UNIVERSITY OF ABERDEEN

Information Skills Refresher 5: Managing your dissertation research

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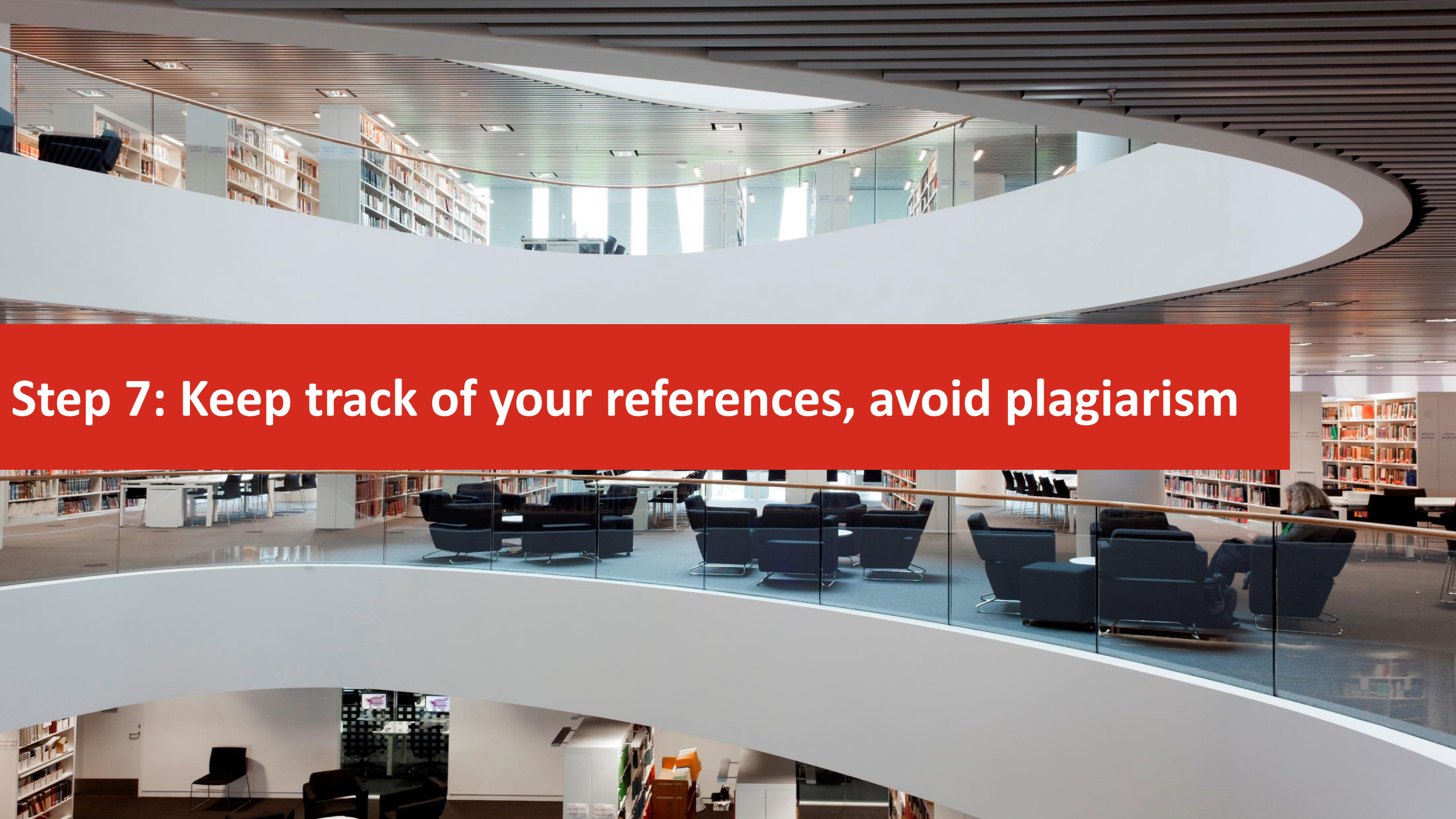
Steps to Finding Reliable Information

- Step 1: Get ready to manage the information you find
- Step 2: Plan your search
- Step 3: What sort of information – sources?
- Step 4: Look for books - use Primo and ebook collections
- Step 5: Look for research level material, e.g. journal articles. Use the Find Databases option in Primo to identify relevant databases, then link and search
- Step 6: Look for support materials - Use Google or other search engines
- Step 7: Keep track of your references, avoid plagiarism

In all processes: be aware of copyright and the need to avoid plagiarism



Step 7: Keep track of your references, avoid plagiarism

STEP 1: Keep a record of what you find

- It’s important to be organised! You’ll be reading a lot of sources
- Choices:
  - Record material (your sources) manually
    - Use a spreadsheet or document to record bibliographic details
    - Use index cards (or electronic equivalent)
  - Use reference management software
    - Many free and costed products
- Our recommendation: software can be helpful if you expect to cite more than 30 references. But if you have created a reliable manual system that is fine, especially during stressful times. It just needs to work for you

