ENGINEERS WITHOUT BORDERS 2018
SEARCHING THE LITERATURE, REFERENCING AND MORE...

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OVERVIEW

1: 2018 EWB Challenge
2: Activity 1 - Smart Searching Techniques
3: Activity 2 - ECU WorldSearch
4: Selecting Credible Sources
5: Activity 3 - Engineering Libguides
6: Activity 4 - APA Referencing
7: Library Resources
8: Library Services
9: Questions
2018 CAMBODIA EWB CHALLENGE LIBGUIDE

2018 Cambodia Engineers Without Borders

About the 2018 EWB Challenge

Water Supply
Sanitation and Hygiene
Energy
Agricultural Systems
Waste Management
Information and Communication Technologies
Conservation and Livelihoods

Engineers Without Borders Australia (EWB)

EWB is a not-for-profit organisation that strives to create significant changes through humanitarian engineering and addresses a lack of access to basic human needs such as clean water, energy, sanitation and hygiene, waste systems and engineering education. The EWB Challenge provides an opportunity for 1st year engineering students to address a real life engineering problem. More information. Participating in the challenge also enhances your skills and contributes to making you a 'global engineer'.

EWB Australia YouTube
Watch clips of previous participants in Engineers Without Borders Challenge.
2018 EWB Challenge

WHAT IS IT?

This year’s EWB Challenge focuses on CRDT’s work with three adjacent communities along the Mekong River in the Sambo District of Kratie Province:
- Ksach Leav
- Koh Khnear
- Puntha Chea.

This year’s Challenge looks at developing engineering, and technical and social solutions to support community development with particular considerations around sustainable livelihoods and the well-being of rural farmers, and environmental conservation.
1. Analyse Your Question

The literature can assist you in the development of your topic, clarify your position or argument, or provide supporting evidence to illustrate your point of view you wish to argue against or provide useful primary source material.

2. Identify the Key Concepts

3. Find Synonyms or Alternative Keywords

4. Use Truncation* (optional)

5. Combine Keywords using AND, OR

6. Use Inverted Commas
ACTIVITY 1: USING SMART SEARCHING TECHNIQUES

Complete Activity 1 with the Design Area of your choice
Follow the STEPS provided - 5mins
Step 1: Analyse Your Topic

Design Area 1: Water Supply
Design Project 1.3: Treatment of river water supply

"This project will investigate the design of an appropriate water treatment method for the water that is pumped from the river for household use."

Additional considerations could include comparing the process to the current method of boiling water and methods to communicate when the water is safe to drink.
Step 2: Identify the Key Concepts

Topic: "design of an appropriate water treatment method for the water that is pumped from the river for household use in Puntha Chea, Cambodia."

CONCEPT 1: Water treatment
CONCEPT 2: Household use
CONCEPT 3: Puntha Chea
Step 3: Find Synonyms

**Water treatment**
- OR water purification
- OR water filtration

**Household use**
- OR non-commercial use
- OR domestic use
- OR household

**Puntha Chea**
- OR Sambo District
- OR Northeast Cambodia
- OR Cambodia
- OR South East Asia
Combine Keywords Using AND / OR / NOT

**AND** narrows down the search
"water treatment" AND household

**OR** expands the search
"water treatment" OR "water filtration" OR "water purification"

**NOT** excludes terms
"water treatment" NOT desalination
Use Truncation and Inverted Commas

**Truncation Symbol *:**
Use this to search for variations on a word.

For Example:
environment* will pick up...
environment, environments, environmental, etc.

**Inverted Commas or Quotation Marks "..."**
Use this to look for specific phrases.

For Example:
"developing countries" or "climate change"
Steps 4-6: Use Truncation, Combine Keywords, and Use Inverted Commas

"Water treatment"

OR

"water purification"

OR

"water filtration"

"Household use"

OR

"non-commercial use"

OR

"domestic use"

OR

"household water"

Puntha Chea

OR

Sambo District

OR

Northeast Cambodia

OR

Cambodia

OR

South East Asia
Example of Developing A Keyword Search Strategy

Using AND, OR, *, "..."

- Water treatment AND "developing countries"
- ("Water treatment" OR water purif*) AND ("developing countries" OR Cambodia)
ACTIVITY 2: HAVE A GO - ECU WORLDSEARCH

Complete Activity 2, search: "Water treatment" AND Cambodia and apply the limits - 3mins
SEARCH

Use ECU Worldsearch to search through the library’s collection of books, ebooks, journal articles and more.

