

A triple-blended eLearning model


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1. Introduction

Research Services

We provide Research Services to:

- Academic Staff
- Professional Staff
- Doctoral candidates
- Postgraduate students



AIL courses for Engineering

Courses embedded with Academic Information Literacy (AIL) contents:

- Five Postgraduate courses
- Five fourth-year undergraduate project courses (postgraduate level) by 2018
- One core first-year course from 2016-2020



Pandemic effect - Opportunity for change

- Covid 19 outbreak in early 2020
- An emergency change into online teaching and learning in the University
- Libraries and Learning Services adapted to the change immediately



2. A new sustainable approach

The first year eLearning initiative

- A case study conducted in 2018 to evaluate the relevance and impact of the eLearning initiative
- Methodologies used for the case study
- Main findings from the case study
- The eLearning Initiative was adapted to the new sustainable approach



Collaboration with the Faculty

- Two postgraduate course coordinators in the Faculty
- Student Experience Adviser in the Faculty - the course coordinator of Graduate School of Engineering



Course design - A triple blended eLearning model

- Online face-to-face workshops
- Drop-in sessions for each curriculum postgraduate course after the workshops
- Research and Study Skill Resources hub available in Canvas of the Graduate School of Engineering course



Digital technologies and tools applied

- Canvas and Course-builder
- Zoom including the functionalities of chat, breakout room, poll and recording
- Video editor
- [Mentimeter](#) and [Slido](#) for Q&A section



Design Principles

- A student-centred design approach
- **Associative view** (learning as activity)
- **Situative view** (learning as social practice)
- **Constructivist view** (learning is personally meaningful to the students)



2.1 Online face-to-face workshops

Online Face to Face Workshops

- 1.5 hour sessions were delivered via Zoom in early evening
- Contents covered including:
 - Literature review and information sources
 - Searching, Referencing and Research impact metrics for publishing
- Activities, real life stories, polls, videos, Zoom chat and breakout room discussions to make workshops interactive



Example 1 of slides in an online workshop

Step 3: Identify synonyms



Research topic: Effect of climate change on public health

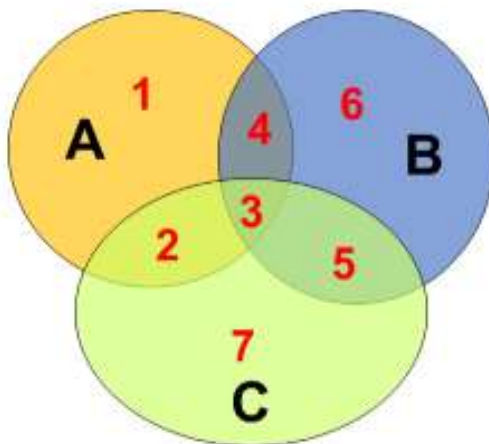
| | Concept 1 | Concept 2 | Concept 3 | Concept 4 |
|-----------------|-----------|----------------|-------------------|-----------------------|
| Keywords | effect | climate change | public health | Life cycle assessment |
| Synonyms | impact | weather change | human health | LCA |
| | influence | global warming | population health | engineering |
| | | | social health | |
| | | | | |



Example 2 of slides in an online workshop

Activity 1:

- A, B C represent search terms/keywords
- Numbers 1-7 represent possible search results
- Using Boolean operators AND OR NOT and nesting (bracket), answer the following questions