Referencing: manually or using software

- Referencing option within Microsoft Word
- Zotero, Mendeley, Cite This for Me, CiteULike, Citavi – free or low-cost web-based apps
- EndNote, ProCite, Reference Manager, Papers – purchased, machine specific
- RefWorks – free (because we have paid for it), web-based

- **Get organised:**
  - Find out what style you are expected to use – numbered, author/date, with or without footnotes
  - Invest time in learning how to use your preferred product correctly
  - OR become familiar with your preferred style and manually create your references

Research: citing and referencing

- There are only two **systems** in place. Name of **system** relates to how the citation is presented within the main body text of your document

  - Vancouver = Numbered system

  Recent studies (1,2) suggest that ....

  Recent studies by Grant [1] and MacKay [2] suggest that...

the black hole *shadow* [1]. This shadow is surrounded by a bright ring, the so-called *photon ring*, made of photons winding for one or many orbits in the very strong-field region extremely close to the black hole's event horizon.

The shape and angular size of the photon ring (or, equivalently, that of the shadow) contains very important information on the spacetime geometry because it depends on the properties of the compact object. For a Kerr black hole, the shadow slightly changes with the observer's inclination angle and with the black hole spin parameter [2]. Many articles have investigated whether alternative compact objects exhibit differences with respect to Kerr predictions [3–9].

These two specific features of the Kerr black hole, the shadow and the photon ring, have attracted considerable attention in the last few years because of the development of millimeter very long baseline interferometry (VLBI). In particular, the Event Horizon Telescope (EHT, [10]), which will become fully operational around 2020, will reach an angular resolution of $\approx$20 μas. This is less than the angular size of the shadow of the central black hole in our Galaxy, Sgr A*, which is $\approx$50 μas, varying only slightly with the black hole spin. We note that the first EHT data were able to constrain the intrinsic angular size of the emitting region close to Sgr A* to only 37 μas [11]. The shadow of the central black hole of the Galaxy M87 has an angular size of roughly half the size of Sgr A* and is also a target of the EHT. As a consequence, very near-future observations might allow constraining the Kerr metric para-

observed shadow cannot be fitted by using the Kerr metric.

In-text citation: one example of a numbered style

References

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[7] Vincent F H 2014 Testing Chern-Simons gravity with black holes? *Class. Quantum Grav.* **31** 025010

[8] Moffat J W 2015 Modified gravity black holes and their observable shadows *Eur. Phys. J.* C **75** 130

[9] Cunha P V P, Herdeiro C A R, Radu E and Runarsson H F 2015 Shadows of Kerr black holes *Phys. Rev. Lett.* **115** 211102

[10] Doeleman S *et al* 2009 Imaging an event horizon: submm-VLBI of a super massive black hole *In astro2010: The Astronomy and Astrophysics Decadal Survey of Astronomy* **vol 2010** 68

Example of the reference list (bibliography) for this numbered style (Classical and Quantum Gravity – journal style). References appear in the numbered order in which they were used in the text

Research: citing and referencing

- There are only two **systems** in place. Name of **system** relates to how the citation is presented within the main body text of your document

  - Harvard = Author-Date system

  Recent studies (Grant 2018, MacKay 2019) suggest that ....

  Recent studies by Grant (2018) and MacKay (2019) suggest that...

John Parnell[1*], John Still[1], Samuel Spinks[2] & David Bellis[3]

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In-text citation: one example of an author-date style

and pathfinder elements for gold mineralization including tellurium and mercury, at redox boundaries. Detailed studies of samples from Millport, Isle of Cumbrae, Firth of Clyde, show particles of native gold up to 10 μm size, typically with less than 15 wt% silver. Their context indicates that the gold was concentrated during diagenesis, in rocks that had not experienced regional temperatures above 100°C. These occurrences add to other evidence of a role for red beds in the genesis of gold mineralization.

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There is a growing awareness that sedimentary red beds (continental successions dominated by coarse siliciclastic sediments) play a role in the cycling of gold in the upper crust. In Europe, Permo-Triassic red beds in particular have been proposed as a source of gold-mineralizing fluids (Stanley *et al*. 1990; Leake *et al*. 1997; Shepherd *et al*. 2005). Continental Devono-Carboniferous rocks, the Old Red Sandstone *sensu lato*, have received less attention in this respect. However, gold-bearing grains in modern streams cutting through Devonian red beds in Scotland (Chapman *et al*. 2009) and the proven availability of gold to the Devonian surface environ-

