

Highs and Lows of Sci Tech librarianship Teaching (and the impact of Gen AI assisted tools)



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Facts and Figures

Emily

Liaison Librarian since 2008 (based in the Library's Faculty Engagement Team)

Part of my role is to teach research and critical thinking skills to engineering students and researchers

University of Sheffield

Number of students - 30,000

Faculty of Engineering

7,000 students (Undergraduate, Postgraduate Taught, Research)

10 departments plus multidisciplinary engineering programmes, foundation year and apprentices based at the Advanced Manufacturing Research Centre (AMRC)

30 teaching sessions held 2023/25 supported by 2 liaison librarians

Teaching in context



Working with academic departments to embed research and critical thinking skills

- provide a library welcome session during Intro Week
- bespoke lectures, workshops or webinars to support literature searching for a project or dissertation



Research and Critical Thinking workshops -

To complement embedded teaching the Library runs workshops and webinars to support students to develop research and critical thinking skills

Searching for Information / Using eBooks Effectively / Referencing and Preventing Plagiarism / Questioning and Evaluating Information

<https://www.sheffield.ac.uk/library/study/research-skills>



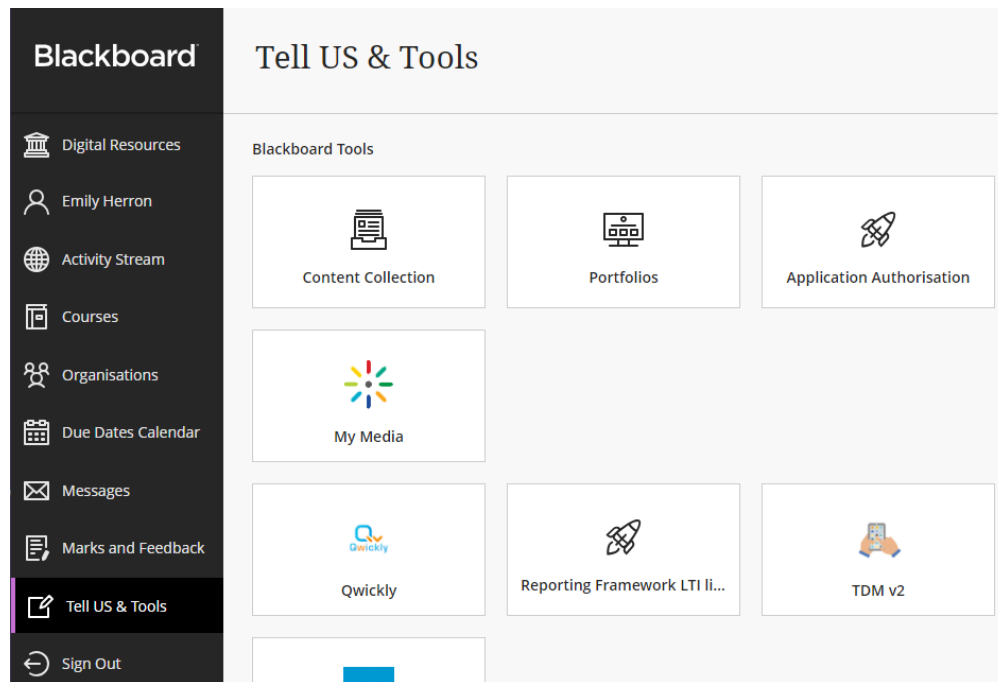
Embedding research and critical thinking tutorial in Blackboard

Library tutorials and guides are available to embed from Blackboard (VLE).

Videos can also be embedded from the Kaltura Shared Repository.

Tailor and enhance feedback by signposting to guidance on referencing, literature searching and research skills.

[Developing students' research skills](#)



The screenshot displays the Blackboard user interface. On the left is a dark navigation sidebar with the following items: Digital Resources, Emily Herron, Activity Stream, Courses, Organisations, Due Dates Calendar, Messages, Marks and Feedback, Tell US & Tools (highlighted), and Sign Out. The main content area is titled 'Tell US & Tools' and contains a section for 'Blackboard Tools' with a grid of icons: Content Collection, Portfolios, Application Authorisation, My Media, Qwickly, Reporting Framework LTI li..., and TDM v2.