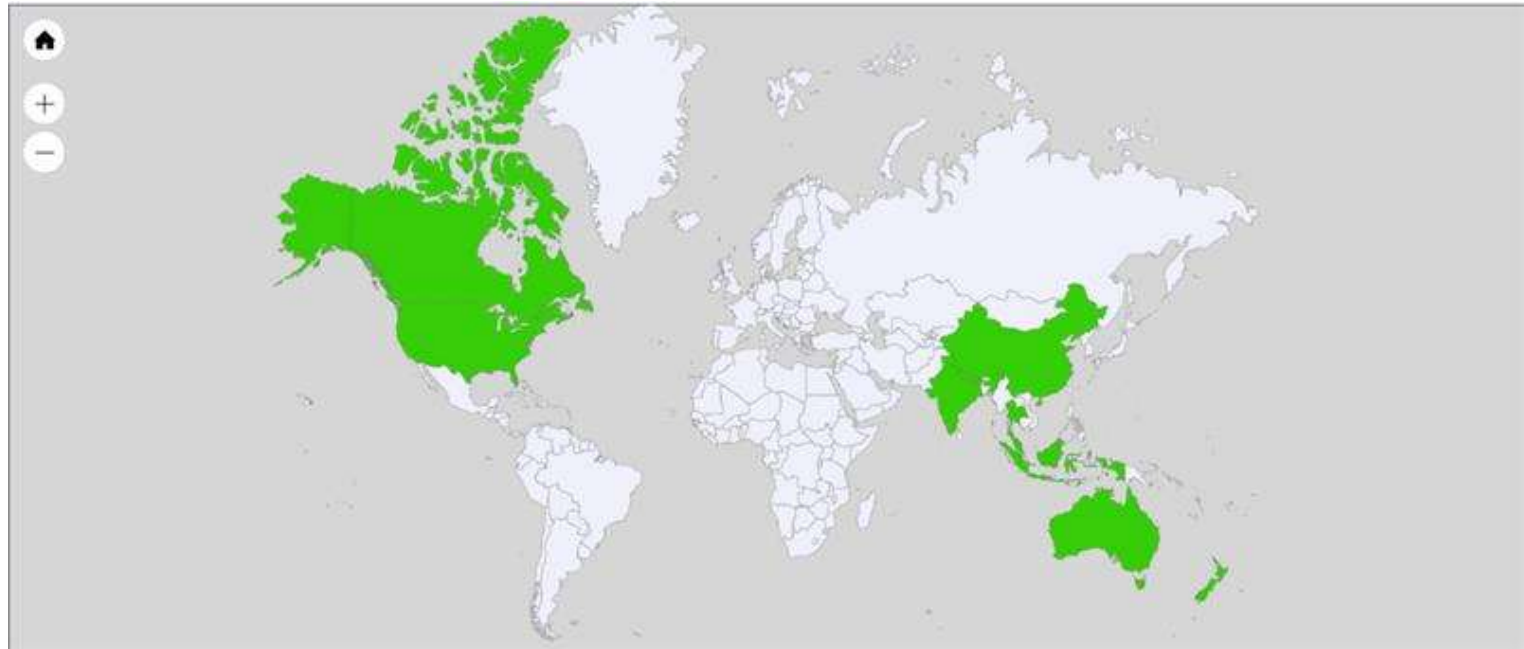
- A and B and C would retrieve?
3
- A and (B or C) would retrieve?
2+3+4
- (A or B) and C would retrieve?
2+3+5
- A or (B and C) would retrieve?
1+2+3+4+5
- What search would retrieve 6?
B not (A or C)
- What search would retrieve 5?
(B and C) not A



Finished!



Participants from different countries



2.2 Drop-in sessions



Drop-in sessions

- Scheduled after the online workshops as follow-up support
- Q & A session and the course coordinator also attended
- Students attended with questions from their own searching
- Covered information and specific resources tailored to the course assignment topic



Example 1 of slides of the drop-in session for a course

Information sources for Energy 722 course assignment



- ❖ Library homepage and the Catalogue
- ❖ Library databases:

| | |
|---------------------------|----------------------------------|
| Scopus | OnePetro |
| Compendex | IGA Geothermal Conference Papers |
| ProQuest | GRC Geothermal Library |
| IEEEExplore | OECD iLibrary |
| SpringerLink | StatsNZ; Inforshare |
| Web of Science | Energy & Power Source |
| ScienceDirect | Geobase |
| Google Scholar | Georef |
| Derwent Innovations Index | ScienceCinema |



Example 2 of slides of the drop-in session for a course

Stats **NZ** Infoshare

Tairāngia Infoshare

Browse Search Load query Export direct Help Glossary

Infoshare: Connecting you to a wealth of information.
You can either [Browse](#) for data by category or use [Search](#).
Data you have chosen a subject category or a result, select variables to customize the data, and view on screen or download.
[Help](#) has a complete guide to using Infoshare.

Data changes and unscheduled releases can be viewed by [logs](#).
To stay informed about date changes and unscheduled releases, please subscribe to our email notification service [here](#).
You can provide us with feedback comments [here](#).

