

OPEN ACCESS

INTRODUCTION

We've all had that feeling of frustration when hitting a paywall while browsing online. However, this experience might become less frequent in the future, at least for research publications and educational information.

Open access (OA) is a publishing practice that increases the accessibility of information. In 2001, the Budapest Open Access Initiative clearly defined the overarching goal of OA: that research should be free and accessible to anyone with an internet connection. OA aims to remove barriers to accessing scholarly literature, which in turn facilitates research progress, and enriches teaching and learning. The root of OA is built on the belief that knowledge is a public good; it should be shared with all those who wish to access it. It emphasizes the ideals of transparency in publishing and equity in access. However, in practice, OA often replicates existing inequities in access to information (see the [Quick Things page on accessibility](#)) and exclusion of voices from published discourse.

The OA movement has several branches, including Open Publication, Open Data, and Open Educational Resources (OER).

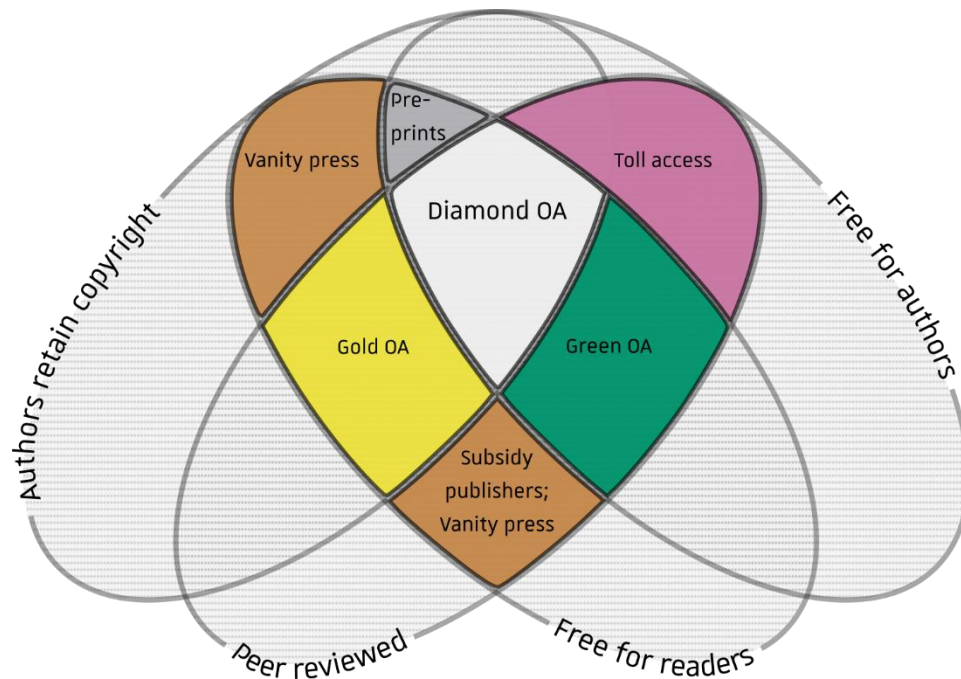
OPEN PUBLICATION

Open publication refers to free and unlimited access to research outputs such as journal articles, theses, and books. Open publication can greatly increase the pace of scientific research. For example, the majority of academic publishers removed access barriers to COVID-19 articles, contributing to the quick development of COVID vaccines. Open publication expands reader diversity, which potentially stimulates collaboration between different domains and fosters innovation.

Because of these evident advantages, open publication has been widely adopted in many countries. In Canada, public funding agencies such as SSHRC, NSERC, and CIHR require that funding recipients publish their research outputs in an open format within 12 months of publication. Fonds

de recherche du Québec (FRQ) requires immediate open access availability. Depending on the journal, there are two major types of open publication:

- Gold Open Access: free for everyone to read
- Green Open Access: a paid subscription is required to access the published article, but authors can make a version of their articles available in repositories for anyone to access for free.



Venn diagram highlighting the different levels of open access in scholarly publishing, as a function of cost to the readers and authors, copyright retention, and peer review.

