Universities exist to create and disseminate knowledge, and the Internet has forever changed the ways in which we do this. This year’s report showcases what we’re doing locally to support open at U of G.

In 2002, the Budapest Open Access Initiative gave the name “open access” to the free sharing of peer-reviewed research and literature on the Internet. Since then, scholars, research funders, governments, librarians, academics, and students have worked tirelessly to transform our 500-year-old print system of scholarly communication to one that takes full advantage of the Internet. Providing public access to publicly-funded research is now a widespread social expectation—an expectation that has expanded to include open science, open data, open textbooks, and open government.

Open scholarship facilitates:

- Knowledge in action—we improve life by giving more people access to research (not just those of us in universities)
- Knowledge with impact—widely available research accelerates the generation of new research
- Knowledge that’s sustainable—compared with current high-priced journal subscriptions


Libraries play a unique role in creating a scholar-controlled scholarly ecosystem. At the McLaughlin Library, we actively support the transition to a more open and sustainable system in several ways. We commit a portion of our acquisitions budget to open scholarship; work with faculty to maximize their research impact through open dissemination; provide infrastructure to openly disseminate journals, data, textbooks, and other scholarly outputs; and steward digital research, ensuring that it is preserved for current and future knowledge seekers.

We hope this report inspires you to join the conversation about open at U of G.

Barbara McDonald, Acting University Librarian (2018-2019)
Making scholarship open by default

The McLaughlin Library is a member of several organizations that work collaboratively to make scholarship open by default and to put scholar-owned infrastructure in place to support open scholarship. One of these organizations is the Canadian Association of Research Libraries (CARL).

In 2017, the CARL Scholarly Communications Roadmap was created to inform and guide senior university administrators regarding the current scholarly landscape and the ways in which we can adapt to make scholarship a more open space. The report states that Canadian academic libraries have a substantial role to play in creating a scholarly communication landscape that is open, sustainable, effective, innovative, and governed by the scholarly community.

The objectives listed in the roadmap are:

- Increase awareness and engage stakeholders about the benefits of open access and the need for change.
- Promote and accelerate the adoption of open science policies.
- Lower the economic barriers to the creation and dissemination of academic publications.
- Promote the responsible application of impact and productivity measures for research.
- Expand the types of research outputs that contribute to the formal scholarly communication system.

To read the full report, visit https://uoguel.ph/carlscholcommroadmap.

Another organization we work with is the Scholarly Publishing and Academic Resources Coalition (SPARC), a global group committed to making information open by default for research and education. To learn more about SPARC, visit http://sparcopen.org.

Open education video

Throughout the winter semester of 2019, Emily Jones, manager, Communications, and Ali Versluis, open educational resources librarian, Research & Scholarship, worked alongside colleagues Jakub Hyzyk, multimedia project coordinator, and Kyle Richie, multimedia assistant, from Open Learning and Educational Support to produce a video that highlights the importance of open education. Here’s a still from the video that shows Franco Vaccarino, U of G’s president and vice-chancellor, speaking about why open education matters to him and the broader University community.

To watch the video, visit: https://uoguel.ph/whyopeneducationmatters.
Why we teach open source tools

Open source tools are programs that openly publish the source code (program instructions in their original form) and allow one to use and/or modify the design or content to meet their needs, free of charge.

At U of G, we teach open source tools to:

- Provide access to the largest population possible, as many do not have access to an institutional subscription, or the financial resources to pay for the tools themselves.
- Teach students and researchers the skills needed to use open source tools as they are tools that can be used anywhere.
- Enhance the sharing of information, as data in an open format is easier to access internationally.

Some of the open source tools we teach in workshops at U of G are:

- R and Python
- Git
- Gephi

“When we teach proprietary tools, we always mention any free alternatives that are available.”

Amy Buckland, head, Research & Scholarship

Open data: professional skills for emerging researchers

During the 2018-2019 academic year, library staff ran three open data workshops and an Open Data Hackathon. The workshops provided participants with an opportunity to become familiar with concepts such as licensing and locating open data, as well as learning how to make their own data open. The Open Data Hackathon provided a space to explore local data including the Rural Diaries, the Textbook Broke Survey results, and the City of Guelph police dispatch dataset.