FILTER

You can use the filters menu at the left hand side of the page to restrict the search to specific items.

ACCESS

You can click on each item for more information. If the item is an article or ebook held online, you can press the ‘Access online’ button to view it.
EVALUATING INFORMATION

CAN'T I JUST GOOGLE IT?

Strengths
- Useful when searching "Grey literature" i.e. conference proceedings
- Results are ranked by relevancy

Be aware that...
- Content is not always equivalent to the scholarly or peer-reviewed content in databases
- Difficult to perform specific searches with precise results
- Gaps in coverage - a lot of information in the world are not freely available on the web
- Citations are often incomplete.

Google Scholar is a useful supplement to database research, but you should use the Library’s databases to search for the high quality information that will be the basis of your research. The Library’s databases provide access to more comprehensive, authoritative and up-to-date information, and enable users to include better limits on searches for more precise results.
IS WIKIPEDIA OK?

Strengths
- Articles can provide an introduction and general overview of the subject
- It is useful for identifying the main terms associated with a subject, and these can be used in your search
- Articles may have useful references at the bottom of the page that you can follow up the links and use in your assignment

Be aware that...
- Anyone can add and edit entries, whether they are an expert or not
- It can be heavily biased
- It can be of substandard quality, subject to misinformation and error
- Articles can be the target of deliberate misrepresentation or 'vandalism'
CREDIBLE

Scholarly
Reputable
Trustworthy
Authoritative
Accurate
Reliable
Peer Reviewed
SELECTING CREDIBLE SOURCE MATERIAL

RECENT
Is it timely and up-to-date?
When was it published?
When was it last updated?

RELIABLE
Who wrote it?
Is it biased in any way?
Can it be verified?
Who published it?
Is it from a scholarly source?

READABLE
Can you read and understand it?
Who is the target audience?
Is the information too basic?

RELEVANT
Is it relevant to your topic?
Is it an overview or detailed?
Does it support or refute?
HOW TO SPOT FAKE NEWS

CONSIDER THE SOURCE
Click away from the story to investigate the site, its mission and its contact info.

READ BEYOND
Headlines can be outrageous in an effort to get clicks. What’s the whole story?

CHECK THE AUTHOR
Do a quick search on the author. Are they credible? Are they real?

SUPPORTING SOURCES?
Click on those links. Determine if the info given actually supports the story.

CHECK THE DATE
Reposting old news stories doesn’t mean they’re relevant to current events.

IS IT A JOKE?
If it is too outlandish, it might be satire. Research the site and author to be sure.

CHECK YOUR BIASES
Consider if your own beliefs could affect your judgement.

ASK THE EXPERTS
Ask a librarian, or consult a fact-checking site.
Welcome to the ECU Library Guides
Research assistance and useful resources in a guide, compiled by your friendly librarians. Know what we know - find it in the Library Guides!
ACTIVITY 3: HAVE A GO - ENGINEERING VILLAGE

Complete Activity 3, search:
Water treatment OR water filtration
AND household OR domestic
AND developing countries
Apply your own limits - 3mins
WHAT ARE THE KEY ENGINEERING DATABASES?

Knovel
Features include interactive tools for tables, charts, equations, plotters and graphs. Also includes material properties, process and design information, best practices, and equations and formulations for engineering disciplines.

ACCESS® Engineering
Features content from a broad range of McGraw-Hill engineering publications. Includes the latest editions of classics such as Mark’s Standard Handbook for Electrical Engineers, Roark’s Formulas for Stress and Strain, and Schaum’s Outlines.

Engineering Village™
Provides access to bibliographic databases of engineering research literature, including Compendex and Inspec, as well as to patents, standards and handbooks.
APA is the referencing and writing style set by the American Psychological Association, and has been adopted across the majority of courses at ECU. It is an (author, date) style of referencing that consists of two parts:

1. **In-text Citation** – a short reference (author, date) contained within the text of your assignment AND

2. **End-text Reference** – the full citation details of each in-text citation used in the text of your assignment.
APA REFERENCING STYLE
IN-TEXT EXAMPLE