Image source: Farquharson, J. I. and Wadsworth, F. B. Introducing Volcanica: The First Diamond Open-Access Journal for Volcanology. *Volcanica*, 2018 1(1): i-ix.

OPEN DATA

Open data fosters transparency and reproducibility, which is considered the gold standard of scientific research. Open data is an umbrella term that embraces many good practices in research, such as sharing research data and notes, conducting research with sound methods, recording detailed lab notes, documents survey instruments, etc.

Another facet of open data is the public perspective. Researchers often receive funding from provincial and federal public agencies, and therefore the outputs of their research should be transparent and accessible by the public.

Video: [Open Data Explained in a Nutshell](#). Authors: Ina Bäckström, Ilya Kompasov, Jana Eberwein. [CC BY](#).

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Open Education Resources

Open Education Resources include textbooks, media, lesson plans, quizzes, etc. that can be freely accessed, shared, adapted, and repurposed because they are made available online through the public domain or [Creative Commons licenses](#). Among many benefits, one significant advantage of OER is their potential to reduce or eliminate the high prices that university students pay for textbooks and other study materials. More information on OER can be found on the [Concordia Library OER guide](#).



Image description: screenshot of OER page at Concordia library.

CONCLUSION

OA refers to a set of practices related to distributing scholarly outputs, educational resources, and other publications digitally at no cost to readers. The overarching goal of OA is to provide access to knowledge as a public good. Imagine: what would the world be like if all published information, including university textbooks, were available for free? However, there are critiques of OA as well, including that it upholds historical hierarchies and exclusion, and doesn't truly allow everyone to contribute or benefit. Do you see any drawbacks to OA?

QUIZ

Which is NOT one of the potential benefits of open publication?

- A Speeding up the progress of scientific research
- B Making more money by publishing in an open access journal
- C Promoting creativity
- D Providing free access to the general public
- E Fostering collaboration between different domains

Correct answer: B

Feedback: Authors do not make money by publishing in an open access format. Instead, open access is about providing free access to the public.

ACTIVITY



Purpose: This activity provides you more resources for OER materials.



Task: Explore the [list of North American OER policies and projects](#), and the [BC Open Textbook Collection](#). Find one textbook or other material related to a course you're taking now.



Time: This activity should take about 15 minutes to complete.

REFLECTION:

Let's reflect on the significance of Open Access for creating greater access to knowledge.



Task: Read the plain English summary of this [article on the public rationale for open access medical research publishing](#) and the conclusion. Write a short reflection on this topic (150-200 words) about how the availability of open access publications has affected or might affect your life in the future.



Time: This reflection should take about 15-20 minutes to complete.

FURTHER RESOURCES

Webpage: [OER by discipline](#)

Concordia Library's guide to open textbooks and other resources by subject area.

Journal article: Brainard, J. (2021). [Open access takes flight](#). *Science*, 371(6524), 16-20.

A feature article in the journal *Science* about open access publishing, specifically in the context of mandates by funding agencies to make research findings available to all.

YouTube video: [Open Access Explained!](#)

A brief video introduction to the principles of open access.

References

Wikipedia. [Open access](#). 2022

[Budapest Open Access Initiative](#). 2023.

University of Edinburgh. [Thing 12: Open Educational Resources](#). *23 Things for Digital Knowledge*, 2016.

Farquharson, J. I. and Wadsworth, F. B. [Introducing Volcanica: The First Diamond Open-Access Journal for Volcanology](#). *Volcanica*, 2018 1(1): i-ix.

Chalmers, R. [Explainer: What Is the Open Movement](#). *The Conversation*, 2012 October 28.

VIDEO TRANSCRIPT

Intro slides: Concordia library logo

Veronica Bergsten, Teaching and Research Librarian

Interviewer: What is open access? [question displayed on the screen]

Veronica Bergsten: Open access is a publishing practice that really focuses on the accessibility of information. So, in 2001, the Budapest Open Access Initiative defined the overarching goal of OA as making research outputs that should be free and accessible to anyone with an Internet connection.

