10-2021

Developing data skills in Malaysian and Singapore librarians via online Library Carpentry

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Citation

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LAS-**PPM** Joint Conference 2021

Agenda

About Library Carpentry

About the LC Workshops by Monash University Malaysia

The collaboration

Feedback from the workshop

Learnings & Reflections

About Library Carpentry

- The Carpentries is a global community teaching **data science** and **computational skills** to librarians, researchers, industry and government
- Consists of Library Carpentry, Data Carpentry and Software Carpentry.
- Library Carpentry
  - For people working in library and information-related roles
  - Focuses on building software and data skills within the Library and information-related communities
  - How to automate tasks; create, maintain, and analyze data; and better understand the use of software in research
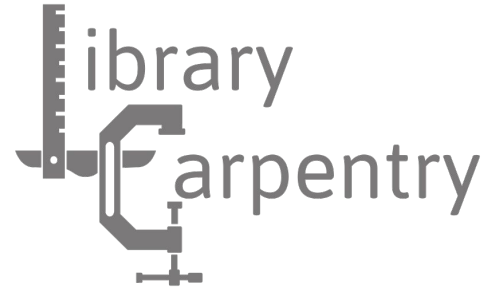
Two types of Carpentry workshops

Centrally-Organised Workshops
- Registration & instructor recruitment managed by The Carpentries Workshop Administration Team
- A fee shall be paid if the organiser is not already a Carpentries member

Self-Organised Workshops
- registration & instructor recruitment managed by local organizer

Costs involved in organizing a physical workshop

Background

- Evolving and expanding role of librarians in research data support & increasing importance of data skills
- The first Library Carpentry workshop in South-East Asia took place in Singapore, jointly organised by LAS and Nanyang Technological University Libraries
- Inspired by the Singapore event, a workshop was planned by Monash University Malaysia for Oct 2020
- It would have been the first Carpentries event in Malaysia

The original plan

The workshop was planned to be a centrally-organized workshop with a fee:

Main instructor: Matthias Liffers, Research Software Skills Specialist, *Australian Research Data Commons (ARDC)* – was invited to come from Perth

Helper: Dong Danping, Research Services Librarian, *Singapore Management University (SMU)* – was invited to come from Singapore (Newly certified Carpentry instructor)

Helper: Belinda Sta Maria, Data Fluency Librarian, *Monash University Malaysia* (Newly certified Carpentry instructor)

Then comes COVID-19...

- Plans had to change as Monash University Malaysia Library shifted to online mode
- Switching to online workshop - unknowns and challenges
- Support from the lead instructor Matthias Liffers who was supportive and agreed to run the sessions FOC
- Two other experienced Carpentry trainers joined
  - **Anton Angelo,** Research Data Coordinator, *Canterbury University*
  - **Liz Stokes**, Senior Research Data Skills Specialist, *Australian Research Data Commons*

What happened next

- From *centrally-organized* to *self-organized*
- Administrative support provided by Monash University Malaysia

Two rounds of workshops

Round 1 (Jul 2020)

➔ 4 half-days from 10am-3pm
➔ Open to librarians from the ASEAN region, especially Singapore
➔ **50** participants in total
➔ Conducted mainly by the two experienced instructors, Matthias and Anton

Round 2 (Oct 2020)

➔ 4 half-days from 10am-3pm
➔ Open to librarians from Monash Malaysia Library, Monash staff from other departments, and private universities in Selangor and KL
➔ **62** participants in total
➔ The two newly certified instructors, Belinda and Danping had the opportunity to conduct a significant portion of the training

For the Librarians by the Librarians

- The workshops were advertised in Library Association of Singapore (LAS) and the IFLA Regional Office for Asia and Oceania

- Thanks to Mr. Edward Lim Jun Hao *(Business librarian from University of Connecticut)* who helped to promote the workshops to Academic Librarians in Singapore and the ASEAN region

- Bulk of the participants were from Singapore and Malaysia with some international participants, e.g. from Israel and the United States

Content of the workshops

Four topics were chosen for the two rounds of Library Carpentry workshops:

<p style="color:red; text-align:center">Introduction to Data (General expressions)</p>

<p style="color:green; text-align:center">OpenRefine</p>

<p style="color:red; text-align:center">Tidy Data</p>

<p style="color:green; text-align:center">SQL</p>

Lesson materials were openly available online from the Library Carpentries website, reusable under the CC-BY license

Challenges

- Shorter attention span for online meetings/trainings
- Carpentry workshops are known for lots of hands-on activities and interactions between trainers and participants
- In an online setting, trainers/helpers cannot walk around the room and help participants with technical issues or hands-on activities

*How to maintain the **hands-on approach & interactivity** during online workshops?*

Overcoming the challenges...