Participants included undergraduate and graduate students, staff and faculty, as well as community members, including professionals in the agricultural sector, government employees and consultants from non-profits.

The library offers these workshops and events so that students, researchers, and community members alike, are aware of sources of free, open data, and understand how to use open data to generate innovative research that benefits society and the economy. “We want to empower our community with resources they can use without barriers,” said Lucia Costanzo, data analyst, Research & Scholarship.

To explore the data mentioned in this article, visit:

Rural Diaries Archive: https://uoguel.ph/ruraldiaries
Textbook Broke Survey Report: https://uoguel.ph/textbookbroke
Housing the largest collection of Scottish materials outside the United Kingdom, Archival & Special Collections (A&SC) at the McLaughlin Library, is now home to a new digitization space. On February 21, 2019, the library unveiled the new Scottish Studies Foundation Digitization Room after receiving a generous gift from the Scottish Studies Foundation. “Having a room dedicated to scanning helps considerably in carrying out specific digitization projects,” said Kathryn Harvey, head, A&SC.

The digitization of primary resources allows for this information to be openly accessed online—free of charge—from around the world. The process of digitization also provides university students with a unique opportunity to participate in experiential learning. “Having an in-house scanner affords students the opportunity to see what’s involved in a digitization project—it’s not just the scanning but learning the metadata that has to be recorded—they get a sense of just how much information about each individual image they have to record,” said Carleton.

While working with A&SC as a U of G student, Lara Carleton had the opportunity to use a variety of machines and software to digitize materials, making them more openly accessible and searchable online. “Having the opportunity to create high-resolution scans of diverse materials was an enlightening experience as a student,” said Carleton. Scholars all over the world rely on online material for their work and as such Carleton expressed appreciation for the opportunity to move this project along. “I feel fortunate to have been able to see the effort needed to achieve this. Having this experiential learning opportunity has opened doors for my future...ones that I had not considered,” said Carleton.

Purchasing a book scanner
This scanner was critical in digitizing the Scottish Chapbook Project (the largest collection of Scottish Chapbooks in North America) and parts of the Rural Diary Project. This scanner enables A&SC to teach students about the standards and techniques for digitizing archival materials and rare books.

Rethinking the location of our Scottish Studies Collection
Once located in various areas throughout the building, the Scottish Studies Collection is now housed on the second floor of the library, making the materials vastly more browsable and findable.

The Scottish Studies Foundation regularly hosts its fall colloquium at the library, which brings together the College of Arts and the library to showcase the breadth of Scottish research on campus.

To explore the Scottish Studies Collection, visit https://uoguel.ph/scottishstudiescollection.

“How did this gift create impact?”

“Having the opportunity to create high-resolution scans of diverse materials was an enlightening experience as a student.”

Lara Carleton, U of G alumna and clerk, Archival & Special Collections
Nearly a decade in the making, the library has completed the digitization of the Ontario Agricultural College (OAC) Review. The OAC Review is a rich collection of social history, genealogy, and community happenings of the University’s founding colleges. The digitization process began in 2011, “We were looking for a way to both preserve and increase access to any sort of special collections, and the OAC Review was something that people came to the archives for frequently. It’s part agricultural history of Ontario and Canada, as well as a unique history of U of G and the City of Guelph,” said Helen Salmon, librarian, Collections & Content.

The idea was developed by Jim Brett, who at the time was the sciences librarian at McLaughlin Library, and he suggested applying to obtain an undergraduate research assistant to work on the project as an experiential learning opportunity. Jennifer Oldham, the same student who was hired to bring the project to life is still working with the collection, among other projects at the library.

Oldham’s first summer was spent investigating what equipment was needed, what would meet archival standards for preserving digital images of the artifacts, scanning, and then editing the material to ensure it had optical character recognition incorporated for PDFs. This digitization process continued over the years until the room went offline during library renovations; it was at this point that materials were sent to the University of Toronto where they helped finish the scanning.

Oldham’s dedication to standards and ensuring proper metadata was built into the process of digitization has made the OAC Review completely searchable for researchers all over the globe. “When the OAC Review only existed as a hardcopy and needed to be requested, the archives sometimes had a dozen requests a month,” said Oldham, “Now we get thousands of accesses a month, worldwide!”

