period.

At the Marriott Library, ReadCube Access has given good results. Interlibrary loan staff time is saved. ReadCube Access can handle significant levels of use. It has been shown to be sustainable in the long run, and the Library patrons used it much more extensively than interlibrary loan, showing a preference for unmediated service. Program abuse does not exist. Most notably, the service is very cost effective, saving the Library thousands of dollars per year on subscription costs.

Table 1 shows results for two journals during calendar year 2014. The Marriott Library had multiple subscription requests from faculty for both of these journals shown, but the Library elected to provide access to the journals using ReadCube Access instead of subscribing. Copyright Clearance Center royalties for NPG journal articles acquired through interlibrary loan cost as much as $35.50 per article. However, the Marriott Library was able to secure access to the published content at a substantially lower cost per article. The interlibrary loan costs shown in the table include average expenses per borrowed article associated with staff, equipment, management tools and software as calculated by Leon and Kress (2012).

The primary complaint of Library staff associated with ReadCube Access is that the service is available from only one publisher.

Patron feedback about ReadCube Access is mixed. Sometimes unjustified complaints are made by patrons who are unaware how ReadCube Access works, who do not know how printing is accomplished or do not know they can again access a cloud purchased article. Even some staff are forgetful that the Library was using the service to provide access to some NPG journals and have to refer or seek help when answering questions by confused patrons.

An article-on-demand service is less convenient and efficient than a subscription, and most patron complaints usually have centered on this issue. When the Library does not offer an unrestricted PDF purchase option, a few people get upset and complain about restrictions on sharing articles, or not being able to save an article PDF to a specific folder they have on their computing device. It is natural for researchers to prefer access to a journal subscription, and of course, researchers will prefer to acquire a DRM-free PDF. However, people generally understand the concept of not always being able to afford what they want to have. The Marriott Library has found that it may be counterproductive to speak with patrons in terms of efficiencies or cost-effectiveness. When the Library talks about efficiencies, the patron sometimes hears that "the Library may be saving money but it is costing me my time". Library staff sometimes need to explain to individuals that pay-per-view services are a compromise that the Library must undertake to substitute for a subscription to maximize campus access to information within the available budget. Library staff try to help people understand that article delivery systems like ReadCube Access are maximizing the content they have ready access to, and that sometimes the access we can afford to provide is not as convenient as providing a subscription.

ReadCube Access is less convenient than a subscription, but it is obvious from both patron feedback and the observed level of use that most people find the service to be more convenient than using ILL. Users like the immediacy of ReadCube Access and many also find it to be more convenient than file sharing.

ReadCube Access at the University of Utah Eccles Health Sciences Library

The Spencer S. Eccles Health Sciences Library (EHSL) at the University of Utah serves the Schools of Medicine and Dentistry; the Colleges of Nursing, Pharmacy and Health; and the University's hospitals and clinics. The Library has primary responsibility for supporting the research and curriculum needs of 3,000 students and 1,700 faculty members at the University of Utah as well as 3,000 clinicians who staff four University hospitals, ten community clinics and several specialty centers. The Library has an annual collection budget of about $1,700,000.

Budget constraints prevented the EHSL from subscribing to several new NPG journals, but a one-time cash gift from a library donor was earmarked to fund a year-long experiment in providing articles from unsubscribed NPG content using ReadCube Access. In all, ReadCube Access was used to provide content from 28 NPG titles from February 2014 to February 2015. All ReadCube Access journals were offered to patrons at the Rent, Cloud and PDF purchase level. Prior

Table I Example of two journals showing ReadCube Access cost savings during the 2014 calendar year

Journal title	Subscription cost	Articles purchased using ReadCube Access	ReadCube Access cost	Approximate equivalent ILL cost
Nature Communications	$5,921	668	$5,305	$23,572
Nature Climate Change	$5,237	36	$252	$1,136

to beginning this pilot program, EHSL had active subscriptions to only 22 Nature journals.