Subject categories

Show all items

- Businesses
- Economic indicators
- Government finance
- Health
- Imports and exports
- Industry sectors
 - Agriculture - AGP
 - Alcohol Available for Consumption - ALC
 - Building Activity Survey - BAS
 - Building Consents - BLD
 - Business Data Collection - BDC
 - Christchurch Retail Trade Indicator - RTI
 - Energy Statistics - MEG
 - Energy Price Indices - Base Period: December 1995 quarter (= 1000) (Qrtly-Mar/Jun/Sep/Dec)
 - Energy Use Survey - EUS
 - Amount of petrol and diesel consumed by industry in Teitokuia (Annual-May)
 - Area of greatest energy savings by industry (Annual-May)
 - End use of petrol and diesel by industry in Teitokuia (Annual-May)
 - Energy management initiatives by industry (Annual-May)
 - Energy use limits by industry in physical limits (Annual-May)
 - Energy use limits by industry in Teitokuia (Annual-May)
 - Priority ratings of energy management by industry (Annual-May)
 - Farm Inputs - FFI
 - Forestry Logging and Timber Production - FLT
 - Internet Service Provider Survey - ISP
 - Livestock Slaughtering - LSS
 - Manufacturing Survey (ANZSIC00) - MFG
 - Primary Production - PRP
 - Research and Development survey - RAD
 - Retail Trade (ANZSIC06) - RTT
 - Retail Trade Deflators (ANZSIC00) - RTE
 - Secondary Production - SEP
 - Selected Services Survey (ANZSIC08) - SSS
 - Transport - TPT
 - Wholesale Trade Survey - WTS



2.3 Research and study skill resources hub



Research and Study Skills Resources Hub in Canvas (LMS)

- Ongoing 24/7 support after the online workshops
- Available for all Engineering Postgraduate student in Canvas
- A good online resource for reviewing contents learned or self-taught



Research and Study Skill Resources Hub

Research and Study Skill Resources



[1. Finding information](#)



[2. Referencing](#)



[3. Evaluating information](#)



[4. Research and Writing Skills for Engineering](#) ^{en}



[5. More Research and Study Skills Resources](#)



2.4 Feedback



Staff feedback

A quote from staff feedback –

*“Kia ora Dahlia,
Just wanting to say a (belated) big ‘thank you’ for the time you put in to helping with EngGen 769. I think you sessions are really valuable. Many of these students haven’t really had to have a good look at literature before so great that they get some useful tips on how to find what they need, and evaluate it. And great that your sessions are opened up to others who can also benefit – it is quite a bit more work from an admin point of view to make sure that everyone is catered for but well worth the effort I think for good learning experience.”*

Student feedback

- Student feedback was received through the course evaluation report
- Students found the library workshops were one aspect that was most helpful for their learning

e.g.,

"I have learnt about how the journal paper will be, where it is available, what is literature review and how it will present and got more knowledge on library learning service and their database i.e., Scopus, Google Scholar, ScienceDirect".

3. Discussion & Conclusion



Discussion & Conclusion

- The Covid-19 pandemic provided the opportunity for the transformation to a triple-blended eLearning model
- Collaboration with Faculty staff is the key to the success
- The new delivery model has made our services more sustainable and scalable

4. Next steps

Next steps

- Evaluating the tripled-blended eLearning model
- Making the access to the Research and Study skill Research Hub more open
- Covering search examples for specific information such as standards and patent information in the online workshops



5. References



References

Greeno, J. G., Collins, A. M., & Resnick, L. B. (1996). Cognition and learning. In D. C. Berliner, & R. C. Calfee (Eds.), *Handbook of educational psychology* (pp. 15-46). New York: Routledge.

Han, D., Gunn, M., & Chidlow, R. (2017). eLearning initiatives-can their effectiveness really be measured?. In *28th Annual Conference of the Australasian Association for Engineering Education (AAEE 2017)* (p. 862). Australasian Association for Engineering Education.

Mayes, T., & De Freitas, S. (2004). *Review of e-learning theories, frameworks and models: JISC e-learning models study report*. London: The Joint Information Systems Committee.

Mendieta Aguilar, J., Chidlow, R., Han, D., Bingham, T., Lin, S., Hardley, L., & Lin, L.. (2021). *Integrating Academic Literacy Support into the Curriculum* (Version 2). The University of Auckland. <https://doi.org/10.17608/k6.auckland.16831210.v2>

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Questions?



Thank you!