In total, there are 586 OAC Review issues that have been published in the Atrium from 1889 to 1961. In the past year, the total number of views for the entire collection on the Atrium is 67,015, and the total number of file views/downloads for the entire collection is 29,234.

To explore the OAC Review, visit https://uoguel.ph/oacreview.

**Top country views during 2018-2019**
- Canada – 4,666
- United States – 3,086
- China – 2,542
- Germany – 1,412
- France – 592
- Denmark – 517
- United Kingdom – 309
- Russia – 246
- South Korea – 217
- Netherlands – 193

**Top cities views during 2018-2019**
- Guelph, Canada – 2,946
- Guangzhou, China – 805
- Toronto, Canada – 258
- Ashburn, USA – 210
- San Francisco, USA – 210
- Montréal, Canada – 205
- Nanjing, China – 202
- Mountain View, USA – 174
- Wilmington, USA – 167
- Shanghai, China – 160

According to the Internet Archive, the all-time views/downloads for the OAC Review are 11,536
Our space: open and welcoming

In the past year, we have continued to make enhancements to our space while planning for the future by updating the Library Master Space Plan. This year, we’ve added new window seating, replaced all old carpeting throughout the building, built a new women’s washroom, and grew our total number of seats to 3,571. We are also working toward building a new study-space on the fifth floor that will consist of approximately 100 seats.

The library now has a new Ask Us Desk that is bright and welcoming. It’s the space that users approach first upon entering the library and go to when seeking assistance. The Ask Us Desk now incorporates the Research Help Desk and the IT Help Desk. We hope that this new take on the Ask Us Desk service model will continue to assist users in a way that suits them best.

In the coming year, we will proceed with the design and construction of a new front entrance that faces the north end of campus, “This is a transformational opportunity as it will improve safety, accessibility, and visibility,” said Kelly Bertrand, director, Library Administrative Services and chair, Library Building Committee.

Embracing student needs: open reserves

Changes made to loan model allows for increased course reserve flexibility

In response to student feedback, the library has implemented new policies for course reserves—in addition to adopting a new open self-serve model (where books are no longer behind a desk). Students will be able to borrow all course reserve items for longer periods of time and can take materials outside of the library. These changes aim to make the course reserve system responsive to student needs.
The move to specialized physical collections

A lot of changes have happened around the library in the past few years including creating new spaces for users and services. We’ve also begun exploring new ways to present our physical collections to the community. One of our most sought-after collections is the Scottish Studies Collection which is now located on the second floor of the library.

The University of Guelph is world-renowned for its academic program in Scottish Studies and for the library’s collection of materials related to Scotland—which is the largest collection in the world outside the United Kingdom. While Archival & Special Collections (A&SC) are known for their Scottish Studies Collection, our open, circulating collections also hold rich resources for teaching and research in Scottish Studies.

As we were redesigning collection spaces, an idea was put forward by Pamela Jacobs, head, Collections and Content, to consolidate everything in our circulating collections related to Scotland in one location, adjacent to the A&SC Reading and Exhibit Rooms—the main access point for Scottish archival materials. By creating this type of specialized collection, the library highlights the resources in a specific area that is academically important to the University and increases user awareness of and access to the materials.

A second specialized collection that focuses on cookery will also be located near A&SC. This collection of cookbooks from across the world complements the A&SC Culinary Collections, which include a range of rich culinary resources such as the Canadian Cookbook Collection, the Edna Staebler Collection, the Jean Paré Collection, and the Una Abrahamson Collection.

To find information about our Scottish Studies Collection, visit https://uoguel.ph/scottishstudiescollection.
We asked Ali Versluis, open educational resources librarian, Research & Scholarship, about the importance of making in-person connections with students during two open-focused weeks at the library—Open Access Week and Open Education Week—here’s what she had to say:

“It’s important to connect with students about open initiatives on campus because they are the next generation of scholars and teachers. As such, they yield an incredible amount of power to recognize issues, generate solutions, and advocate for change. These open-focused weeks allow library staff to amplify the conversation, talking to students about these issues as something that matters both at U of G and outside of campus. Since we prioritize meeting students where they are, we organize programming that allows for different levels of engagement with unique opportunities for action.”