Concurrent with the ReadCube Access trial, the EHSL was managing another article delivery pilot program using the Copyright Clearance Center's Get It Now Service[5]. Implementation and use of Get It now has been discussed in the literature by (Suhr, 2013; Smith and New, 2012; and Nazar and Bowen, 2014). The Get It Now service consisted of rapid email delivery of article PDFs from a defined set of journal titles selected by the EHSL. The Library's Get It Now trial launched in October 2012 with access to 24 journal titles from seven publishers. In October 2013, the trial was expanded to include access to 58 journals from nine different publishers. By October 2014, the Get It Now article delivery service was available for 61 journals from 11 publishers, but not the NPG titles available using ReadCube Access.

The year before the ReadCube Access trial took place, a total of 79 interlibrary loan requests were filled for patrons from the 28 NPG titles later activated in trial. And while the ReadCube Access trial was underway in 2014, patrons submitted interlibrary loan requests for 47 articles from the same set of NPG titles. This use of ILL during the trial year suggests that both patrons and ILL staff who fulfilled the requests, encountered at least occasional difficulty in accessing or remembering to use ReadCube Access.

During the trial, EHSL patrons used ReadCube Access to obtain 624 articles from the 28 NPG journals. While not an exact comparison, it is instructive to note that the Library's other article delivery service, Get It Now, filled a total 301 individual article requests from patrons during a year's timeframe.

The EHSL has noted two major differences in the implementation, use and growth of ReadCube Access and Get It Now at our institution. The first difference is rooted in the levels of discoverability between the tools. The ability to have the Library purchase patrons' NPG articles using ReadCube Access is prominently displayed on the publisher's Web site. So patrons are highly likely to be alerted to this option when attempting to download an article that is included in the Library's ReadCube portfolio. Also, it is immaterial what path the user took to reach that site; she or he could be linking out from a PubMed abstract or following up on a search result from Google Scholar. Once reaching the publisher's site, the patron's attempt to download the article triggers the access options provided by the library. While it is true that patrons need to be within their institutional IP range or connected to the network via Virtual Private Network (VPN) or proxy server to enable a ReadCube Access purchase, these restrictions also apply to all other licensed resources, so patrons can be expected to have some familiarity with and to regularly use the authentication procedures at their institution.

In contrast, Get It Now is largely hidden from patrons. The ability to have an individual article emailed to a patron was only discoverable after the patron had conducted an article-level search using the Library's link resolver tool. The search results in the EHSL discovery systems clearly indicated how to order the article using the Get It Now service and guided the user through the process. But if the patron was searching in another database such as PubMed, or was using another discovery strategy, such as browsing a journal title or following a DOI link, they would not be notified that there was the Get It Now delivery option available. This limitation was imposed, not by Get It Now, but as a result of the library's OpenURL configuration. In December 2015, EHSL migrated to a new system, ExLibris's Alma platform and was able to make Get It Now content findable by patrons using additional criteria, including journal title. This enhanced discoverability has resulted in a 350 per cent increase in use of the Get It Now service since January 2015.

ReadCube Access has a discoverability advantage, but Get It Now has a major advantage in available content. As of July 2015, Get It Now is able to provide access to articles from over 9,000 scholarly journal titles from 125 different publishers. ReadCube Access is limited to only the NPG suite of titles. In comparison, DeepDyve offers about 3,000 journals; however, its strongest areas are medicine and life science and it has significant limitations in coverage (Brynko, 2013).

The EHSL received mixed reviews from patrons about ReadCube Access. Most of the patron enthusiasm stemmed from the expanded access to unsubscribed Nature journals and the speed with which patrons could retrieve an article compared to submitting an ILL request. Another frequently repeated favorable comment had to do with the convenience of accessing and downloading article references and supporting data within the ReadCube Web Reader.

Some patrons had unfavorable privacy concerns: they objected to the need for a personal account to acquire articles using ReadCube Access and had fears about an individual's purchases being tracked. However, the ReadCube Access administrative data are secured and are no different than ILL record keeping which equate the patron's name with a specific article request.

Library staff also had feedback revealing patron confusion about the display of the ReadCube Access purchase options. Some people were unhappy to encounter what looked like a paywall screen when trying to retrieve an article. The staff spent considerable time guiding some patrons through the steps involved in obtaining a ReadCube Access PDF, and often had to reassure patrons that the rental or purchase fee would be paid by the Library not by the user.

