100 Stories: The Impact of Open Access

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“The idea for this paper came out of discussions with my esteemed colleagues at the inaugural conference of the Global Open Scholarship Initiative, sponsored by UNESCO and the Alfred P. Sloan Foundation, and held on the campus of George Mason University in April, 2016. As the facilitator for the “open impacts” working group, I found that we were wrestling with potentially the most critical and challenging topic of any that the open access community had identified. I returned to Berkeley thinking that there was more that bepress could do to help our community take concrete steps forward in demonstrating the positive impacts of open access. I’m excited to share our work and hope to see others build on our framework and create and share their own stories of open access success.”

Jean-Gabriel Bankier, President and CEO, bepress

It is time to reassess how we talk about the impact of open access. Early thought leaders in the field of scholarly communications sparked our collective imagination with a compelling vision for open access: improving global access to knowledge, advancing science, and providing greater access to education. But despite the fact that open access has gained a sizable foothold, discussions about the impact of open access are often still stuck at the level of aspirational or potential benefit. Shouldn’t we be able to gather real examples of positive outcomes to demonstrate the impact of open access? We need to get more concrete.

Measurements like altmetrics and download counts provide useful data about usage, but remain largely indicators of early-level interest rather actual outcomes and benefits. There has been considerable research into how open access affects citation counts, but beyond that discussion there is still a gap between the hypothetical societal good of open access and the minutiae of usage and interest measurements.

This report begins to bridge that gap by presenting a framework, drawn from 100 real stories that describe the impact of open access. Collected by bepress from across 500 institutions and 1400 journals using Digital Commons as their publishing and/or institutional repository platform, these stories present information about actual outcomes, benefits, and impacts. This report brings to light the wide variety of scholarly and cultural activity that takes place on university campuses and the benefit resulting from greater visibility and access to these materials. We hope that administrators, authors, students, and others will be empowered to articulate and amplify the impact of their own work.

We also created the framework to serve as a tool for stakeholders who are interested in advocating for open access on their campus yet lack the specific vocabulary and suitable examples. Whether it is a librarian hoping to make the case for open access with reluctant administrators or faculty, a faculty member who wants to educate students about changing modes of publishing, a funding agency looking for evidence in support of its open access requirement, or students advocating for educational affordability, the framework and stories themselves can be a catalyst for these endeavors. Put more simply, these are 100 stories to answer the question: “why does open access matter?”

This report is a pre-print that has been submitted for publication with UNESCO. It will be published as part of the publication: “Open Access to Scholarly Communication in 2016: Status and Benefits Review”
The data in this report has been amassed from open access success stories from the bepress community and metrics from Digital Commons and Author Dashboards. The stories in themselves are compelling, educational, and motivational, but when we examined the entire dataset it became clear that the stories could also be organized into distinct groups. In doing so, we created a language for describing the impact of open access that was more actionable than the aspirational goals described by early thought leaders. We hope we’ve developed a framework that illustrates more of the breadth and scope of the real impact of open access.

At the highest level, the framework—which you can see above—is organized by three groups that benefit most from open access: readers, authors, and institutions. Each of these groups benefit from specific types of impact, indicated by the colored squares within the framework. Articulating the numerous ways that each group experiences the benefits of open access was eye-opening, and challenged some of the assumptions we had going into this project.

For the first group, readers, benefits align with the broader aspirational goals of open access. However, we found that breaking these down into individual benefits and categories helped bring a more nuanced understanding. Who are the readers? What kinds of materials are they looking for? The second group is authors, here defined as individuals, such as faculty or students; in some cases, they represent a collective of authors, as with labs, or journals. While authors benefit from increased visibility of their work, it was interesting to discover unexpected outcomes, such as “Expanding quality and scope” of their research.

Exploring the sometimes overlooked impact of open access on an institutional level is crucially important because institutions provide most of the funds that support open access. These stories are arguably the most important because they have the potential to make changes on the greatest scale. As we expected, institutional benefits of open access often align nicely with the broader aspirations of open access.
with author benefits when the author’s works are discovered. For example, an institution builds its reputation when its faculty members amplify their scholarship within the context of an institutionally branded repository/publishing platform. On the other hand, it was surprising to discover institutional impacts such as “aiding accreditation and review” or “boosting operational efficiency.”

The framework was built from a sample size of 100 concrete stories of impact, but we know that there are many more stories to tell. We found that the best instances of sharing scholarship and other materials produced outcomes and benefits for more than one group. When possible, we selected examples that demonstrate impact across multiple groups because they illustrate, in concrete terms, how one of the great promises of open access—finding unexpected benefits for new audiences and stakeholders—is being realized.

Data

The data comes from bepress Digital Commons institutional repository subscribers, ranging from over 50,000 FTE to much smaller, and from the R1 Carnegie Class to law schools, health science centers, and community colleges.

The charts below illustrate some of the trends that emerge when sorting the stories by institution and content type. There are a number of international stories but the majority came from the U.S., Carnegie Class R1 and R2 institutions (Doctoral Granting Research Universities), and M1 institutions (Master’s Granting Universities). There are a substantial amount of stories from Baccalaureate Arts & Science-focused schools as well (see appendix for specific percentages).
The chart below shows the types of content being shared in each of the stories. Even a brief glance is enough to demonstrate that open access impact comes from a very broad range of materials produced across campus. While traditional faculty research had a slight edge, other categories, particularly student content, produced a lot of stories of impact. As scholarship and creative output continue to evolve digitally, and as institutions, funders, publishers and authors continue to develop more needs to disseminate their work, we anticipate that this already broad spectrum will continue to expand.
Governor’s Office reassesses labor policies
The New York Governor’s Office found collective bargaining agreements from the New York State Employment Relations Board online and used it as a resource in reassessing labor policy.  

