Supporting Open Educational Resources

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Sharing Before OER

- Sharing paper-based lesson plans
  - Teaching with the newspaper
    - Worksheets, templates, maps, etc...
      - Handouts and photocopies
        - Library books, videos, music

Advantages: low-tech, could be used by everyone, portable

Disadvantages: cost, weight, can be out of date

A Digital Sharing Culture

- Bulletin Board Systems (1978)
  - Usenet (1979) and FTP servers (1970s).
    - Shareware (1982) & GPL (1989)
      - Archie (1990), Yahoo (1995), Google (1997)
        - Gopher, World Wide Web (1991)
          - Napster peer-to-peer (1999) Also Gnuzilla, Kazaa
            - BitTorrent services (2002) Suprnova.org, isoHunt, TorrentSpy, Pirate Bay.

Learning Resources (1)

- Project Gutenberg (1971, 2000)
  - arXiv preprints (1991)
    - GeoCities (1995)
      - Stanford Encyclopedia of Philosophy (1995)
        - MERLOT (1997)
          - Slashdot (1997)
            - Web Syndication: ICE, RSS (1998)
   - Open Content (1998)

Learning Resources (2)

- Nupedia (1999), Wikipedia (2001)
  - LiveJournal, Blogger (1999)
    - Open Archives Initiative (2000)
      - Creative Commons (2001)
        - MIT's OpenCourseWare (2001)
          - OER (UNESCO definition), 2002
            - Stack Overflow (2008)
              - MOOC (2008)
                - Open Educational Practices (2009)

Major Elements of OER (from the history)

- Content library of some sort
- Creation, editing, storage
- Search and retrieval service
- Content description and metadata
- Licensing and permissions
- Review and moderation
- Community and networks
- Support and training
- Access from other services
- Management & Sustainability
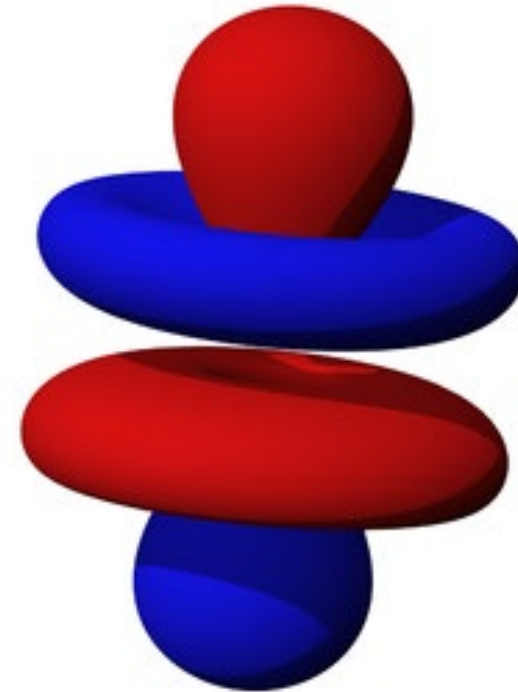
Programmers
Designers
Experts

Description & Metadata

Librarians
Archivists

Community Development
Social Services
Companies & Trades

Creation, Editing, Storage

Content Library

Search & Retrieval

Management. Infrastructure & Sustainability

Licensing & Permissions

Review & Moderation

Community & Networks

Learners
Adults
Children
Community

Access from Other Services

Government
Industry
Universities
Foundations
Community

Support & Training

Practices & Pedagogy

Instructors
Tutors

Practitioners

Supporting Open Educational Resources

The Plan…

Continuing barriers to access and use of OER

- As found in the literature and surveys

Examples from other fields and content types

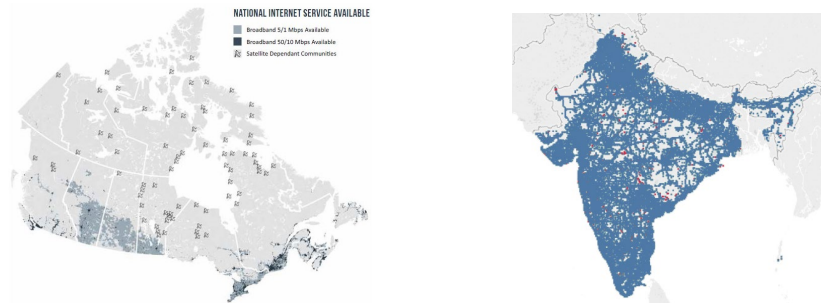- Using the wider internet to draw inspiration