Some patrons were also confused over the appearance of the ReadCube Web Reader icon on NPG titles that were not included in the Library's ReadCube Access trial: a similar ReadCube logo would appear in both kinds of journals. One icon or button simply opened a Web Reader, sometimes leading to subscribed content and sometimes leading to a real pay wall, another button with a slightly different appearance would open the Web Reader and show the ReadCube Access purchasing options.

ReadCube Access at Auburn University

Auburn University is a public institution located in Auburn, Alabama, with major research programs in science and technology. Auburn has 20,000 undergraduates, 5,000 graduate students, 1,200 faculty and professional schools in Pharmacy and Veterinary Medicine. Auburn University Libraries (AUL) is an ARL library with a serials budget of over $7,000,000.

AUL have used ReadCube Access since late March 2014. The Libraries subscribe to 24 Nature Publishing Group

journals, and offer access through ReadCube Access to 89 NPG journals to which the Libraries do not subscribe. All journals are offered only at the rental and cloud purchase levels. The unrestricted PDF option is not offered to patrons.

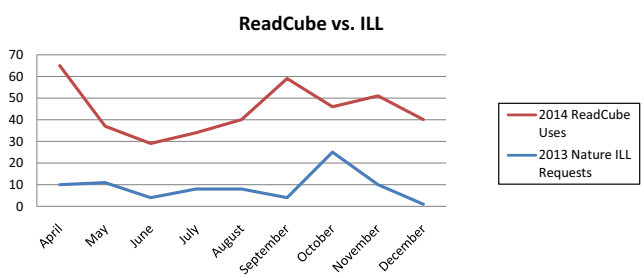
ReadCube Access appears to work well for Auburn's users, although occasionally users still request NPG articles through interlibrary loan. Document Delivery no longer fills ILL requests for NPG articles; in these cases, staff ask subject librarians to contact users with information about ReadCube Access. Librarians find that the recent ILL requests are almost always generated because users do not realize that articles can be purchased for them by the Libraries using ReadCube Access. Unless users access articles from within the institution's IP range, authenticate through the proxy server or use a VPN, they do not see the ReadCube Access icon or activate the Libraries' options.

The Libraries surveyed end-users several months after implementing ReadCube Access. At that time, users complained that they had problems printing, some objected to having to log in to access articles and several disliked reading articles in the ReadCube client or in the ReadCube Web Reader rather than saving articles to their own citation manager. Not surprisingly, rights-restricted articles purchased using ReadCube Access compare unfavorably with a downloaded PDF from a subscribed journal. However, users did appreciate immediate access to articles, and several indicated that they liked the ReadCube reader's features. In the year since the survey was given, ReadCube has fixed the printing problems and librarians receive fewer complaints about ReadCube Access.

From April through December 2014, a total of 174 unique patrons used ReadCube Access to acquire 401 articles at a cost of $3,034 and an average cost of $7.57 per article. In total, 40 per cent of the purchases were rentals and 60 per cent were cloud purchases. During the same period in 2013, users made 81 ILL requests for NPG journals at a cost of $2,805 in copyright charges with an average cost of $34.62 per article. Comparing ReadCube and ILL, ReadCube usage was almost five times that of ILL requests (Figure 1). Although the number of articles acquired using ReadCube Access was nearly five times higher, the total overall cost of the ReadCube Access articles was only slightly more than total cost of the fewer interlibrary loans.

From January through June 2015, similar use numbers for ReadCube were posted. During this time, 168 users acquired 320 articles at a cost of $2,357, with 56 per cent being cloud purchases and 44 per cent rentals. The average cost per article was $7.37.

Figure 1 2014 ReadCube usage compared to 2013 ILL requests



Despite being unmediated, individual users have not abused the service. During the period AUL has used ReadCube (March 2014-June 2015), only 14 users have acquired ten or more articles; 88 per cent of users have acquired five or fewer articles. One user, however, has purchased 61 articles.

