1. Know your library
   • Library Facilities
   • Library Resources: Findmore, LINC, etc
   • Library Services: Graduate Students
   • Tools: Proxy Bookmarklet, Find It!@NUS Libraries, EndNote

2. Research skills
   • Research data management: An overview
   • Publishing tips
A two-minutes video at https://www.youtube.com/watch?v=FVYFcEz_x0g
Library Essentials

Smart Card/Library Pin
Enter the libraries

Library Account
Check your record
Borrow /Renew /
Reserve books

NUSNET ID/password

NUSNET Account
Everything E:
E.g.
Portal/E-Resources/E-forms

NUSNET ID/password
NUS IT Care: 6516 2080
Mon – Fri:
  Term 8am – 9pm
  Vacation 8.30am – 6pm

Sat:
  Term 10am – 5pm
  Vacation Closed

Sun & Public Holiday:
  Closed

Reading Area is open 24/7 for NUS Staff & Students

https://libportal.nus.edu.sg/frontend/opening-hours-calendar?selectedLib=0
E-Resources cluster

Photocopy / Printing / Scanning Payment by Cashcard/Ez link

Self-Checkout Machine Pay Fines via NUSFastPay

Loans Desk (RBR Collection) *self-service kiosk

Reading lounge: Current Newspapers

New Books Display
Medical Library: Facilities

- Singapore Malaysia Collection
- Study Cubicles
- Training Room (walk in to use when not booked for training)
- Discussion Rooms 1 & 2 (Book online)
- Discussion Room 2
  Open for 24 Hours
- Discussion Room 3
  (Walk in use)
- 24 Hour Reading Area

Open for 24 Hours
Library Resources: NUS Library Portal

http://lib.nus.edu.sg
ALL (FINDMORE@NUSL)
- Searches books, Media, eBooks, journal articles, newspaper articles, online thesis & more
- Covers most but not 100% of our articles & E-Resources

BOOKS AND MEDIA (LINC)
- Good for known item search
- Covers books, DVDs, music scores
- Cannot be used for journal or newspaper articles
• Use Filter to refine search results
• Useful to search full-text articles
• Select ‘Books & Media’ tab
• Search the journal ‘European Journal of Clinical Nutrition’ by ‘Title’
• Learn how to read a journal record with online & print version
• Login to Library account to request for closed stack journal
- Enter Matric no. & Library PIN to login to Library Account
- See your loan record, library fines, modify PIN
- Renew or reserve library materials

RENEW ONLINE (Up to 3 times)
RBR (Reserved Books/Readings)
2 hour/overnight loan (subject to fines)
Search catalogue (by module code /lecturer’s name) E.g. CO5102

E-Reserves
Scanned articles recommended by lecturers
Search LumiNUS by module codes
Only 1 download
https://luminus.nus.edu.sg/
Library Services: Graduate Students
### Services for Graduate Students

<table>
<thead>
<tr>
<th>Services</th>
<th>Links</th>
</tr>
</thead>
<tbody>
<tr>
<td>Essential Guides</td>
<td></td>
</tr>
<tr>
<td>Ask a Librarian</td>
<td></td>
</tr>
<tr>
<td>Schedule an Advisory Session with Your Resource Librarian</td>
<td></td>
</tr>
<tr>
<td>Loan of Library Materials</td>
<td></td>
</tr>
<tr>
<td>Interlibrary Loan</td>
<td></td>
</tr>
<tr>
<td>Pay Fines Online via NUSpayPay</td>
<td></td>
</tr>
<tr>
<td>Print Form to Pay Fines</td>
<td></td>
</tr>
<tr>
<td>Renew Loans</td>
<td></td>
</tr>
<tr>
<td>Report a Lost Book</td>
<td></td>
</tr>
<tr>
<td>Reserve Items</td>
<td></td>
</tr>
<tr>
<td>Recommendation to Purchase New Materials</td>
<td></td>
</tr>
<tr>
<td>Recommend Books</td>
<td>(Check Status)</td>
</tr>
<tr>
<td>Recommend Journals</td>
<td></td>
</tr>
<tr>
<td>Recommend Media Materials</td>
<td></td>
</tr>
<tr>
<td>Purchase Articles/Book Chapters/Conference Papers Not Found in NUS Libraries</td>
<td>(Check Status)</td>
</tr>
<tr>
<td>Purchase Articles/Book Chapters/Conference Papers Not Found in NUS Libraries</td>
<td>(For research assistants of Yale-NUS College faculty members)</td>
</tr>
<tr>
<td>Book ARTIBUZZ &amp; Central Library Lobby</td>
<td></td>
</tr>
<tr>
<td>Book Library Facilities</td>
<td></td>
</tr>
<tr>
<td>Change Mail/Email Address</td>
<td></td>
</tr>
<tr>
<td>Network Printing</td>
<td></td>
</tr>
</tbody>
</table>