Dedicating money to open acquisitions

“The library believes that scholarship is a public good. As a public institution, we also recognize the need for cost containment while providing our students, staff, and faculty with the scholarly resources they need. The current system of scholarly publishing, particularly scholarly journals, is dominated by a handful of commercial publishers with high profit margins. This places an undue cost burden on universities that is simply not sustainable. We are actively supporting the transition to a more open and sustainable system on several fronts. In the 2018-2019 fiscal year, we dedicated $105,000 of our acquisitions budget to support open initiatives, be that open content, open infrastructure and software, or advocacy organizations which increase access to scholarship,” said Pamela Jacobs, head, Collections & Content.
Transforming the scholarly publishing culture

A Q&A discussing the benefits of open

Wayne Johnston, librarian, Research & Scholarship, has been with the University of Guelph for over 15-years. Johnston was first introduced to open access while overseeing the Open Journal Systems at U of G and has been a proponent for open initiatives since. In this Q&A, Johnston shares what integrating open practices in the publishing process means for authors, researchers and the U of G community.

Please tell us a little about yourself...

I have been at the University of Guelph for 15-years. One of the first assignments I had when I joined the library was overseeing the Open Journals System platform for publishing open access journals. I feel a strong commitment to the open access movement because it democratizes knowledge. Research outputs should not be the exclusive domain of those fortunate enough to be at a western academic institution. Members of the general public and people in developing economies should also have access. There are many ways that open access can transform the traditional publishing system but supporting the publication of journals and books is a strategy that is impactful without some of the complexities of economics that accompany other forms of open access. It is also a great way to partner with researchers on campus.

What is open publishing?

Broadly speaking, open publishing is publishing that is free from the constraints of commercial publishing with strict copyright limitations. Content is openly available so that readers do not have to pay for access. Content can usually be shared and adapted which greatly enhances its usefulness.

In your opinion, what is the biggest difference between open publishing and traditional publishing methods? Why do they differ?

Traditional publishing is motivated by two related factors: profit and intellectual property protection. Content is published in order to sell access to that content. And that profit motivation is protected by ensuring that only the copyright holder—the author or publisher—benefits. Open publishing is motivated by concepts of democratization of knowledge and working collaboratively for the benefit of all.

How does publishing in an open repository benefit both the author and the user?

Essentially, the author sacrifices financial reward in exchange for impact. Unleashed from the constraints of traditional publishing, the work can spread, be adopted and adapted, without limit. Users have the benefit of free access to content—for research and study—that can be tailored for their needs. Additionally, teachers can mix and match to compile tools that are tailored to their course’s learning objectives.

What type of feedback do you receive from those publishing in open repositories at U of G?

I’ve noticed that the concepts of open access and open publishing are fully embraced by researchers, especially younger scholars. They seek out opportunities that don’t entail personal expense and they are very appreciative of the publishing platforms hosted by the library at no cost, as well as the expert advice from library staff.

How does open publishing help U of G become more “open”?

There are many ways that the library can provide open resources or encourage open practices among researchers, but our publishing initiatives are true partnerships that fully engage researchers in a contribution to the larger open landscape. Many of our researchers are now strong advocates for open in their disciplines.

What would you say to individuals who are thinking about using open publishing for their research?

Open publishing truly contributes to the transformation of the scholarly publishing culture. It creates great opportunities for the democratization of research, for collaboration, and for sustainability.
Supporting campus research

Mobilizing knowledge via U of G’s research repositories

Having a scholarly work published is a meaningful moment for any academic. An option for authors is to preserve their work by submitting it to a repository—a platform where data, theses, dissertations and other works can be managed, stored, and shared over the long-term.

By preserving their data in a repository, researchers can replicate their results to create reliable, accurate data that can increase the visibility and impact of their research.