AUL finds ReadCube Access to be a good product, as it is both cost-effective and provides more convenient access than ILL. Although users would undoubtedly prefer an unrestricted PDF download, ReadCube Access makes financial sense for the Auburn University Libraries.

ReadCube Access at the University of Kentucky

The University of Kentucky is the largest land grant public university in Kentucky with over 29,000 students. The University of Kentucky offers 93 undergraduate programs, 99 masters programs, 66 different doctoral degrees and also has professional programs in medicine, law and pharmacy. Additionally, the University has an active agricultural extension program which covers over 100 Kentucky counties. The Libraries' annual budget totals approximately $10,000,000.

The University of Kentucky Libraries began a trial of ReadCube Access in January 2014 and started using the service in earnest in March 2014. The Libraries subscribe to 34 NPG titles and have access to another 22 NPG journals via databases. The Libraries currently offer content from 50 NPG journals using ReadCube Access. According to usage statistics provided by NPG, these 50 titles have the highest number of unsuccessful article access requests. Only the rental and cloud purchase options of ReadCube Access are offered by the Libraries at the University of Kentucky. From March 2014 to June 2015, 602 different users acquired 1,245 articles using ReadCube Access.

Interlibrary loan statistics for NPG journals at the Main Campus show little or no change in ILL requests between 2013 when ReadCube was not an option and 2014 when it was available. However, the Medical Center interlibrary loan statistics show a substantial change in the number of requests between the two years. The Medical Center ILL staff promoted ReadCube Access and helped patrons understand the process of obtaining the articles.

Overall, the University of Kentucky reports having a mixed experience with ReadCube Access. The service has been enthusiastically received by parts of the campus and has provided many articles not otherwise available except through ILL. However, some user confusion is also a problem in Kentucky. Some researchers are puzzled by the appearance of the ReadCube icon within articles at NPG websites and within journals by other publishers offering the ReadCube Web Reader, so explaining what the Libraries can and cannot cover using ReadCube Access has been an occasional issue. Readers are also confused by the apparent charge for some NPG journals and not others. Librarians at the University of Kentucky were sometimes contacted by users asking if they were permitted to use the ReadCube Access service after seeing the two purchase options the Library offered. End users are not seeing the purchase options on the subscribed journals and became confused. A small portion of Medical Center users reported problems trying to print from the cloud version of the article they accessed, which is part of the service.

At the University of Kentucky, acquisitions staff also identified a considerable number of problematic purchases. ReadCube Access charges were occurring for articles the Libraries had licensed under a subscription or database. The Libraries signed up for the ReadCube Access service with an understanding that there would be some glitches, often due to trying to match the articles accurately; however, the number identified seemed high. ReadCube and the Libraries' Electronic Resources Unit and Information Technology Department are attempting to resolve this issue, and ReadCube has stood behind its commitment to refund money when the Libraries are improperly charged for an article already under license. After reviewing the statistics on the ReadCube Access usage, the University of Kentucky opted to reduce the number of journals available through the ReadCube Access service, offering through the service only those titles for which there is no other option for accessing articles but interlibrary loan.

ReadCube Access at Claremont Colleges Library, Claremont, California

The Claremont Colleges Library is a single library that serves a consortium of seven separate academic institutions: five liberal arts colleges and two graduate institutions. The undergraduate colleges are Pomona College, Scripps College, Claremont McKenna College, Harvey Mudd College and Pitzer College. The graduate institutions are Claremont Graduate University and the Keck Graduate Institute. The combined student population of the consortium is around 7,700, including undergraduate-, masters- and doctoral-level students. A wide range of subjects are presented to students, including arts and humanities, social sciences, sciences, engineering and mathematics. The Claremont Colleges Library's materials budget is approximately $5,100,000.

The Library subscribes to just 17 NPG journals. ReadCube Access has been used to provide 39 additional titles since February 2014. Researchers at the Claremont Colleges have all three ReadCube Access purchase options available to them:

- articles can be rented;
- unrestricted PDF's can be purchased; or
- articles can be purchased with DRM and be available for cloud access..