Low-cost options for the treatment of drinking water at the household level are being explored by the Cambodian government and non-governmental organizations (NGOs) working in Cambodia (Askandar & Laohasiriwong, 2007), whereas Brown & Sobsey (2010) state many lack access to improved drinking water sources and diarrhoeal diseases are the most prevalent cause of death in children under 5 years of age. The ceramic water purifier (CWP), a locally produced, low-cost ceramic filter, is now being implemented by several NGOs, and an estimated 100,000+ households in the country now use them for drinking water treatment (Engineers For Change, 2012). Safe drinking water saves lives...
ACTIVITY 4: HAVE A GO - APA REFERENCING

Complete Activity 4:
Choose a book and journal article from one of your searches and create an end-text reference for each.
Follow the examples provided - 3mins
APA REFERENCING STYLE
END-TEXT: JOURNAL ARTICLE EXAMPLE

APA REFERENCING STYLE

END-TEXT: WEB PAGE EXAMPLE

Author

(Year)

Title


URL of the web page
APA REFERENCING STYLE
REFERENCE LIST EXAMPLE


- List is in **alphabetical order** according to last name
- Use a **hanging indent** for each subsequent line
- List is **double spaced** (check with lecturer)
TIPS FOR MANAGING YOUR LIBRARY RESEARCH

Tip 1: Allocate a realistic amount of time for searching the literature - this includes fine-tuning your search strategy, tracking down full-text items, and time to review and reassess your search.

Tip 2: Creating a spreadsheet or table that includes your keywords, search strategies, and notes about databases might be useful when first starting out.

Tip 3: Record the full bibliographic details of what you find, when and where you found it. (E.g. Website URLs and date accessed).

Tip 4: Consider using a reference management system such as EndNote.
HOW MUCH TIME DO YOU SPEND ON YOUR RESEARCH?

DATABASES
Access our databases to find full-text journals, ebooks, images, video, statistics, and abstracts.

REFERENCING
Access our APA Referencing Guide and EndNote Library Guide for additional support and tutorials.

STANDARDS
Access our Engineering Libguides to find databases to search for International and Australian Standards.
DOC DELIVERY

Document delivery is a service for requesting books, journal articles and other resources not held by an ECU library.

CONSULTS

ECU Library consultations connect researchers to the information and skills needed to support their research.

WORKSHOPS

The workshops help you become more proficient in researching and using the ECU Library and its resources.
Library Lunch & Learn Sessions include:

- How to use ECU Library
- How to use ECU Worldsearch
- Researching your Assignment
- Referencing
- Mind Mapping
- Streaming Music & Videos

Please register your attendance by visiting
ecu.au.libguides.com/library-workshops

Free study help, anywhere

In 2018, Studiosity is your free, 24/7, online lifesaver.

Find it at blackboard.ecu.edu.au

Studiosity
Welcome to SLIDE: Student Learning in a Digital Environment

SLIDE will introduce you to Technology-Enhanced Learning (TEL) at ECU. You will become familiar with:

- What Digital Learning is
- How to work in a Digital Learning Environment (DLE)
- What support is available when you are learning within the Digital Learning Environment (DLE)

**MODULE 1**
- Technology Enhanced Learning
  - Welcome to SLIDE
  - What is Technology-Enhanced Learning
  - Being "Job Ready"
  - ECU Systems: An Overview
  - Self-Directed Learning

**MODULE 2**
- Digital Learning Environment
  - Studying at ECU
  - Technology Requirements
  - BYOD: Bring your own device

**MODULE 3**
- Your Learning Environment
  - Getting Started
  - Meet Blackboard (LMS)
  - Get App-y
  - Virtual Classrooms
  - Create & Note-take
  - Submitting Assessments
  - Feedback & Marks

**MODULE 4**
- Digital Identity
  - Digital Identity
  - Professional Digital Identities
  - Social Media

- The Digital World
  - Online Behaviour
  - ECU Policies
  - Netiquette

- Protecting Your Digital Self
  - Online Privacy
  - Managing Passwords

Need help? Visit our contact page for assistance.
DANIELLE KONG
Subject Librarian: Engineering

Joondalup Campus
Make an appointment with me at the Library from:
Monday - Friday, 9am - 5pm

Contact
d.kong@ecu.edu.au   |   6304 6250

Consultations
I provide research advice and support in individual or group consultations for:
- Advanced searching skills (search strategies and databases)
- Technical assistance on using EndNote
QUESTIONS?