Supporting OER Services and Platforms

- Examples and ideas to support OER in learning today

Physical Barriers

- Computer equipment and electricity
- File storage or bandwidth

Management. Infrastructure & Sustainability

- Canada: national broadband initiative; India: Bharat Net
- Energy: hydro, solar, wind, nuclear
- Platforms: Raspberry Pi, Framework
- Media: USB, local area network

- Mobile learning network support
- Community access centres
- BCcampus, eCampusOntario, Contact North, IGNOU

NIC is offering VC services since 1995
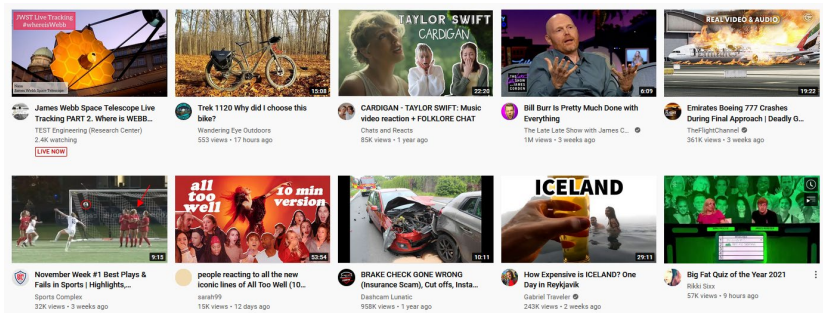
2278+ VC Studios
395 VIP VC Sessions in 2019
24 K + VC Sessions in 2019
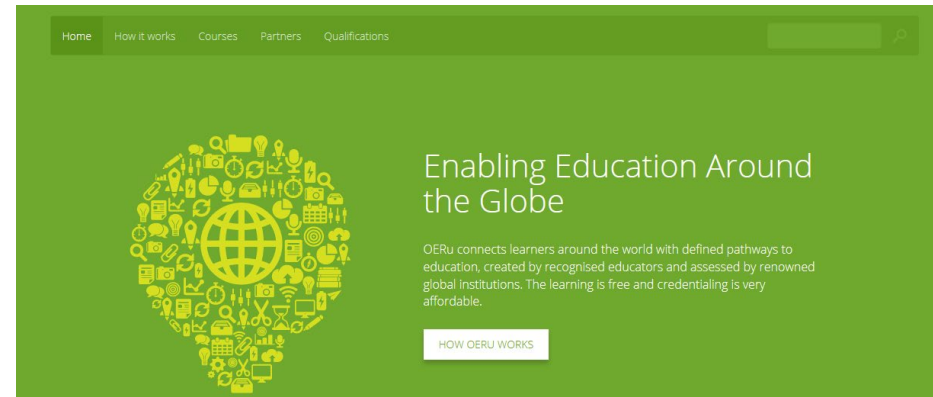6.09 Lakh + VC Studio Hours in 2019

Lack of OER

- E.g. no OER in a given field of study, language, locale
- Also, no OER in the proper format
  E.g. hard copy resources for field trip in climate science

Creation, Editing, Storage

- Government Content, CBC, BBC
- Community generated content (YouTube, Flickr, Twitter, Facebook, Wikipedia, Stack Overflow)

- Government or Institutional MOOCs
- OCW reourposed content
- Community generated content (OERu)

Enabling Education Around the Globe

OERu connects learners around the world with defined pathways to education, created by recognised educators and assessed by renowned global institutions. The learning is free and credentialing is very affordable.