Visual slide text: Open access (OA) research should be free and accessible to anyone with an internet connection.

Visual image description: A ball breaks the wall flying towards a bookshelf full of books.

Veronica Bergsten: So really, the initial goal of OA was to make scholarly literature more accessible by removing barriers. So, what this ends up doing in turn is to facilitate access, it facilitates the research process and ends up enriching teaching and learning experiences. So, open access has really focussed on the foundation of two beliefs. The first belief being that knowledge is a public good, and those folks who wish to access that knowledge should be able to access it freely.

Visual: Video clip shows a white board drawing with the theme of public good, fostering communication and engagement

Veronica Bergsten: But what usually happens in open access, it can perpetrate inequities in scholarly discussion and in information access. And it can also discourage and exclude certain voices that are not usually found in public discourse.

Visual slide text: Amplifies existing inequities in access

Veronica Bergsten: So, OA is a broad term that has a few branches. So that includes open publication, open data and open educational resources.

Visual slide text: Open publication, open data, open educational resources (OER)

Interviewer: Can you give us a quick introduction of each? [question displayed on the screen]

Veronica Bergsten: Yeah, absolutely. I'll start off with open publication. Open publication, refers to free and unlimited access to research output.

Visual slide text: Open publication can increase the pace of scientific research.

Veronica Bergsten: That can be things like journal articles, books and theses. What this really aims to do is greatly increase the rate of scientific research. An example of this would be in COVID-19, at the beginning of the COVID 19 pandemic, the majority of scholarly publishers removed access barriers to articles related to COVID-19. And what this ended up doing is to help contribute to the rapid development of vaccines. And so, the goal of open publication is to expand reader diversity. So, you're getting more researchers from a variety of disciplines accessing this content, because there's no barriers. What this has the potential to do is that it fosters collaboration between researchers in different fields, as well as innovation.

Visual: Video clip shows a person wearing a mask and searching for information with a laptop

Visual: A video clip of a PubMed search with the keyword covid 19 vaccine, and the results page.

Visual image description: Gloved hands writing labels on testing tubes

Interviewer: What about open data? [question displayed on the screen]

Veronica Bergsten: So open data really focuses on fostering transparency, and reproducibility, which is a gold standard in scientific research.

Visual slides text: Open data fosters transparency and reproducibility

Veronica Bergsten: This really highlights things like keeping detailed lab notes, using sound scientific methodology, survey equipment, documents, so on and so forth. So really open data is an umbrella term for all of those things. And it really has a key aspect of public accessibility, and public perspective. Part of that, it's usually for grants. The funding comes from federal and provincial public agencies, and the research outputs of those projects need to be transparent and publicly accessible.

Visual: Video clip showing a pair of hands playing with a phone, book pages are being flipped through

Visual: A screenshot of public funding agency logos CIHR, NSERC, FRQ

Visual slide text: Open data: transparent and accessible by the public

Interviewer: What is an open educational resource? Is this something related to university students' textbooks? [question displayed on the screen]

Veronica Bergsten: Yeah, so yes and? no. Open education resources are way more than textbooks. It also refers to lesson plans, quizzes, assignments, video tutorials, sound files, really the list goes on and on.

Visual slide text: OER (open educational resources). Imagine what the world would be like if study materials were free for learners?

Veronica Bergsten: It's way more than just textbooks. And there's a few key defining features of OER. Some of the key characteristics of OER are that they're freely accessible, shared, adapted, and can be repurposed. And they're able to have these characteristics because they can be found in the public domain, or they have Creative Commons licences. OER and using OER has a long list of benefits, but one of the most prominent benefits is the cost factor. Usually using OER helps lower costs for students' textbooks as well as other costs related to instructional materials for courses. So, the Concordia Library has a designated subject guide on open educational resources that talks about the benefits and how to use them but also has a myriad of resources that users can search through, to find OER for a wide variety of disciplines and fields.

Visual: Screenshot of Open Educational Resources webpage from Concordia library website

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