Transportation department success leads to new OA policies in neighboring states
Technical reports from the Joint Transportation Research Program (JTRP) at Purdue University have been downloaded over one million times by transportation agencies around the world. Discovery online has led to campus and library visits from the Ohio and Illinois Departments of Transportation, who were interested in modeling their programs after this unique partnership.  

Public health agency credits medical school for providing access to needed research
A Philadelphia public health official commented, “We would like to thank Jefferson Digital Commons for making articles accessible to Local Public Health Agencies. Having free access is important since Local Public Health Agencies do not have funding to pay for articles; in addition, access to the latest literature provides opportunities to learn new ways of improving our work. We commend you for providing this incredible resource.”
Local business finds partner to complete testing for NASA project
An ongoing business partnership was initiated when a local business with a NASA/U.S. Air Force contract and an urgent need for testing found Material Physics Group documents online and was able to work with the head of the group, Professor J.R. Dennison, for a collaboration that was beneficial to both parties.7

New patents matched against University’s patent portfolio
Iowa State University patents have been downloaded over 16,000 times by 275 institutions. 35% of the patent downloads have been from high-profile corporations such as IBM (33), Unilever (11), Dow-Corning (7), Hewlett-Packard (6), and Deere & Co (5).

Extension research is primary resource for cranberry industry
Over half of the 45,000 downloads for the University of Massachusetts’ Cranberry Station collection come from commercial institutions including Ocean Spray, Dow Chemical, and Market Track, demonstrating the value of this data for commercial sectors.

Local hotel group uses student thesis to understand emerging industry
In 2015, MBA student Dean Lehr’s thesis, “An Analysis of the Changing Competitive Landscape in the Hotel Industry Regarding Airbnb” was found by a local hotel group that noted, “this is one of the few white papers I have seen in the industry regarding Airbnb.” In just one year the thesis has been downloaded over 6,500 times, including by prominent industry analysts such as The Hilton Corporation, Wyndham Worldwide Hotel School in The Hague, and Deloitte and Touche.8

OA Textbook used in classrooms around the world
Professor Gerry Bergstrom has been contacted by a variety of educators around the globe seeking permission to use his Cell and Molecular Biology textbook. Based on usage data, he estimates that the textbook has been used in approximately 5 to 6 courses.

Open Textbooks save students $59,000
Open Textbooks in Portland State University’s institutional repository have served approximately 500 students and led to $59,000 in cost savings. In addition, the textbooks have been downloaded in 75 countries, including United States, India, Italy, Spain, and Indonesia.9

Computer Science Textbook adopted and remixed for use in classroom
Professor Charles Kann’s computer science textbook, Introduction to MIPS Assembly Language Programming, is used by his own students and has been adopted at Linfield...
College and at Maryville College. The book has a CCBY license, which enabled Maryville Professor Robert to re-mix the contents into a wiki format which facilitated study in the context of his course.

**Faculty textbook adopted at seven institutions and included in top 20 Google results for “calculus textbook”**

Matt Boelkins’ open textbook *Active Calculus* has been downloaded 30,000 times. In addition to receiving notifications that the book has been officially adopted at over seven institutions, Professor Boelkins can surmise from download data that it is being used in an official capacity at another five. His book is among the top 20 results for “calculus textbook.”

**Textbook used by social science students in universities across the globe**

Professor Anol Bhattacherjee’s textbook, *Social Science Research: Methods, Principles, and Practices* has received over 360,000 downloads from around the world and been translated into a variety of languages. Some of the top downloads are from institutions like University of KwaZulu Natal in South Africa (252 downloads), City University of New York (239 downloads), and University of Zambia (229 downloads) and has allowed students in institutions with limited resources to textbooks to access his materials.

**Area studies journal creates dialogue for readers in the region**

Professor Richard Reed, editor of *Tipití* journal, said that going open access not only helped build readership, but helped the journal connect and foster dialogue with readers from the area that it specializes in, lowland South America.¹⁰

**Faculty member invited by Chinese radio station to convene with other experts in his field**

Professor David Mason was invited to participate in a roundtable on public-opinion research and reform in China by a Chinese radio station that found his scholarship on Google, where his articles showed up near the top of search results on this topic.¹¹

**Communication department showcases global impact of star faculty**

Florida International University’s Office of News and Communications Department was eager to share the success experienced by Geosciences Professor Grenville Draper’s *Spanish-English Glossary of Geological terms*. The glossary has been downloaded over 30,000 times and has become an important resource for researchers working in geosciences in Spanish-speaking regions.¹²
70,000 new readers creates revival for counter-cultural magazine

The avant-garde Oz magazine was featured in The Guardian, Open Culture and Dangerous Minds in spring of 2016. All sites contain links to University of Wollongong’s Research Online, allowing over 70,000 readers, mainly from the U.S. and the U.K, to access these materials.¹³

37,000 readers explore searchable database of valuable Wright Brothers archive

Wright State University’s Special Collections and Archives hold the largest collection of Wright Brothers materials in the world. Items from the collection have been downloaded over 37,000 times in over 133 countries, and have been used as resources for a number of organizations, such as the National Park Service, NASA, and the FAA. In 2015, the New York Review of Books illustrated its review of the Wright Brothers’ biography with open access images from this collection.

25,000 global readers access newly discovered manuscript

Over 25,000 readers have accessed a newly discovered journalistic series by Walt Whitman, which was published in the Spring 2016 volume of the Walt Whitman Quarterly Review and was reported in the New York Times, NPR and other prominent media outlets.¹⁴

Archive offers unique gastronomy resource to 70,000 users

70,000 users have accessed the 800 items from DIT’s Gastronomy Archives, a collection focusing on the history of food and drink in all its aspects, with an emphasis on the culinary traditions of Ireland. The archive comprises a variety of resources including menus from the 19-21st centuries, cookbooks, audio interviews, and images.