**Loan Entitlement**

- 30 books
- 28 days
- renew 3 times online
- RBR: 2hr/overnight
• Google “Dietary effects on breast-cancer risk in Singapore” by Lee, J; Lee, H.P; Gourley, L; Duffy, S.W; Day, N.E; Estève, J

• Use Proxy Bookmarklet to download the fulltext article
• Refer to guide to install “Proxy Bookmarklet” at https://libguides.nus.edu.sg/proxybookmarklet/installondesktop
• Click on Proxy Bookmarklet to access the fulltext article
- Go to Google Scholar
- Configure setting to link to Find It! @NUS Libraries
• Click on **Find It! @NUS Libraries** icon to download full text articles
Summary: Tools to Find Full-text

- Search in Google Scholar
- Library proxy bookmarklet
- FindMore@NUSL
  - Other resources
  - Alternatively
- Only if proxy failed
- Only if FindMore@NUSL failed
- LINC

Document Delivery
EndNote

A bibliographic management tool that:

• *Stores* citations

• *Organizes* citations

• *Formats* citations
1. Introduction

Ovarian cancer is the second most deadly gynaecological cancer in the world, and the most deadly in North America [1], highlighting the need for primary prevention through modifiable risk factors potentially including the consumption of tea, coffee, and caffeinated soft drinks. Black tea consumption has been suggested to be associated with increased level of estrogen circulation in postmenopausal women [2], while green tea [2-4] consumption has been suggested to be associated with reduced risk of colorectal cancer among women. In a population-based study, a lower risk of ovarian cancer was observed among women who consumed black tea [4]. Controls were randomly selected from the general population.

References


http://libguides.nus.edu.sg/endnote
Installing EndNote X9 on PC

Refer to EndNote guide at: http://libguides.nus.edu.sg/endnote
EndNote X9 for Mac is available for download via NUS IT website.

https://nusit.nus.edu.sg/services/software_and_os/software/software-for-mac-and-linux/

Installing EndNote X9 on Mac
"Data management should be woven into every course in science, as one of the foundations of knowledge".
Research Data Lifecycle

Planning
- Data management plan

Collecting
- Data organisation
- Documentation
- Data security

Analysing
- Data storage
- Backup

Publishing
- Data sharing

Preserving
- Data reformatting
- Data archival

Reusing
- Finding data
- Data citation

Adapted from: https://www.goshen.edu/academics/data-management/
Components of a data management plan

- Data organisation
- Documentation
- Data storage and security
- Ownership and rights
- Data sharing and licensing
- Data preservation

After this lesson, you will be able to:

1. Describe your data (i.e. source, format, scope)
2. Identify types of documentation suitable for your data
Question: Which **ONE** of the following statements is **FALSE**?

A. Data can be categorised into primary, secondary or tertiary data.

B. Different disciplines have and use discipline-specific language around the subject research data.

C. Data can be regarded as situational; the same information may be research data for some research questions but not others.
A. Data can be categorised into primary, secondary or tertiary data.

❖ **Primary** data are collected by the investigator conducting the research.

❖ **Secondary** data are collected by someone other than the user. Some examples include published research, census, organisational records, etc.
B. Different disciplines have and use discipline-specific language around the subject research data.
C. Data can be **situational**; the same information may be research data for some research questions but not others.

❖ For example, CCTV footage may be archived or destroyed by a security firm. But when used to study human behaviour or 21\textsuperscript{st} century surveillance methods, it becomes data for that researcher.

❖ Thus, research data are very much about **when** they are used, as well as **what** they constitute and the **purpose** for which they are to be used.

Therefore, we need **context** to interpret, analyse and reuse data.
<table>
<thead>
<tr>
<th>Data Class</th>
<th>Source or process</th>
<th>Scope or content examples</th>
<th>Format examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>Generated by lab equipment</td>
<td>Chromatograms; gene sequences</td>
<td>Lab notes; samples; specimens; methodology</td>
</tr>
<tr>
<td>Computational / Simulation</td>
<td>Generated from computation models</td>
<td>Climate models; economics prediction models</td>
<td>Methodology; SOPs; models; algorithms; scripts; simulation software</td>
</tr>
<tr>
<td>Observational</td>
<td>Recordings of specific phenomena at a specific time or location</td>
<td>Climate data; seismic data; medical imaging; survey or interview results</td>
<td>Field notebooks; photographs; films; questionnaires; responses; codebooks; audio or video recordings</td>
</tr>
<tr>
<td>Derived</td>
<td>Produced via processing or combining other data</td>
<td>Data mining; compiled databases; GIS</td>
<td>Databases; spreadsheets, data files</td>
</tr>
<tr>
<td>Reference</td>
<td>Extracted from published and/or curated datasets</td>
<td>Genbank, crystallographic databases</td>
<td>Database application; spreadsheets, data files</td>
</tr>
</tbody>
</table>

Adapted from: EDINA and Data Library University of Edinburgh.(2011) Research Data MANTRA [online course].
https://mantra.edina.ac.uk/
What datasets might be generated in my research?
What file type or format might each dataset be in?
What are some ways to add context to research data?