Teaching experiences (highs and lows)



An overview of teaching sessions. Sessions can be a combination of the following:

Student level - undergraduate, postgraduate taught course or postgraduate research (sometimes staff support sessions)

Teaching setting - lecture style, computer room, webinar, 1-1 meeting

Topics covered - getting started with using the library, planning a search strategy, formats of information, thinking about where to search, evaluating sources, referencing and reference management software



Search strategy & referencing exercise

1. Think about your dissertation topic /research question.

What are the **key words** and **concepts** in the question you have chosen? Try writing down your ideas as individual words or phrases.



e.g. rainfall

What **alternative key words** can you think of to use within your searching?

	Search terms (key words)		Alternative terms
	<u>e.g.</u> green roof	OR	living roof
AND		OR	
AND		OR	
AND		OR	



3. Which of the following do you think is a good example of paraphrasing and why?

Original text -

“A third important part of Web 2.0 is the social web, which is a fundamental shift in the way people communicate. The social web consists of a number of online tools and platforms where people share their perspectives, opinion, thoughts and experiences. Web 2.0 applications tend to interact much more with the user, so the user is not only a user of the application but also a participant”.

Taken from

Oppenheim, C., (2012). *The no-nonsense guide to legal issues in web 2.0 and cloud computing*. London: Facet Publishing.

Paraphrase 1 -

Oppenheim notes that the interactive nature of Web 2.0 applications, in particular the social web, allows users to become participants in the process as they share experiences and opinions.

Paraphrase 2 -

The social web is an important part of Web 2.0. This has shifted the way that people communicate. They use several online platforms to share perspectives, opinions, and experiences. Users of Web 2.0 applications are participants as well as users (Oppenheim 2012, p.2).



Website



Example: www.energysavingtrust.org.uk
An online information source that can be created by anyone on any topic.

Academic authority.....75
Up-to-date.....72
Ease of use.....93
Subject focus.....89
Fun Factor.....62

Library Catalogue



Example: StarPlus
A discovery platform that enables you to find books, e-books, journals and individual journal articles all in one place.

Academic authority.....74
Up-to-date.....80
Ease of use.....72
Subject focus.....55
Fun Factor.....35

Search Engine



Example: Google Scholar
Enables you to search for information on the internet. Results can include different formats of information such as web pages, blogs and images.

Academic authority.....80
Up-to-date.....78
Ease of use.....80
Subject focus.....45
Fun Factor.....65

Friends



Example: (insert name of friend here)
Friends can be a good source of help and support at University.

Academic authority.....45
Up-to-date.....55
Ease of use.....90
Subject focus.....50
Fun Factor.....100

Database



Example: Scopus
You can use a database to search across hundreds of journals at the same time using keywords. You can create quite complicated searches and find influential journal papers.

Academic authority.....100
Up-to-date.....90
Ease of use.....65
Subject focus.....85
Fun Factor.....73

Social Media



Example: Twitter, Facebook
Allow users to network online, create and share content.

Academic authority.....25
Up-to-date.....100
Ease of use.....99
Subject focus.....10
Fun Factor.....97



Primary
sciences

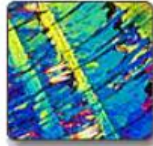
The collection

Cambridge,

Cambridge
University Press.



Format	Definition	Good for...	Not so good for...
Book	An information resource which can be easily created by anyone on any topic. Electronic 13	Daily information 10	Detailed and objective reports. 2
Newspaper	A regular publication containing new products plus information for a business sector. May be electronic 12	Latest product news 7	Accurate and reliable information 6
Journal	A written or printed work of fiction or fact. May be electronic 4	Very up to date information 5	Balanced and well researched information 14
Web page	A regular publication containing current events, informative articles, diverse features and advertising. May be electronic 3	Clear overview 1	Up to date information 8
Popular (trade) journal	A regular publication containing articles on a particular academic subject. Presents new research. Usually electronic 11	Latest research, critically reviewed by experts 15	Broad overview of a subject 9



Boolean Searching: More advanced searching

Monkey



Turtle



Shark



Q8. sea AND (beach OR trees)

Q9. (sea NOT land) OR trees

Q10. (land NOT sea) OR (sea NOT land)

Q11. (land NOT sea) AND (sea NOT land)

Q12. (land OR sea) NOT (beach OR trees)

()
OR
AND
NOT

Lessons I've learnt:

Sometimes less is more! It can be tempting to cover too many topics in the time given

The best sessions are planned in collaboration with programme leads (who attend in person to place the session in context) and are embedded into the course

Embed sessions at the point where students are undertaking a piece of work that requires the skills you are teaching

If you can, check out the room set up and equipment before the day

Try co teaching (if resources allow) - it can really help to plan sessions with someone else. You learn new ideas and can give feedback to each other.