Online book lets ex-POWs and family members connect

Among the 8,500 readers of Professor Sears Eldridge’s e-book, Captive Audiences / Captive Performers: Music and Theatre as Strategies for Survival on the Thailand-Burma Railway 1942-1945, are ex-POWs and their family members, who have used the book’s interactive platform to connect and share stories.¹⁵

Local community gets involved in digitizing state’s historic newspaper collection

Local volunteers have spent a collective 150 hours in an initiative with the Maine State Library to digitize historic Maine newspapers. Volunteer Lisa Jessick commented on the depth of knowledge of the Library staff and noted that “they are so passionate about what they do. Hearing this and seeing the different projects they are working on, it gets us excited as well.” ¹⁶
Open Access images incorporated into local history exhibit
Dr. Michael Ruiz is building a research website for the historic town of Yorkship Village in Camden, NJ. His search for a photo of a prominent local physician brought him to Jefferson University’s archival yearbook collections. Dr. Ruiz also mentions that he is “inspired by Jefferson’s commitment to history by making yearbooks available online in digital form. [It] encourages me to continue with my own website on the history of Yorkship Village, Camden and associated Shipyard for which the town was built c. 1918.”

History course featured on PBS and opened up to local residents
After receiving $15,000 in grant funding to transform his course on Montana history into a series of television episodes for the local PBS station, Professor Evan Barrett created ongoing access to the videos, transcripts, and other materials affiliated with the project. Local interest in this topic has enabled the university to create a “first of a kind” course that is open to members of the local Butte community. Over 25% of this collection’s users are based in Montana.

City-wide resource serves over 300 presenters and 8,500 audience members
Every year, Cleveland State University partners with local city groups to produce Octavofest, Cleveland’s annual celebration of book arts. The library’s open access conference hosting platform allows artists and presenters and organizers to use the platform to submit, review, and schedule proposals and events. Over the years, the site has supported proposals by over 300 artists and has served 8,500 audience members.

Relative of Civil War soldier finds map to locate gravesite
Janelle Wertzberger reports that Gettysburg University received a note from a relative of a Civil War soldier who was looking for his gravesite. Through a combination of Ancestry.com and the Gettysburg finding aid posted online, she was able to ascertain that the Gettysburg Special Collections contained a map drawn by a fellow soldier that could help her locate the gravesite.

Oncologist develops treatment plan from open access article
An oncologist in Moscow was able to use research that he found on the university’s repository in order to treat a patient, stating: “Thank you so much for the article ‘Malignant Peripheral Nerve Sheath Tumor (MPNST): An overview with emphasis on pathology, imaging and management strategies,’ it already turned to be very helpful in treatment and examination approach choosing for a 13-year patient with MPNST (proved by biopsy) and NF1. I’m working as an oncologist in Moscow pediatric clinic and this is one of my patients.”
Italian Physical Unit translates patient-family teaching manual

After finding the “Spinal Cord Injury Manual” in an online search, Italian practitioner Antonio Spagnolin wrote to Jefferson Digital Commons saying, “I’d like to translate your ‘patient-family teaching manual, Bowel’ to give our patients and carers as a teaching tool. It’s extremely well-done. I’m here to ask the permission to translate and distribute it.”

Local health officials informed by article on bacteria outbreak in region

The Journal of Patient-Centered Research and Review recently published an article addressing methods for stemming the outbreak of Elizabethkingia, a bacteria that is believed to have caused approximately 20 deaths in Wisconsin, Illinois, and Michigan this year. Since its publication, the article has received about five times the average number of downloads for the journal and has been especially accessed by readers in the region as well as notable health-care institutions such as Kaiser Foundation Health Plan and the U.S. Center for Disease Control and Prevention.

Three million tractor users and manufacturers access reports

The State of Nebraska has required every tractor to be tested through the University of Nebraska–Lincoln since the early 1900s, such that the university has become the testing grounds for nearly every tractor manufactured in the U.S. These tractor tests have been accessed over 3 million times by readers all over the globe who are using the reports for a variety of uses in their daily work.

Agencies turn to graduate expert during local crisis

Seth Olsen is a civil engineer whose Master’s thesis on a landslide zone in a local hillside region has been accessed over 325 times. When the region actually did experience a landslide, Seth’s work was discovered online and he was able to provide specialized research to local agencies in a crisis situation.

California lawmakers turn to legal archive as go-to resource

The California Ballot Propositions and Initiatives is a valuable archive of California law that has become a go-to resource for a number of government, legal, and media organizations, including the California Senate, the Office of Legislative Council, California Department of Justice, McClatchy Management, and the Tribune Company.

International students access syllabi collection to gain information on prerequisites

Computer Science and engineering syllabi have been downloaded over 23,000 times from around the world, with the highest downloads coming from India (1046), the Philip-
staff in the Computer Science department have learned that prospective students have used the syllabi to gain information about what materials are covered in courses and to obtain information about what prerequisites they would need for admittance.

**Recruitment strategy strengthened by showcasing student research**
The Office of Research and Sponsored programs worked with the campus library to showcase the student research experience at St. Catherine University in an overall effort to strengthen recruitment at the institution.

**Prospective faculty impressed by high quality of student work**
Scholarly Communications Librarian Stephanie Davis-Kahl reports that all three candidates for the faculty position in the Philosophy department reported finding student Honors Projects online in their interview preparation and were struck by the academic rigor of the curriculum and the intellectual achievements of the graduating seniors.