Context comes from proper documentation, e.g. hypothesis/research question, methodology, definition of variables, what was done with missing values, etc.
In preparation for a Resource Management Plan, an officer discovered 14 duplicate GPS inventories of roads. However, because none of the inventories had enough metadata, it was impossible to know which inventory was best or if any of the inventories actually met their requirements.

The officer had to re-inventories all the roads. This took another 9 months.

Source: DataONE Education Module: Data Management. DataONE.
• Electronic notebooks facilitate documentation by:
  • **Linking** data, files and pages for easy referencing/searching
  • Allowing **embedding** and viewing of data and image files within notebooks
  • Ability to **track changes** → Audit trail
  • Ability to **locked and electronically signed** → Defence against claims of fraud, evidence in patent disputes, regulatory approval, etc.
  • Ability to **export data** to a common file type → Exchange information or backup

• Do the following to ensure proper documentation:
  • Creating an **table of contents/index** for referencing/searching
  • Attach equipment readouts/printouts and reference to relevant experiments within notebooks
  • Create an audit trail by amending in ink and signing off
  • Indicate or remove blank spaces and sign off at the end of everyday
• Back up hardcopy (lab) notebooks by scanning (e.g. PDF format)

Metadata is information about data (i.e. who, what, when, where, why, and how):

- **Vague**: See page 5 of log book

- **Better**: Western blot from *Mus musculus* samples, performed on 23 Aug 2019. For methods and blots, see page 5 of log book. For digitised images, see “C:/Documents/Wblots/”.

- **Best**: ??
A digital, structured metadata (Dublin Core schema):

- Creator: A.M. Chou
- Contributor: K.P. Sem
- Date: 23 Aug 2019
- Title: Western blot from *Mus musculus* samples
- Subject: *Mus musculus*
- Identifier: 2019-08-23_Blot01.tif
- Format: TIF image

Other documentation types

- Highly versatile
- Open format
- Describe data content and general file structure

**README.txt files**
- List of variables or information for every experiment
- Add structure to unstructured notes

**Templates**
- Useful for processing heterogeneous data into consistent, computable dataset

**Data dictionaries**
- Suitable for spreadsheets and datasets containing many variables
- May be part of README.txt file

**Codebooks**
- Suitable for spreadsheets and datasets containing many variables
- May be part of README.txt file

- Variable name
- Variable definition
- Data unit
- Data format
- Min and max values
- Method of measurement
- Precision of measurement

- Date
- Experiment
- Sample
- Sample conc.
- Instrument power
- Wavelength
- PMT voltage
- Calibration files
- Measurement files

Adapted from Guide to Writing "readme" Style Metadata, Comprehensive Data Management Planning & Services, Cornell University
What are some **documentation methods** suitable for your research data?

What **metadata schemas** will you employ, if any?

What **tools** do you need for documentation?
1. Be mindful about your publishing choices
2. Adopt appropriate research metrics
3. Create a consistent and persistent online identity
1. Be mindful about your publishing choices

I. Generate a pool
  - Talk to your supervisors, seniors etc.
  - Look at similar articles or articles in your citation network
  - Use journal finders to search for journals by subject, publisher, keywords, etc. E.g. Journal/Author Name Estimator (JANE)

II. Narrow down
  - Criteria when selecting journals
    - What are the aims and scope of the journal?
    - Has the journal published articles that are similar to yours?
    - What are the journal’s restrictions?
    - What are the journal’s metrics?

For more info, see Scholarly publishing: Journal selection LibGuide
Publishing Fundamental: Selecting the Right Journal

DATE & TIME
16 Apr 2019 (Tue), 10am - 12nn

Journal selection is an important process, as you can only submit to one journal at a time.

Read More


DATE & TIME
17 Apr 2019 (Wed), 10am - 12nn

Publishing in top-tier journals brings your research publications to a higher level. In this...