HOW OERU WORKS

Lack of OER

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Creation, Editing, Storage
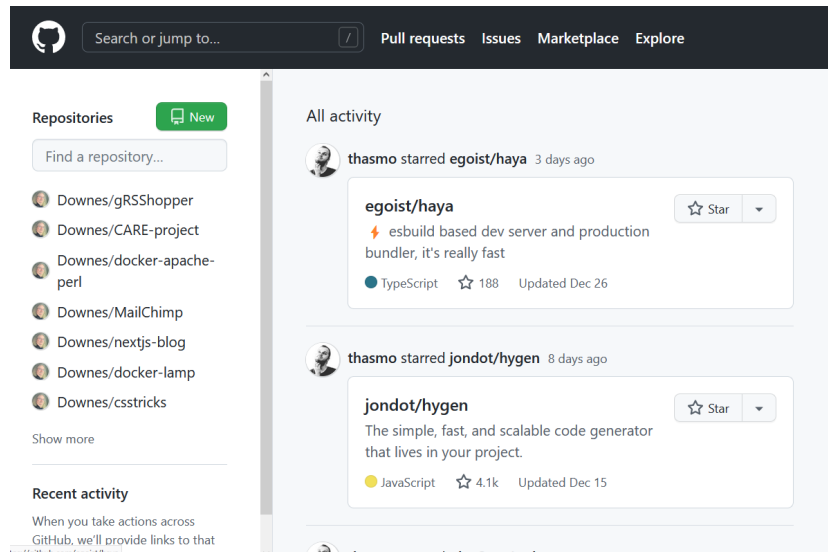
Content authoring and version control tools
- Desktop & Mobile: Word, Docs, Slides, etc
- Web Authoring: Blogger, WordPress
- Versioning and community: GitHub, Gitlab
- Audio & Video: Audacity, OBS, OpenShot
Resources need to be portable & reusable

Awareness

"material that is free and available needs to be marketed and collated in a database properly since many of the well-intentioned professors don't know about some of these materials."

NASA
- Mailing Lists
- Newsletters
- Social Media
- Conferences
- Programmes

- CC Open Learning Platform
- Open Education Conference
- OER Commons & OER Hubs
- Commonwealth of Learning (COL)

Perceptions of Quality

- Most surveyed feel OER overall is of sufficient quality
- However, lack of time to evaluate OER

- ISO Standards and Certification
- Product testing and reporting
- Review and moderation

TIPS Framework
- Teaching and learning processes
- Information & material content
- Presentation product & format
- System technical & technology

Curation

Curation is "an integral part of the normal workflow of data creation and managing of open educational resources… good data and digital asset management at local levels is also good practice"

Content Library

Media and Journalism
- Stock video – Kaltura
- Image library – Flickr, DigiKam

Docs and Notes
- Teams, Slack, Mattermost, Rocket Chat, Wire

Library Services

- Scholarly Communication
- Subject Liaisons
- Administration
- Teaching & learning
- Public Service & Reference
- Collections & Tech Service
- Other
- University Press

Open Data

"From accelerating economic growth to ensuring government accountability, Open Data can benefit citizens, organizations – and the governments themselves."

"The COVID-19 response requires an integrative, collaborative and managing real-time deidentified data and information to produce the best decision-making."

COVID-19 Open Research Dataset
CORD-19

AI2 Allen Institute for AI | Semantic Scholar
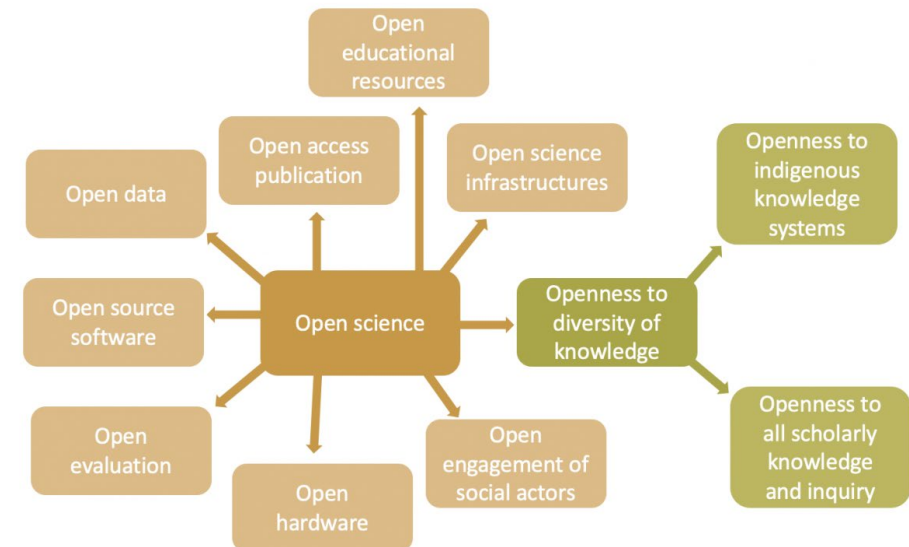
- OER Commons: Open Data Sets
- APIs and End Points
- Working with Data: Jupyter Notebooks, Kaggle