**REPUTATION BUILDING: Open Access for Authors**

- **Amplifying Scholarship**
- **Author Impact**

**Faculty member emerges as leading authority in area of growing public crisis**
Philip Stinson has been cited in the *Washington Post*, the *Wall Street Journal*, and Nate Silver’s *FiveThirtyEight* blog as a leading expert in police crime statistics. Media outlets have found his work online, and link to his faculty profile as a way of quickly accessing his research and podcasts.

**Faculty expertise gets renewed media attention**
Professor David Mason was surprised to be contacted by a Chinese radio station to participate in a roundtable on public-opinion research and reform in China. When he Googled “public opinion research in China,” he found his publications in Digital Commons and SelectedWorks coming up very near the top of the results, and he learned that the station identified him as an expert based on the online discoverability of publications.

**Faculty work downloaded over 30,000 times**
Professor Grenville Draper’s Spanish-English Glossary of Geological terms has been downloaded over 30,000 times and from over 540 institutions, including Universidad Nacional Autónoma de Mexico (UNAM). UNAM professor, Ricardo Barragán Manzo, says he and other professors from a variety of disciplines recommend it regularly to their students, who “benefit from the open access to the bilingual glossary.”
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Faculty textbook adopted at seven institutions and top 20 Google result for “calculus textbook”

Matt Boelkins’ open textbook Active Calculus has been downloaded 30,000 times. Matt has been notified that the book has been officially adopted at over seven institutions, and download data for the book indicates that it’s being used in an official capacity at another five. His book is among the top 20 results for “calculus textbook.”

Open datasets enhance reputation

After sharing his long-term environmental data on the Finger Lakes region, Professor Joseph C. Makarewicz found that his department was being contacted by local county agencies to conduct research. Makarewicz says open access “enhanced the reputation of the college and my reputation” and notes that the visibility helped him be “recognized as an expert” in his field.

Local business finds partner to complete testing for NASA project

An ongoing business partnership was initiated when a local business with a NASA/U.S Air Force contract and an urgent need for testing found the Material Physics Group documents online. The company partnered with Professor J.R. Dennison to develop an ongoing collaboration that was beneficial to both parties.

Student invited to join board of local non-profit

Pitzer College student Mary C. Ferguson was invited to join the board of a Los Angeles environmental non-profit group and asked to participate in a sediment management roundtable facilitated by the Arroyo Seco Foundation after her senior thesis on sediment removal was found in Scholarship@Claremont during an online search. Her thesis has been downloaded over 940 times by organizations like the County of Los Angeles, the State of Utah, the U.S. Fish and Wildlife Service, and more.

Partnership allows state Department of Transportation to fulfill its mission

The Joint Transportation Research Program (JTRP), a partnership between the Purdue University and the Indiana Department of Transportation, has made its technical reports and other materials open access in order to fulfill the program’s goals of providing increased access to state-funded research. With over one million downloads, JTRP Director Darcy Bullock reports that the collection “has been an incredibly valuable tool for communicating to our sponsors the impact their funded research is having.”

Research center reinforces and expands funding sources

The Center for Non-Destructive Evaluation, which conducts testing for a variety of government agencies, national labs, and industries, uses download information to demonstrate that its research is benefitting its users, leading to stronger ties with current...
sponsors and the acquisition of new ones.

**Agency develops policy based upon student thesis**
Within six weeks of being posted on the IR, Melissa Jayne Winslow’s thesis on the Black Creek Watershed was downloaded 68 times by the New York State Department of Environmental Conservation, which was about to start a study of the area and used the thesis as a basis of policy development and management of the watershed. This connection led to a long-term association between Brockport and the Department of Conservation.29

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| **Law journal article spikes in readership after mention in Huffington Post and Salon**
Readership of Professor Bernard Harcourt’s article on the NRA and Nazi Gun Laws spiked from an average of 600 a month to over 12,000 after it was referenced in the Huffington Post during a 2015 election debate on the issue. The same article was also featured in a previous article in Salon in 2013 and has now garnered over 56,000 downloads.30

**Elle Magazine cites student thesis, leading to over 100,000 downloads**
An Elle Magazine article cited Claremont McKenna graduate Kendyl Klein’s senior thesis, Why Don’t I Look Like Her?: The Impact of Social Media on Female Body Image and also borrowed its title. Downloaded over 100,000 times by readers in over 100 countries, the thesis is now one of the most popular papers in Claremont’s institutional repository.

**New York Times links to article on Supreme Court History**

**Forestry data becomes top news story**
Thomas Crowther’s groundbreaking research on global tree density was published in the journal Nature and subsequently featured on NPR, NBC, the BBC, LA Times and others. Links to this article and the affiliated data in Yale’s IR have been accessed by users around the globe.

**Expert on income disparity interviewed by radio station**
Professor Randy Albelda was invited by Northern California’s KRXA radio station to discuss her work on income disparity and economic policies that affect low-income women and families after host Michelle Jackson discovered Albelda’s faculty profile online.31
Law professor’s research cited in a number of media outlets

Law Professor Sara Bronin reports that a number of news outlets including the Houston Chronicle, the Victoria Advocate, and the Denton Record Chronicle have contacted her after finding her article on the growth of Municipal Utility Districts online. All three news outlets have cited her in their coverage of the growing controversy around Municipal Utility Districts in the region.