Read More
2. Adopt appropriate research metrics

http://libguides.nus.edu.sg/eng_research/evaluate/citation_analysis
<table>
<thead>
<tr>
<th>Cited Works</th>
<th>Citing Articles (cited by)</th>
<th>Number of Citations (times cited) for each cited work</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>b</td>
<td>4</td>
</tr>
<tr>
<td>b</td>
<td>A, B, C, D, E</td>
<td>3</td>
</tr>
<tr>
<td>c</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

6 Citing Articles
1 Self-Citation

8 - Total citation counts
Citation count vs FWCI

FWCI: A measure of how well cited a publication is compared to similar publications
• The *h*-index is an author-level metric that attempts to measure both the **productivity** and **citation impact** of the publications of a researcher.

• A researcher with a **h-index** of *n* has published *n* **papers** each of which has been cited **at least n times**.
• **Journal Citation Reports** (JCR): Information on **Journal Impact Factor**. The higher the impact factor the more influential the journal is considered to be.

• **Scopus Journal Metrics**: A free listing of journal metrics (i.e. **CiteScore**, etc) in Scopus database.
• It is used as a proxy to determine how important a given journal is in its field
• The journal Impact Factor is the average number of times articles from the journal published in the past two years have been cited in the JCR year

\[
\text{Calculation} = \frac{\text{Cites to recent items}}{\text{Number of recent items}} = \frac{637}{104} = 6.125
\]
Better to judge a journal by its quartile ranking in a particular subject category.
• Categories of research metrics
  • Article-, author-, journal-level, etc.
  • Citation count: Absolute and field-weighted
• Understand limitations of use
  • Always use a basket of metrics

2. Adopt appropriate research metrics
• Publish with consistent name
• Register for [ORCID](https://orcid.org); it is a unique, persistent identifier
• Ensure each of your scholarly output has a unique, persistent identifier, e.g. DOI

3. Create a consistent and persistent online identity
What is it?
It is a unique and persistent 16-digit identifier expressed as an *url* that connects you to your research activities throughout your career.

Benefits
- Eliminates name ambiguity
- Increases research visibility
- Connects you to your works and affiliations
- Stay with you for life
- Saves you time

Register @ [https://orcid.org/register](https://orcid.org/register)
When do I use an ORCID iD?

- Submitting manuscript to publisher
- Grant submission
- Peer review
- Your websites / social media
- CV

For more info, see http://libguides.nus.edu.sg/orcid
Sharing publications on networking platforms?

• Long-term accessibility and sustainability not guaranteed
  • Social Science Research Network (SSRN) was acquired by Elsevier in May 2016

• Research social networks are not considered as “Open Access”
  • Elsevier and American Chemical Society (ACS) filed lawsuits against ResearchGate in Germany and USA between 2017-2018
  • Academia.edu was asked by Elsevier to take down papers in Dec 2013

• Find where and appropriate version to share at https://www.howcanishareit.com/


Are you infringing on copyright laws
**Gold OA**
- Article becomes open access *immediately* on publication
- Available to fully open access journals, as well as hybrid journals
- Very often, an article processing charge is required

**Green OA**
- Publish in a subscription-based journal
- Making a *version* of your article (i.e. preprint, postprint, and/or published PDF) available via a repository
- No article processing charge is required

*What is pre-print, post-print, and publisher's PDF?*

Pathways to open access
Our goal is to collect, preserve and showcase the research output of NUS researchers in order to:

- Support them in increasing their research visibility
- Demonstrate the research excellence of NUS to the world
NUS’ institutional repository

Access Options
- Free
- All Research Disciplines
- Safe & Perpetual Storage

Usage Statistics & Citations
- SCOPUS™ Citations
  - 10 checked on Mar 6, 2018
- WEB OF SCIENCE™ Citations
  - 10 checked on May 8, 2018
- Page view(s)
  - 166 checked on Jul 8, 2018
- Download(s)
  - 114 checked on Jul 8, 2018
- Google Scholar™ Check

DOI & Handle
- Searchable & Discoverable
What we do

1. PLAN & CONDUCT
   Learn about literature review, databases, academic writing via workshops and personalised advisories

2. PUBLISH RESEARCH
   Find out more about publishing in impactful journals and with scholarly presses through talks and workshops

3. ENHANCE VISIBILITY
   Enhance your research visibility through the use of ORCID IDs, the adoption of green open access and more

4. ARCHIVE & PRESERVE
   Preserve publications and research data in our ScholarBank@NUS to facilitate new knowledge creation and fulfil funders’ mandates

5. MEASURE IMPACT
   Measure and benchmark the quality and impact of your research output using citation metrics using tools like Scopus, SciVal, Web of Science

Librarians are here to help
Survey

https://tinyurl.com/MDG5214-form19