Share resources - we have recently split up teaching subject areas and are working collaboratively on developing lesson plans, slides and activities

Don't be too hard on yourself!



What next?



University Structure Changes - implications for teaching

The University has recently undergone a restructure and are merging department to form schools -

- School of Mechanical, Aerospace and Civil Engineering
- School of Chemical, Materials and Biological Engineering
- School of Electrical and Electronic Engineering
- School of Computer Science

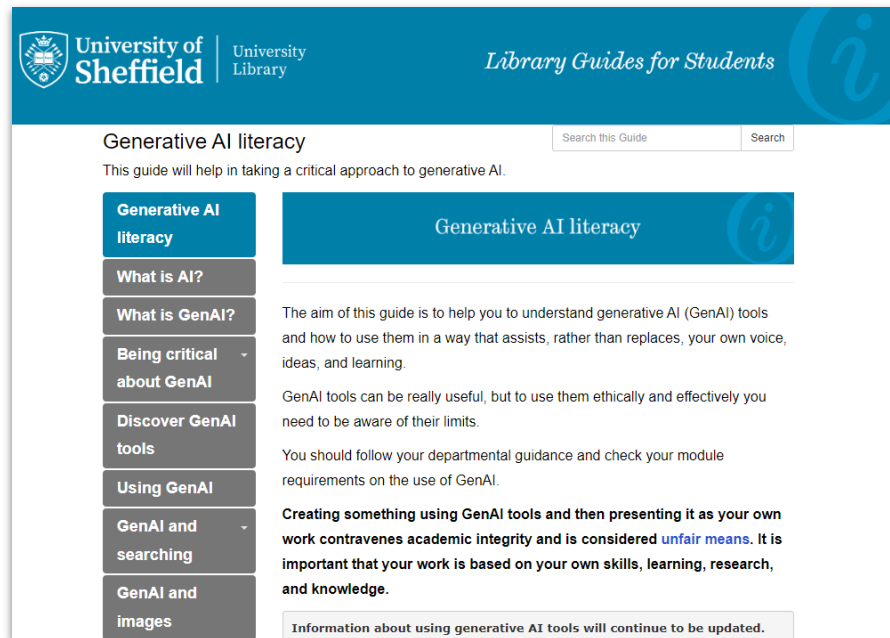


Finding reliable information (or not) using GenAI assisted tools - more questions than answers!

Can/should Chatbots be used as a source of information?

Could GenAI tools be useful in developing a search strategy for a literature review?

How can we ensure students learn responsible use of GenAI when searching or summarising information?



The screenshot shows the 'Generative AI literacy' guide page. The header includes the University of Sheffield logo and 'University Library' on the left, and 'Library Guides for Students' with an information icon on the right. Below the header, there is a search bar with 'Search this Guide' and 'Search' buttons. The main content area features a sidebar with a menu of topics: 'Generative AI literacy', 'What is AI?', 'What is GenAI?', 'Being critical about GenAI', 'Discover GenAI tools', 'Using GenAI', 'GenAI and searching', and 'GenAI and images'. The main content area displays the title 'Generative AI literacy' and the introductory text: 'This guide will help in taking a critical approach to generative AI. The aim of this guide is to help you to understand generative AI (GenAI) tools and how to use them in a way that assists, rather than replaces, your own voice, ideas, and learning. GenAI tools can be really useful, but to use them ethically and effectively you need to be aware of their limits. You should follow your departmental guidance and check your module requirements on the use of GenAI. Creating something using GenAI tools and then presenting it as your own work contravenes academic integrity and is considered unfair means. It is important that your work is based on your own skills, learning, research, and knowledge. Information about using generative AI tools will continue to be updated.'

<https://sheffield.libguides.com/genai>

Feedback/Discussion:

Are you making use of GenAI tools within your role? What tools are you using?

Can you see any problems or issues?

How can we best support students and colleagues in their use of GenAI tools?

Thank you for your time!

If you have questions you are welcome to
contact me:

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Any questions?