Niche journal finds and grows audience by factor of 100

Frustrated by traditional academic publishing, Dr. James Navalta and Dr. T. Scott Lyons decided to launch their own journal The International Journal of Exercise Science. The journal has helped expand the discipline of exercise studies through its wide readership and has grown by a factor of 100 since its original launch.32

Reissue of out-of-print book brings renewed interest to field

Ornithologist Paul Johnsgard’s book Cranes of the World, considered the “bible of the Crane world,” had been published at Indiana University Press, but out of print for many years. Johnsgard was able to get the rights to the book and publish it in his institutional repository, leading to 40,000 downloads and renewed interest in the field. As Johnsgard said, “I can still make my contributions matter and my influence felt at a national and international level.”33

Multimedia book brings little-known war history to wider audiences

Passed over by traditional publishers for being too niche, Sears Eldridge’s e-book, Captive Audiences / Captive Performers: Music and Theatre as Strategies for Survival on the Thailand-Burma Railway 1942-1945, was published by Macalester’s DeWitt Wallace Library. The book, which has had over 8,500 readers from 165 countries, showcases a wide variety of its source material including audio, video interviews, and images.34

Scholar’s life’s work preserved for others to build upon

Professor Alfred Benney’s American Scholars of Religion project includes over 800 video interviews. This unique work of scholarship couldn’t be disseminated through traditional modes of academic publishing. Benney views the collection as his life’s work, noting that the value of the videos is that, in watching these theologians in engaged conversation, the viewer sees that “scholarship is often the struggle to understand the question rather than posit a simplistic answer.”35
Lifetime collection of images and study guides preserved and made available as teaching tool
Julia Fitzpatrick Cooper’s *Landscape Plants of the Chicago Area* brings together images and information collected throughout her teaching career to create plant profiles that can be used by community college students as a visual study guide.

Law professor’s influence on environmental policy highlighted in memorial collection
UC Berkeley Law School built a collection memorializing Professor Joe L. Sax and the profound influence he had on the direction of environmental and natural resources law. In addition to serving as a memorial, the collection provides access to his scholarship and other materials related to his legacy.

Faculty member finds collaborator for bi-national study
At the University of Dayton, faculty member Nasser Razek’s paper, “*Academic Integrity: A Saudi Student Perspective*,” has been downloaded over 1500 of times and was a source for a June 2015 story in *Inside HigherEd*. Razek notes that the repository “provides me with a monthly report of readership, so I was able to track how many readers downloaded my work. It also enabled me to connect with other scholars from Britain, the Philippines and South Africa. One of these has already developed into a bi-national study.”

Collaborative project gets international citation
A Master’s thesis by a group of Occupational Therapy students from Dominican University was discovered by another group of students in Manila, Philippines, who were working on a similar study. The students in Manila contacted the authors and asked for permission to model their study, and use their research instruments with proper citation in their eventual thesis.

Faculty gain collaboration opportunities with colleagues
The institutional repository at Linfield College played a key role in helping Professor Brenda DeVore Marshall fulfill her vision of developing an arts project that showcases the cultural heritage of the Pacific coast region. The resulting *Dory Project* brought together four intra-institutional partners and engaged with two institutions and over 60 individuals from the local community.
Journal becomes more selective following jump in submissions

*The Australian Journal of Teacher Education* found that going online not only increased readership, but increased submissions as well. As a result, editors can be more selective in their process, which has improved the quality of the journal overall.39

Faculty motivated to enhance scholarship

After seeing that making their scholarship open access resulted in a high number of downloads from global audiences, faculty at Duke Law were motivated to provide translated versions of their articles as supplemental content in hopes of further improving quality of access for their readers. Professor Charles Dunlap’s article on cyberwar provides a clear example of this practice.40

Author incorporates reader feedback into second edition of textbook

Professor Matt Boelkins’ open textbook *Active Calculus* has been downloaded 30,000 times by readers all over the globe. In addition to fielding reader enquiries about course adoption, Professor Boelkins receives substantial feedback on content, which he compiles and incorporates into subsequent editions, a process he describes on his blog.41

“Tremendous” public response spurs group to expand scope of study

Professor Barbara Olendzki’s research group was motivated to pursue new research in inflammatory bowel disease in part because of the huge interest in their pilot study, which was posted online. She notes, “Without the tremendous response of our tiny pilot study, we would not have undertaken such a risk in forging forward with our current study. We greatly appreciate the exposure eScholarship@UMMS has provided for us in pursuing this groundbreaking and important research.”42

Medical schools access student work during application process

Augustana College student Aaron Volk noted, “I’ve seen that some of the medical schools to which I’ve applied actually have downloaded my paper... I’ve seen Harvard Medical School and different schools in Chicago that have downloaded [it].”43

Thesis downloads help student win faculty position

A law graduate from Southern Cross University reports that the over 3,000 downloads of her thesis enabled her to stand out as a candidate with hiring committees and helped her obtain a position at a prestigious institution.
Student thesis tops Google search results
Claremont-McKenna graduate Karima Merchant’s senior thesis is the top result for “gender differences in communications styles” on Google, has been cited 20 times on Google Scholar, and has been downloaded over 148,000 times. A large percentage of readers come from government agencies including The Department of Veteran’s Affairs, The State of Minnesota, State of Maryland, and Riverside County in California.

Student-curated digital exhibit featured in interdisciplinary course
Professors at Gettysburg College team-teaching an interdisciplinary course on the Renaissance created a student-curated digital exhibit, The Cabinet, which drew on materials from the college’s own museum and archives. The cross-disciplinary course co-taught by professors in Art History and Natural History focused on the very nature of interdisciplinary knowledge, which was enhanced by the digital platform of the exhibit.

Digital Humanities course gets global exposure and 1,500 views
Students in Professor Ryan Croft’s Digital Humanities course created video essays exploring connections between Star Wars and Medieval and Renaissance literature. The video medium of the course project reinforces the overall inquiry, which explores the influence of early texts on today’s popular culture. The videos have been accessed over 1,500 times by viewers in 42 countries.

State-funded model teaching collections made available to K-12 teachers throughout Illinois
Illinois Math and Science Academy is mandated by the state of Illinois to create model curricula and teaching resources for its K-12 teachers. Their open access curricula is having great impact: while the majority of downloads stem from the State of Illinois, these materials have also been accessed by over 50 countries around the globe.