During 2013, the calendar year prior to the introduction of ReadCube Access, the Library's interlibrary loan staff filled 149 requests for NPG journal articles. A total of 134 articles were acquired by patrons using ReadCube Access during the first year of its use. Of this total, 40 articles were rented (30 per cent). There were 84 unrestricted PDF articles purchased (63 per cent) but only 10 cloud PDF's were selected (7 per cent). During the first half of the present calendar year, from January through June 2015, 146 articles have been acquired by patrons using ReadCube Access. Seventeen cloud purchases (11 per cent), 109 DRM-free PDF's purchases (75 per cent) and 20 rentals (14 per cent) were completed. After the introduction of ReadCube Access and from February 2014 through January 2015, the Library filled 81 interlibrary loan requests for NPG journals. During the first half of the present calendar year, from January through June 2015, 59 articles have been acquired by patrons using ILL.

The Claremont Colleges Library has not received any complaints from patrons regarding ReadCube Access. The service runs smoothly, and the Library considers ReadCube Access to be both efficient and cost-effective. Patrons like and use the service, and many end users prefer to use the ReadCube Web Reader to view articles in subscribed journals as well.

Conclusion

ReadCube Access was developed in collaboration with libraries and publishers to improve access to scholarly literature. This article has reported on the initial use of the product in several US academic libraries.

The trials show the service to be cost-effective, fairly efficient and sustainable, especially for higher-cost journals with somewhat low demand. A major failing of ReadCube Access is its content limitations, as it only works with one publisher: NPG.

As a relatively new service, and possibly as unfamiliar software, ReadCube Access, the ReadCube Web Reader and ReadCube client applications will create some confusion with readers. Some libraries and end-users have struggled a little while learning how the software and services are used. The significance of this concern has varied in the five libraries involved in this case study.

Depending on which ReadCube Access purchase options a library chooses to offer patrons, the service can be seen by the end user as less convenient than a subscription. And when DRM-restricted articles are placed before the end user, objections will follow. These protestations should be seen as opportunities to discuss how libraries are experimenting with different ways to open pay walls and optimize researcher efficiencies when also dealing with budgets.

Article on demand services, like ReadCube Access, are not just about cost effectiveness or savings. ReadCube Access improves access to NPG journals, is more efficient and legitimate than file sharing and is more immediate and efficient than interlibrary loan. Libraries should not underestimate the value that researchers place on time and efficiency.

Notes

1 ReadCube for researchers. Available at: www.readcube.com/

2 ReadCube desktop. Available at: www.readcube.com/

3 ReadCube for Android. Available at: https://play.google.com/store/apps/details?id=com.readcube.mobile

4 ReadCube for iOS. Available at: https://itunes.apple.com/us/app/readcube/id864042981?ls=1&mt=8

5 Copyright Clearance Center Get It Now. Available at: www.copyright.com/academia/get-it-now/

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Appendix 1. ReadCube Access screen captures

If a library patron wants this article from Nature Communications, they first locate the article at the NPG website. If the library is providing the journal via ReadCube Access, the service's panel will appear on the publisher's webpage. They can click on this panel or click the PDF button above the abstract heading.

The first page of the article is displayed, and all other pages of the article are blurred. The patron can read the entire first page. If they scroll to the second page or wait a few seconds, then the library's acquisition options are displayed in the left margin. The library can control which options are made available. In this case, two options are available for this journal. The article can be rented for 48 hours. This option does not allow printing or downloading. The article is only available to the patron's ReadCube account for 48 hours and then disappears. The Cloud Purchase option allows download only to ReadCube client application software, but the article is perpetually saved to my ReadCube account in the cloud. The article can also be printed.

Clicking on any of the options, and clicking on "Checkout" prompts to create a ReadCube account or to login to an existing account. Once logged in, the article is made available to the user. The entire process takes just a few seconds.

ReadCube Access has an administrative backend (not pictured) that provides collection management tools and statistics.

Here is an example of ReadCube Access use by Wiley Online Library to serve individual researchers unaffiliated with any academic library. Wiley is only offering ReadCube Access services to individuals, and they do not offer the service to libraries. Note that the prices and article restrictions for this Wiley journal are different than those currently offered by NPG.