- Instead of usual two full-day workshops, the same content is delivered over 4 half-days
- Make use of **tools and resources** - collaborative Google Doc, Zoom chat, Carpentry website
- Hands-on activities and discussions in Zoom **Breakout Rooms** facilitated by helpers/trainers
- Invite participants to **talk about and share** their work in an open and friendly atmosphere
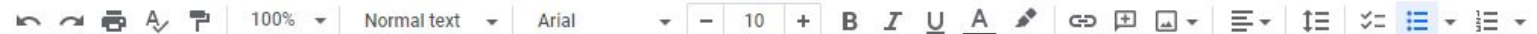
data that's important. ... **Big data** can be analyzed for insights that lead to better decisions and strategic business moves.

- **SAML** - Security Assertion Markup Language (SAML) is an open standard that allows identity providers (IdP) to pass authorization credentials to service providers (SP). What that jargon means is that you can use one set of credentials to log into many different websites.
- **SSO** - This *definition* explains the *meaning* on *single sign*-on (*SSO*), including how it works, the different types, and the advantages and disadvantages it provides.Single sign-on is an authentication scheme that allows a user to log in with a single ID and password to any of several related, yet independent, software systems. It is often accomplished by using the Lightweight Directory Access Protocol and stored LDAP databases on servers.
- **WAYFless** - WAYFless is a method of combining IDP addresses in URLs for the purpose of avoiding readers having to choose their own institution when adopting Shibboleth authentication.
- **Stanza** - a part of a configuration file that holds the settings for a particular feature e.g. single sign on
- **Altmetrics** - **Altmetrics** are metrics and qualitative data that are complementary to traditional, citation-based metrics. ... Sourced from the Web, **altmetrics** can tell you a lot about how often journal articles and other scholarly outputs like datasets are discussed and used around the world.
- **API** - An application programming interface (**API**) is a computing interface which defines interactions between multiple software intermediaries. It defines the kinds of calls or requests that can be made, how to make them, the data formats that should be used, the conventions to follow, etc.
- **Binary files** - A **binary file** is a computer file that is not a text file.[1] The term "binary file" is often used as a term meaning "non-text file".
- **UTF-8 encoding** - **UTF-8** is a variable-width character encoding used for electronic communication.

Feedback from the workshop

"One Up One Down"

- The Carpentry way of getting feedback from participants
- Participants were asked to share one thing they liked and one thing that can be improved
- It is one of the crucial activities for the Library Carpentry workshops
- The informative feedback that we got from participants will help us to improve our delivery of Library Carpentry workshops in the future

Feedback from the workshop

- More hands-on activities and **Breakout Rooms**!

- Participants generally enjoyed learning new tools like regular expression, OpenRefine, SQL and find them useful

- Learn coding without programming background

Rewards and Learnings

- New instructors, Danping and Belinda learnt through observing experienced and established Carpentries instructors like Matthias and Anton.
- They gained confidence and competence to organize and lead Library Carpentries workshops in the future
- The group picked up new tools and innovative teaching approaches for online trainings

Conclusion

- With all the challenges with organising and conducting workshops online, it was a great success as feedback received were mostly positive. Monash University still gets emails enquiring if there are further plans to offer these workshops.

- This collaboration proved that joint events and trainings can be effectively carried out in an online environment and demonstrated the flexibility of international collaborations without crossing the borders.

- To meet the growing interests and demands of data skills in librarians, libraries might consider organizing Library Carpentry workshops and/or getting their staff trained as certified instructors.

- Library Carpentry is also a great resource as all lesson materials are openly available and reusable.

Collaboration: Library and Librarians

Though relatively a new approach for Carpentry workshops, the collaborative efforts of the organisers and the instructors resulted in two rounds of successful online Library Carpentry Workshops in 2020.

Organisers/Coordinators:
- Namita Santra, Monash Malaysia Library
- Belinda Sta Maria, Monash Malaysia Library
- Dong Danping, Singapore Management University

Carpentries Instructors:
- Matthias Liffers (Research Software Skills Specialist), Australian Research Data Commons,
- Anton Angelo (Research Data Coordinator), Canterbury University,
- Liz Stokes, (Senior Research Data Skills Specialist) Australian Research Data Commons,
- Dong Danping (Research Services Librarian), Singapore Management University,
- Belinda Sta Maria (Web Librarian), Monash Malaysia Library.

Thank You

Find out more

The Carpentries
https://carpentries.org/
Library Carpentry
https://librarycarpentry.org/
The Carpentries Handbook
https://docs.carpentries.org/index.html
Monash University Malaysia Library
Carpentry Workshop Website
https://bellsm74.github.io/2020-07-21-monashmalaysia-online/

https://bellsm74.github.io/2020-10-13-monashmalaysia-online/