Scholarship cited in 7 of top 10 media outlets
Materials from the University of Pennsylvania’s institutional repository have been downloaded by 7 of the top 10 media outlets in the last year, including the New York Times, the Wall Street Journal, CNN, the San Francisco Chronicle, the Huffington Post, USA Today, and the Washington Post.
Law school rankings increased by 38 spots
Texas A&M University School of Law’s rankings rose 38 spots between 2015 and 2016. Library Director Susan Phillips ascribes part of this success to the launch of their institutional repository, which quickly drew over 20,000 downloads from institutions like Harvard, Columbia, prominent law firms and even the Supreme Court.  

Increasing scholarly impact is key to Library Director’s promotion
A recent announcement about the promotion of Fordham Law Library Director Todd Melnick points to his work on building the library’s institutional repository: the repository has “significantly increased Fordham Law’s scholarly impact: FLASH contains over 9,600 documents that have been downloaded over 7.4 million times by readers in more than 170 countries.”

After years of unsuccessful attempts, professor wins grant funding
The Four Valleys Archive helped archeologists at Kenyon College create a model that they could show to funders to obtain support for latter stages of their project. As IR Admin Jenna Nolt put it, the IR “gave us the technology to get grant funding for something the faculty on this project had been trying to do for years.”

Readership data makes the case for funding from the Illinois legislature
The Professional Learning Day conference at Illinois Math and Science Academy (IMSA) helps develop educator STEM proficiency in the State of Illinois, and is central to IMSA’s mission. Since being made open access, conference presentations have received over 15,000 downloads from around the globe. IMSA administration has been able to leverage this impact in their reports to the Illinois State legislature in their budget renewal requests.

State-specific metrics used to build successful business case for State Historical Society
Tony Jahn, the state archivist for Iowa, uses download metrics showing Iowa-specific usage for two publications, the Annals of Iowa and the The Goldfinch, as a key measurement in the business case demonstrating impact for the appropriations committee to receive continued funding for the State Historical Society of Iowa.

Popularity of biology scholarship leads to funding of campus building
Todd Bruns notes in Making Institutional Repositories Work that, at “EIU, the regular appearance of biological science faculty on the ‘Most Popular Authors’ list was used in the university’s initial pitch to the Illinois state legislature for funding a new science building.”

Garnering Funding

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<th>Kenyon College</th>
<th>Institution Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>After years of unsuccessful attempts, professor wins grant funding The Four Valleys Archive helped archeologists at Kenyon College create a model that they could show to funders to obtain support for latter stages of their project. As IR Admin Jenna Nolt put it, the IR “gave us the technology to get grant funding for something the faculty on this project had been trying to do for years.”</td>
<td></td>
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<table>
<thead>
<tr>
<th>IMSA</th>
<th>Institution Impact</th>
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</thead>
<tbody>
<tr>
<td>Readership data makes the case for funding from the Illinois legislature The Professional Learning Day conference at Illinois Math and Science Academy (IMSA) helps develop educator STEM proficiency in the State of Illinois, and is central to IMSA’s mission. Since being made open access, conference presentations have received over 15,000 downloads from around the globe. IMSA administration has been able to leverage this impact in their reports to the Illinois State legislature in their budget renewal requests.</td>
<td></td>
</tr>
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<table>
<thead>
<tr>
<th>University of Iowa</th>
<th>Institution Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>State-specific metrics used to build successful business case for State Historical Society Tony Jahn, the state archivist for Iowa, uses download metrics showing Iowa-specific usage for two publications, the Annals of Iowa and the The Goldfinch, as a key measurement in the business case demonstrating impact for the appropriations committee to receive continued funding for the State Historical Society of Iowa.</td>
<td></td>
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<thead>
<tr>
<th>Eastern Illinois University</th>
<th>Institution Impact</th>
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</thead>
<tbody>
<tr>
<td>Popularity of biology scholarship leads to funding of campus building Todd Bruns notes in Making Institutional Repositories Work that, at “EIU, the regular appearance of biological science faculty on the ‘Most Popular Authors’ list was used in the university’s initial pitch to the Illinois state legislature for funding a new science building.”</td>
<td></td>
</tr>
</tbody>
</table>
New academic program provides industry expertise
Linfield College’s repository showcases materials from the extensive Oregon Wine History Archive, which is committed to preserving and sharing the story of Oregon wine. The collection of materials brought attention to the potential curricular use of the materials and led to the creation of a wine studies minor for students.

Student invited to join board of local non-profit
Pitzer College student Mary C. Ferguson was invited to join the board of a Los Angeles environmental non-profit group and asked to participate in a sediment management roundtable facilitated by the Arroyo Seco Foundation after her senior thesis on sediment removal was found in Scholarship@Claremont during an online search. Her thesis has been downloaded over 940 times by organizations like the County of Los Angeles, the State of Utah, U.S. Fish and Wildlife Service, and more.

Bar raised for students publishing in OA journal
According to a survey of the Journal of Purdue Undergraduate Research’s (JPUR) authors, “around 20% of article authors decided to pursue a career in research in his/her field of study as a result of writing an article in JPUR.” Student author Madison Heslop explains: “Publishing with JPUR makes you a more attractive candidate with research and writing. It’s a huge advantage if you know you want to get a higher degree because you already know how the publishing process works.”

Student develops industry contacts, launches career
In 2015, MBA student Dean Lehr’s thesis, “An Analysis of the Changing Competitive Landscape in the Hotel Industry Regarding Airbnb” was found by a local hotel group that noted, “this is one of the few white papers I have seen in the industry regarding Airbnb.” The download created strong industry contacts for Lehr. In just one year the thesis has been downloaded over 6500 times, including by prominent industry analysts such as The Hilton Corporation, Wyndham Worldwide Hotel School in The Hague, and Deloitte and Touche.