With three repositories maintained by the library, the U of G community can store their data in a secure place on campus:

- U of G’s institutional repository, the Atrium, houses electronic theses, dissertations, articles, manuscripts, and other research;
- The Agri-environmental Research Data Repository specializes in the preservation of and access to agricultural and environmental data;
- The University of Guelph Research Data Repository houses research data from all other disciplines.

Developing a repository is no easy task. “Building a repository should begin with an environmental scan of repository platform options available. It is important at the beginning of the process to determine the criteria most important to your team,” said Carol Perry, librarian, Research & Scholarship. To combat the financial cost of repository development, the library chose to use a consortial project with open source software—this is the point in the process where open access and data sharing options are available to repository administrators as well as the depositors.

With how competitive the information marketplace is, data has become a commodity of value in society. High-powered companies are vying for researchers to deposit data into their platforms. Ultimately, for libraries, the goal is to have as much of the data openly accessible as possible. “There will always be some data that cannot be shared due to legal, ethical or commercial factors,” said Perry. “There are challenges and concerns ahead, but it is an exciting time to be involved in these initiatives.”

Open access publishing at U of G

U of G researchers can choose to disseminate their articles in “closed access” (subscription) journals, publisher-run “open access” journals, or “self-archive” them in repositories (like U of G’s Atrium, or PubMed). This graph, broken down by year, shows the growth of open dissemination over the past three decades. We gathered this data from the Web of Science, looking for U of G authors who are published in this database.

To explore the Atrium, visit https://uoguel.ph/theatrium

To see the full visualization, visit https://uoguel.ph/oapublishing

“Open initiatives, especially the University’s online repository, the Atrium, is worthy of celebration. As a publicly-funded institution, we are committed to sharing the knowledge that is generated from graduate students’ research. The Atrium serves as a surprisingly effective vehicle for this. Over the past year, the 4000+ theses held in the Atrium were accessed a remarkable 1,129,994 times by the public. Since the inception of the repository, total downloads have exceeded 2,363,868. As the head of graduate studies for the University of Guelph, this achievement is heartening.”

Benjamin Bradshaw, professor and assistant vice-president, Graduate Studies.
Jonathan Newman, former dean, College of Biological Science at the University of Guelph, is an advocate for open access. Newman works as a grassland ecologist, studying the impact of climate change and invasive species on population sizes and community structure in temperate grasslands. Newman sees a future for open access initiatives in the field of biological science. In the following Q&A, Newman shares his thoughts about and experiences with open access.

Q&A with Jonathan Newman

Why is open access important to you?

Two reasons, really. In the context of research, I think that publicly funded research results should be publicly available. In the context of teaching, I hate the fact that academic publishing is among the world’s most profitable businesses. Textbook costs are now ridiculous. I would say that we shouldn’t be profiting off the backs of our students, but the fact of the matter is that it is the publishing companies that are really profiting.

How do you think open education and research can advance the field of biological science?

I think open science could help advance biology by: (1) reducing the so-called ‘replication crisis’ that is widely talked about in some areas by making data and methods more widely accessible for scrutiny and reanalysis; (2) making meta-analyses easier to conduct; and (3) ‘democratizing’ science so that not only rich countries and institutions have access to the scientific literature. We can’t expect the greatest advances in science to come by excluding vast segments of the world’s population.

What is your favourite open access resource?

Hands down PeerJ. PeerJ is different from other open access journals in that: (1) it is run by academics, for academics, and (2) it has a membership model which is a much better deal than the article processing charges employed by most open access journals.

Is there anything else related to open that you’d like to share?

With the move to online-only journal publishing and the ready availability of publishing software, I’d like to see academic societies ‘take back’ the publishing of their own journals. [Academic publishers have] completely co-opted the academic publishing economy. Now we (researchers) produce content for free, we referee for free, we (mostly) edit for free, and then our libraries must pay outrageous sums of money to gain access to all this material. If anyone is going to make outrageous sums of money from this work it ought to be our professional societies, not the publishers.

Note: Effective August 1, 2019, Jonathan Newman began his new role as vice president (research) at Wilfred Laurier University in Waterloo, Ontario. Learn more about Newman’s appointment at https://uoguel.ph/newmanappointedtolaurier.
Q&A with Coral Murrant

Coral Murrant, professor and chair, Department of Human Health and Nutritional Science at U of G, is a supporter of open access and believes that “knowledge should be shared, not stuck behind a paywall.” Murrant is passionate about making evidence-based decisions regarding how she teaches in order to make changes in the classroom as well as utilizing the benefits of open access resources in her teaching and research. In the following Q&A Murrant shares her thoughts on and experiences with open access.