Discoverability

"We need to know where to go for high-quality resources that will fit with our course goals and that can be easily adopted by us and our students"

Search Services

- Google, Bing, DuckDuckGo

Hashtags

- Flickr, Twitter

Subscription
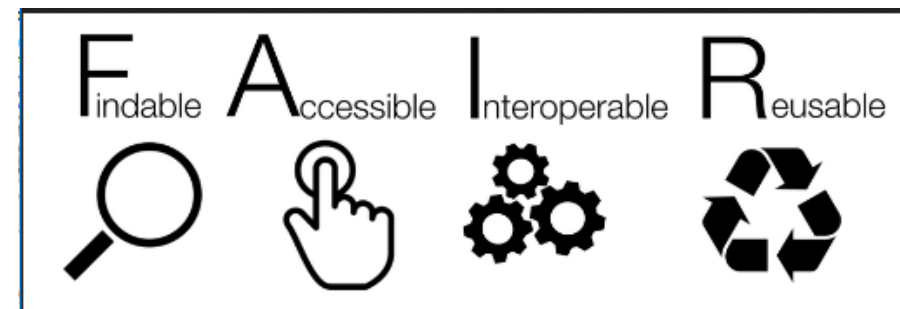
- Mailing Lists, Podcasts
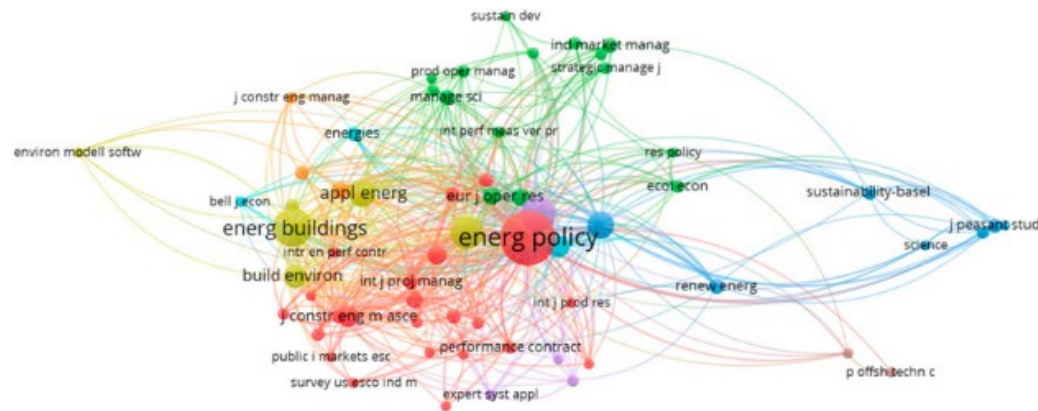
AI and Algorithms

- Feedly LEO

FAIR

- Findable – can be indexed, searched
- Interoperable – common formats, not plugins
- Accessible – alternative formats, readers
- Reusable – licensed, generic, adaptable

Findable Accessible Interoperable Reusable

Supporting OER

"Institutional support is critical for any innovation or staff engagement, and the institution's policies are the primary guide to how staff will approach OER adoption and creation."

Support & Training

Government Impact Calculation

- Logic model / Theory of Change
- Outputs and Outcomes
- Key Performance Indicators
- Benefits

- Documenting impact
  - Financial
  - Outcomes & student learning
- Incentives – promotion, tenure
- Training and development

Funding models

- Endowment Model, e.g. the Stanford Encyclopedia of Philosophy
- Membership Model, e.g. Sakai Educational Partners Program
- Donations Model, e.g. Wikipedia and Apache Foundation.
- Conversion Model, e.g. Redhat, Ubuntu, SuSe. They convert free to paying customers
- Contributor Pay Model, e.g. Public Library of Science (PLoS)
- Sponsorship Model, Stanford on iTunes, sponsored by Stanford & Apple
- Institutional Model, e.g. MIT OpenCourseWare
- Government Model (including UN) e.g. BCcampus
- Community model, e.g. Slashdot, Stackoverflow

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https://www.downes.ca