Yearbooks motivate alumni to volunteer at the University
Many George Fox alumni are active members of the Quaker community; open access to the student newspaper and yearbooks as well as resources for researching Quaker history has fostered a reconnection with the institution. According to University Archivist Rachel Thomas, “social sharing of alumni collections online has also led to alumni interest in volunteering in the archives.” Volunteers from the Alumni Auxiliary Association have
generously given hundreds of hours working on alumni collections in the IR as well as donating materials such as programs, photos, and other ephemera.51

“Incredible response” to yearbook archives from local alumni
As the only HBCU (Historically Black College and University) in Oklahoma, Langston is a hub of information about the African American community in the state. Their yearbook collection has received an “incredible response from the local alumni community” with over 25% of the institutions archival downloads coming from local readers from Oklahoma.52

Alumni letters spark reconnections with family of alumni
A collection of digitized letters written by Bryant alumni who served during WWII helped support research, sparked reconnections with alumni John Renza’s family, and also allowed several other family members to connect with the university while learning more about their relatives’ past.53

Marketing Department boasts NY Times citation in campus news
The John Marshall Law School featured a short story publicizing Professor Timothy O’Neil’s citation by the New York Times in the prominent News and Publications section of their website.54

University promotes new discovery and impact to over 25,000 global readers
The discovery of a new Walt Whitman journalistic series was an exciting find for Whitman scholars and also the University to Iowa. The story of the discovery, broken by the university’s open access journal Walt Whitman Quarterly Review is in its Iowa Now Newsletter. The discovery of the manuscript has been reported in the New York Times, NPR and other prominent media outlets, and allowed over 23,000 readers to access the document.55

Communication department showcases global impact of star faculty
Florida International University’s Office of News and Communications Department was eager to share the success experienced by Geosciences Professor Grenville Draper’s open access Spanish-English Glossary of Geological terms, which has been downloaded over 30,000 and has become an important resource for researchers working in geosciences in Spanish-speaking regions.56

International students access syllabi collection to gain information on prerequisites
Computer Science syllabi have been downloaded over 23,000 times from around the world, with the highest downloads coming from India (1046), the Philippines (693), China (560), and Germany (323). Staff in the Computer Science department have learned
that prospective students have used the syllabi to gain information about what materials are covered in courses and to obtain information about what prerequisites they would need for admittance.

### Strengthening Recruiting

**St. Catherine University**

**Recruitment strategy strengthened by showcasing student research**

The Office of Research and Sponsored programs worked with the library to showcase the student research experience at St. Catherine University in an overall effort to strengthen recruitment at the institution.\(^{57}\)

**Prospective faculty impressed by high quality of student work**

Scholarly Communications Librarian Stephanie Davis-Kahl reports that while conducting a search for a new faculty member, the Chair of the Philosophy department was told by all three finalists that they had discovered students’ Honors Research papers online and were struck by the academic rigor of the curriculum and the intellectual achievements of the graduating seniors.

**Capstones show off research potential for prospective students**

Independent Studies and Capstones from the Program in Audiology and Communication Sciences are consistently among the heaviest downloaded collections in the university’s institutional repository. The program’s directors use these collections as a recruiting tool to showcase the high level of research students can undertake.

### Aiding Accreditation and Review

**UMASS AMHERST**

**Carnegie classification awarded to school for community engagement collection**

The University of Massachusetts Amherst applied for and won a classification for Community Engagement in the category of Curricular Engagement & Outreach and Partnerships based largely on the impact demonstrated in its Community Engagement Collections.\(^{58}\)

**Department cites activity metrics to pass quality review**

During an assessment by an external quality review board, the Social Sciences Department was able to meet the criterion of developing external facing scholarship by showing that the departmental collection had received over 250,000 downloads from 189 different countries.

**Public posting fulfills accreditation requirement**

Framingham State received its accreditation with the New England Association of Schools and Colleges and publicly posted institutional documents on its repository.
Association OA accreditation requirement met

SLIS Connecting, an open access library journal, helped The University of Southern Mississippi meet an American Library Association accreditation requirement for “maintaining contact and communication with students and alumni.”

Demonstrating Learning Outcomes

Student oral history project draws over 10,000 users

Students at Linfield College learn about disappearing traditions of the Dory fishing community of coastal Oregon through a variety of course activities, including conducting research, collecting oral histories, developing scholarship, and compiling their findings through a theatrical production. Over 10,000 users have accessed the collection, which showcases the full spectrum of the students’ learning experience.

Undergraduate Research conference presentations draw 1,800 readers

UWill Discover, an Undergraduate Research Conference held at Canada’s University of Windsor, showcases the exceptional research students are conducting at the university and provides an opportunity for students to talk about broader implications of their work. Materials from the Undergraduate Conference have been accessed over 1,800 times by a variety of institutions, including government agencies, corporations, and universities.

Creative Atlas project draws national attention

Students worked with renowned essayist Rebecca Solnit and cartography professors to develop a unique multimedia project mapping atlas of Laramie and the region. The unique partnership led to a feature story in a regional paper, exhibits in Wyoming and San Francisco, and over 2,700 downloads over time.

Boosting Operational Efficiency

Administrators save thousands of hours a year on document retrieval

In the 2015-2016 academic year, materials from Cal Poly’s Campus Documents collection were downloaded over 100,000 times, including 104 downloads from the California State University Office of the Chancellor. This collection saves thousands of hours in time the school’s administrative office would have otherwise spent responding to document requests (assuming 15 minutes per request).