Appendix 2. Survey questions

1. Please provide a very brief description of your institution/library, including size (e.g. FTE student count, materials budget), general academic focus of the library/institution, and any other information that would allow readers to get a sense of your library.
2. How long has your institution used ReadCube Access or how long did you use it?
3. How many Nature journals does your library subscribe to?
4. How many Nature journals are/were accessed through ReadCube at your library?
5. What tiers (rent, cloud, PDF) does/did your library offer to users?
6. Please compare ReadCube Access usage to ILL requests for Nature journals. Please report ReadCube usage by month, as well as ILL requests by month for year prior to implementation of ReadCube Access.
7. Please share any comments about ReadCube you wish. The comments can be from document delivery staff, library staff, or users. For example, do your users find it easy to use? What problems have liaisons encountered with faculty in regard to ReadCube? Does your staff find it easy to administer? Does your institution find ReadCube to be cost-effective? What complaints have been registered?

Thank you very much for providing information about your institution's experience with ReadCube Access.

Figure A1

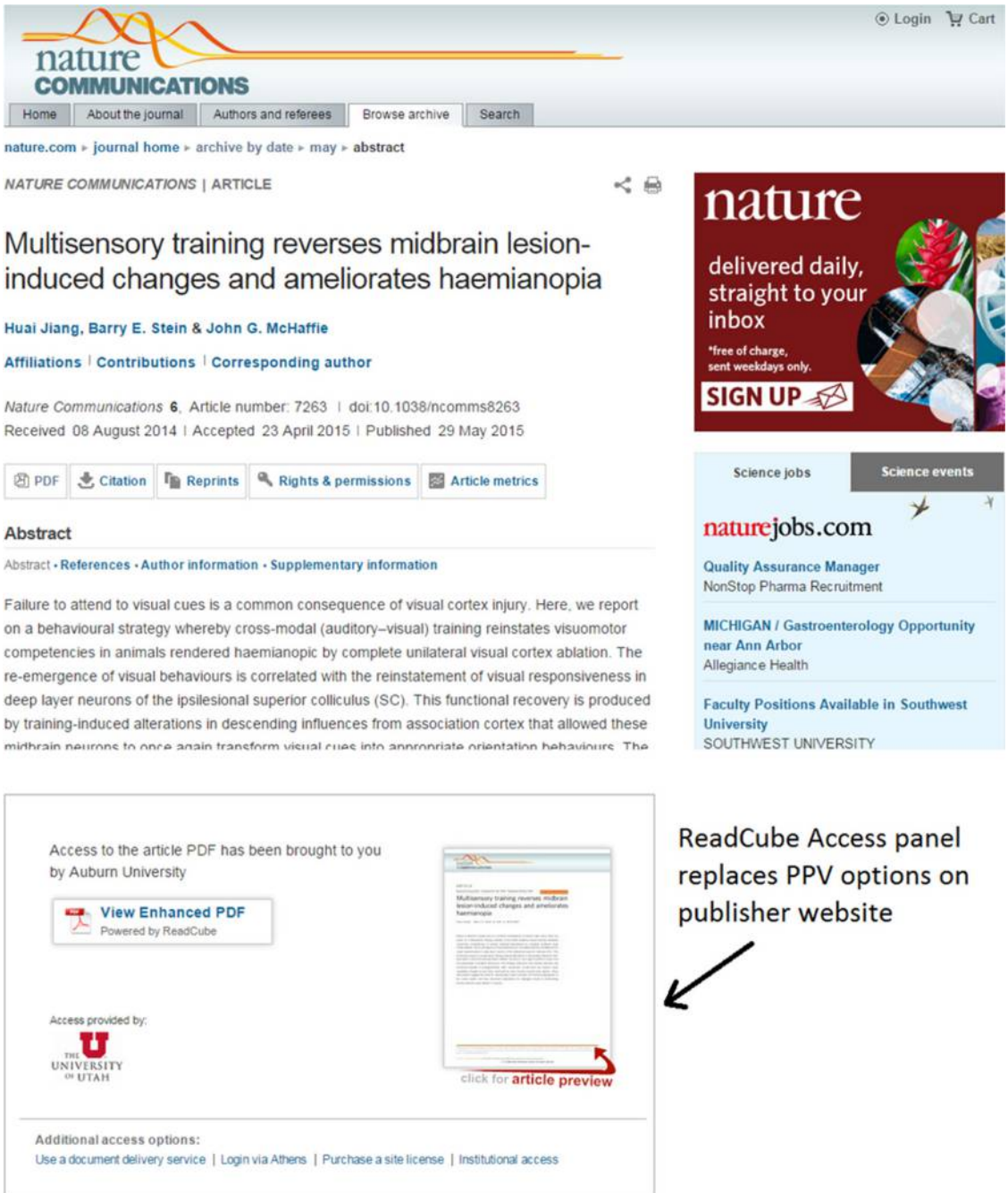
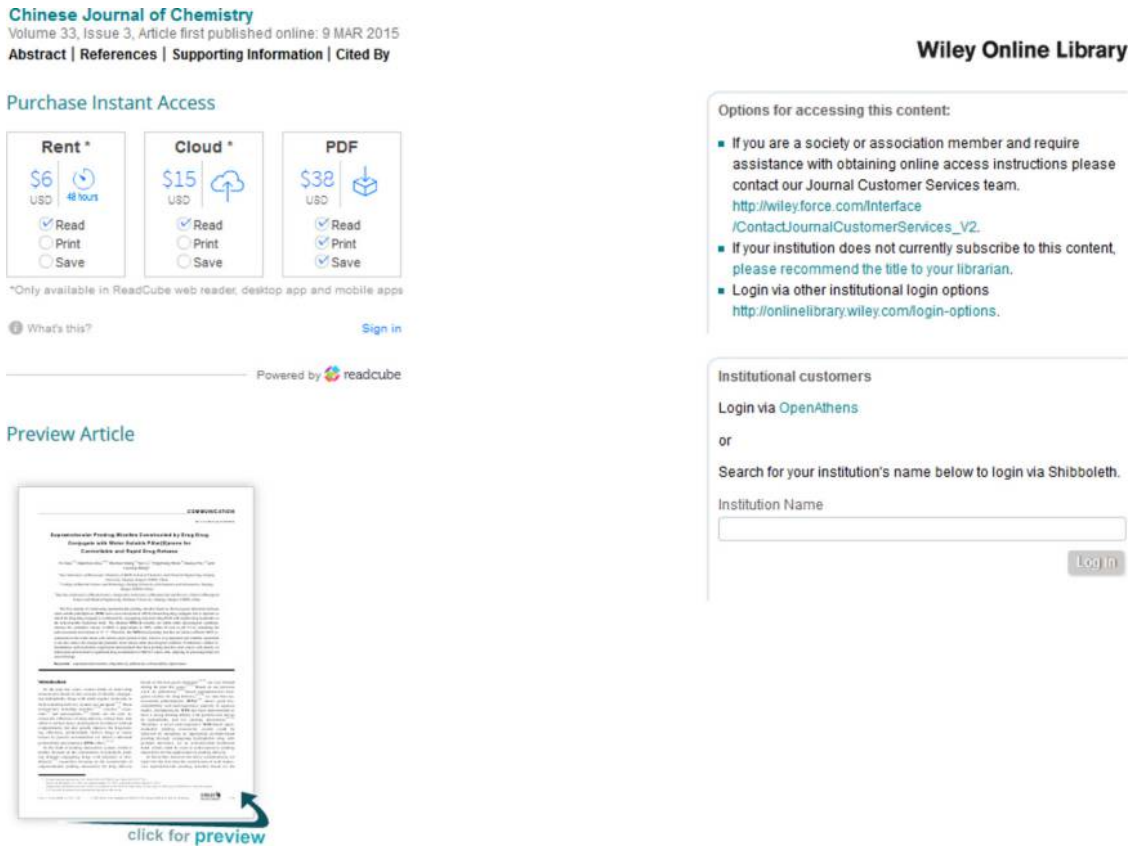


Figure A2

Figure A3

Figure A4



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