Why is open access important to you?

Open access from a research perspective is critical in sharing our results globally and more easily. From a teaching perspective open access is important for resource development, developing the right tools to support teaching as well as developing a tool that is accessible to all students.

How do you think open education and research can advance the field of biological science?

Advances in research are about getting the information you have in front of someone who is thinking about similar issues, and this process needs to be facilitated and not inhibited by restricted access. Open education and research will foster innovation and speed up the rate of discovery, because the information will be made accessible to a diversity of people, with a diversity of ideas, that will move these ideas forward in new and creative ways. Open education and research also saves a huge amount of money, for example, my lab has used open software for image analysis for over 15-years, commercial software would cost us thousands of dollars every few years. Because of the open software, we can use this money to fund more graduate students and do more science.

What is your favourite open access resource?

I have used open access image analysis software (ImageJ) in my lab for over 15-years now. I use GIMP for image analysis as well. I have also just been introduced to a site where people share 3D printing schematics (Thingiverse) so that I can print adapters for my microscope and camera.

Are there any other thoughts in relation to open that you’d like to add?

I think we are at a time and place where we have the tools needed to make “open” possible. We need to start investing in the development of these resources and using these tools.
Opening students’ minds to invisible structures underlying knowledge production and dissemination

A conversation about critical information literacy with two information literacy librarians

Critical information literacy explores how power and privilege factor into the creation and dissemination of information and knowledge. We spoke with two members of our Information Literacy (IL) team: Karen Nicholson, manager, and Melanie Cassidy, librarian.

“Critical information literacy looks at the cultural, social, and economic structures that underlie all of information production and dissemination. Critical information literacy... urge[s] students to approach all information... with a critical eye and to be reflective of their role as information consumers and producers,” writes Annie Downey in Critical Information Literacy: Foundations, Inspiration, and Ideas, published in 2016. Critical information literacy is informed by the ideas of critical educators such as bell hooks and Paolo Freire.

The IL team members are working to incorporate critical information literacy pedagogy and practices into their teaching by moving beyond standards, competencies, and outcomes to consider the ways that information and libraries are not neutral. There is power and privilege in the ways in which information is accessed, presented, and processed in institutions of higher education and society more broadly. Part of the way this power and privilege is enacted is through search engines and paywalls, which determine whose voices are represented in scholarly discourse, how information is accessed, and who can access it.

What does the IL team do to support critical information literacy at U of G?

The IL team supports scholars seeking to enhance their research skills and practices and develop a critical approach to the consumption and production of information in academic contexts and beyond. The team also supports instructors seeking to facilitate the development of students’ information literacy skills and practices within the curriculum.

The team develops online tools and resources to support foundational research skills, in-class workshops that address disciplinary research conventions and practices, and one-on-one research consultations. Our in-class workshops employ active learning strategies, increasing engagement for both students and instructors. We believe students bring diverse knowledge and experience and are active participants in their own learning.

How does critical information literacy improve research, teaching, and learning at U of G?

Critical information literacy supports critical thinking about information systems and structures and helps to facilitate lifelong learning. It improves research by helping scholars to search more effectively, to critically assess information quality and bias, to use and share information ethically and openly, and to recognize the limitations of scholarly communication systems and tools.

Critical information literacy also helps us to apply a critical and thoughtful approach to everyday life practices: we use (and produce) information in routine tasks and activities, such as reading newspapers, considering political candidates, or purchasing groceries.

To read more about critical information literacy and how libraries support it, Nicholson recommends this article written by Eamon Tewell, featured on In the Library with the Lead Pipe: An open access, open peer reviewed journal, titled “Putting Critical Information Literacy into Context: How and Why Librarians Adopt Critical Practices in their Teaching,” at https://uoguel.ph/criticalinfolit.
Be a part of our story and help us advance library spaces, services, and resources.

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