Streamlined collection saves departments time in accreditation process

Kris Petre created a highly organized and well-documented collection of departmental and institutional materials that makes it more efficient for individual departments to access accreditation information for ACGME (Accreditation Council for Graduate Medical Education) and LCME (Liaison Committee on Medical Education) accreditation reporting.
Office of Registrar increases efficiency by creating access to semester schedules

Current and archival semester schedules have been downloaded over 18,000 times, saving the Registrar’s office at the University of Georgia Law School the time they would normally have spent fulfilling these requests (up to 4,500 hours, assuming 15 minutes per request).
## Appendix

### Institution Type

<table>
<thead>
<tr>
<th>Institution Type</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>R1: Doctoral Universities – Highest Research Activity</td>
<td>17%</td>
</tr>
<tr>
<td>R2: Doctoral Universities – Higher Research Activity</td>
<td>15%</td>
</tr>
<tr>
<td>R3: Doctoral Universities – Moderate Research Activity</td>
<td>2%</td>
</tr>
<tr>
<td>M1: Master’s Colleges and Universities – Larger programs</td>
<td>15%</td>
</tr>
<tr>
<td>M2: Master’s Colleges and Universities – Medium programs</td>
<td>5%</td>
</tr>
<tr>
<td>M3: Master’s Colleges and Universities – Smaller programs</td>
<td>2%</td>
</tr>
<tr>
<td>Bac A&amp;S: Baccalaureate Colleges: Arts &amp; Sciences Focus</td>
<td>12%</td>
</tr>
<tr>
<td>Law</td>
<td>12%</td>
</tr>
<tr>
<td>International</td>
<td>8%</td>
</tr>
<tr>
<td>Health</td>
<td>6%</td>
</tr>
<tr>
<td>Community College</td>
<td>2%</td>
</tr>
<tr>
<td>Other</td>
<td>5%</td>
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</tbody>
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### Content Type

<table>
<thead>
<tr>
<th>Content Type</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Faculty Research</td>
<td>21%</td>
</tr>
<tr>
<td>Special Collections</td>
<td>12%</td>
</tr>
<tr>
<td>Student Theses</td>
<td>11%</td>
</tr>
<tr>
<td>Teaching Materials</td>
<td>9%</td>
</tr>
<tr>
<td>Institutional Documents</td>
<td>7%</td>
</tr>
<tr>
<td>Faculty Journal</td>
<td>5%</td>
</tr>
<tr>
<td>Conference</td>
<td>4%</td>
</tr>
<tr>
<td>IR</td>
<td>4%</td>
</tr>
<tr>
<td>Digital Humanities</td>
<td>4%</td>
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<tr>
<td>Honors Papers</td>
<td>3%</td>
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<tr>
<td>Student Journal</td>
<td>3%</td>
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<tr>
<td>Faculty Book</td>
<td>3%</td>
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<tr>
<td>Data</td>
<td>3%</td>
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<tr>
<td>Technical Reports</td>
<td>3%</td>
</tr>
<tr>
<td>Yearbooks</td>
<td>3%</td>
</tr>
<tr>
<td>Student Work</td>
<td>3%</td>
</tr>
<tr>
<td>Patents</td>
<td>1%</td>
</tr>
<tr>
<td>Oral History</td>
<td>1%</td>
</tr>
<tr>
<td>Creative Work</td>
<td>1%</td>
</tr>
<tr>
<td>Community Engagement</td>
<td>1%</td>
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</table>
These phrases are pulled from the Budapest Open Access Initiative declaration of 2004: Budapest Open Access Initiative (2004) http://www.budapestopenaccessinitiative.org/read. While there are several well-known and actively contested definitions of open access, for the purposes of this report, we consider it to be “any material that is free to access and download,” a description that was laid out by Paul Royster in his 2014 interview with Richard Poynder: Royster, Paul. “The Open Access Interviews: Paul Royster, Coordinator of Scholarly Communications, University of Nebraska-Lincoln” By Richard Poynder. Open and Shut? August 31, 2014. http://poynder.blogspot.com/2014/08/the-open-access-interviews-paul-royster.html

See, for example, Swan, Alma (2010) The Open Access citation advantage: Studies and results to date. http://eprints.soton.ac.uk/268516/.

Digital Commons Dashboards and Author Dashboards give institutions and authors the ability to get a complete overview of the impact of their work, from heatmaps, download counts, to access by country, institution, and sector.


What People are Saying about Jefferson Digital Commons: http://jdc.jefferson.edu/jdcvalue.html


Dominican Scholar: Our First Year: Annual Report to the Vice President of Academic Affairs Academic Year 2014-2015 http://scholar.dominican.edu/all-faculty/78/

Portland State University Library (2016, March 24) http://library.pdx.edu/pdx-open-textbooks-save-psu-students-59000/


Iowa Now (2016, April 29) http://now.uiowa.edu/2016/04/newly-found-whitman-writings


What People are Saying about Jefferson Digital Commons: http://jdc.jefferson.edu/jdcvalue.html


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37 Dominican Scholar: Our First Year: Annual Report to the Vice President of Academic Affairs Academic Year 2014-2015 http://scholar.dominican.edu/all-faculty/78/


45 Fordham Law News (2016, May 12) http://news.law.fordham.edu/blog/2016/05/12/todd-melnick-appointed-maloney-library-director/
50 Dominican Scholar: Our First Year: Annual Report to the Vice President of Academic Affairs Academic Year 2014-2015 http://scholar.dominican.edu/all-faculty/78/
55 Iowa Now April 29, 2016, http://now.uiowa.edu/2016/04/newly-found-whitman-writings
58 Myers, Kim, and Billings, Marilyn, IRs Supporting Community Engagement, Part 2: Regional Research at Brockport (SUNY) and UMass (Amherst) (2013, April 4) [webinar] http://digitalcommons.bepress.com/webinars/38/
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