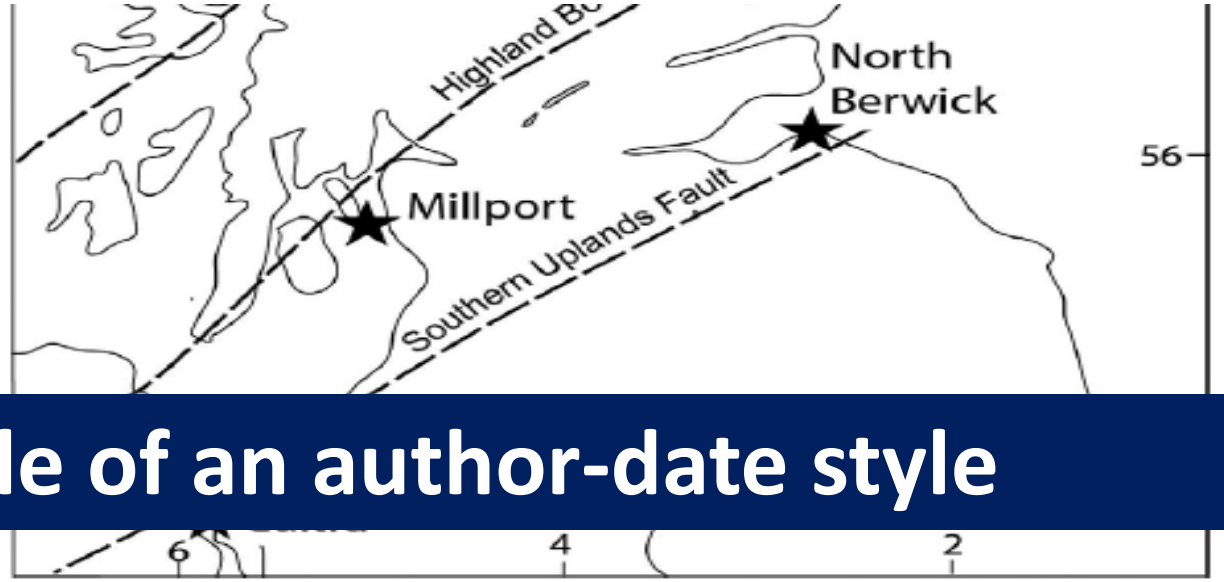

Fig. 1. Map of northern Britain and Ireland showing locations of red bed-hosted samples examined in this study.

of selenide mineralization (Spinks *et al*. 2014), were examined for mineralogy using an ISI ABT-55 scanning electron microscope. Compositions were measured using gold, silver and vanadium pure elemental standards. Samples from North Berwick, Millport and Cultra, representing over 200 km width of Lower Carboniferous continental red bed outcrops across northern Britain (Fig. 1), were examined for trace element concentrations using laser ablation inductively coupled plasma mass spectrometry (LA-ICP-MS). Analysis was performed using a UP213 LA system (New Wave, Freemont, CA) coupled to an Agilent (Wokingham, UK) 7500ce ICP-MS system. LA-ICP-MS was tuned for maximum sensitivity and stability using standard SRM 612 for trace elements in glass (NIST, Gaithersburg MD), optimizing the energy fluence to about 2 J cm^{-2}. A semi-quantitative calibration was provided using MASS-1 Synthetic Polymetal Sulfide (USGS, Reston, VA). Samples and the standard were analysed using a 100 μm diame-

Example of the reference list (bibliography) for an author-date style (Journal of the Geological Society). Authors in a-z order

(4) Large-scale redox boundaries in red beds may be worth investigating for possible gold mineralization.

Acknowledgements and Funding

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Scientific editing by John MacDonald

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Young, G.M. & Caldwell, W.G.E. 2011*b*. Early Carboniferous stratigraphy in the Firth of Clyde area: New information from the Isle of Bute. *Scottish Journal*

Citing and referencing

- There are many thousands of variations on the two systems
  - Find out which system you have to use (Author-Date or Numbered)
  - Find out which style/format is recommended within this
  - Do not leave this until you are writing up – avoid additional stress and find out soon
- Style variation occurs in punctuation, lettering format (italics, bold), amount and order of information presented within the in-text citation and the reference list (bibliography)

Author-Date in-text citations: examples of style variations

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- If 2 authors: **and or &**
  - A recent study (McCourt and Borompoka, 2018) indicated that…
  - A recent study (McCourt & Borompoka, 2018) indicated that…
- Separation between author and year: **comma or not**
  - A recent study (Grant & Borompoka, 2018) provided evidence…
  - A recent study (Grant & Borompoka 2018) provided evidence…
- More than 3 / 4 / 5 or more authors: **use of *et al.***
  - A recent study (MacKay, Grant & Borompoka, 2017) presented data…
  - A recent study (Mackay *et al.*, 2017) presented data…

Reference lists – examples of style variations

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Same source document – presented using different referencing styles

Einstein, A., and N. Rosen. 1935. “The particle problem in the general theory of relativity”. *Physical Review* 48: 73-77.

Chicago 16th edition

Einstein A, Rosen N. The particle problem in the general theory of relativity. Physical Review. 1935;48(1):73-7.

NLM

EINSTEIN, A. and ROSEN, N., 1935. The particle problem in the general theory of relativity. *Physical Review,* 48(1), pp. 73-77.

Harvard British Standard

Einstein, A. & Rosen, N. 1935, "The particle problem in the general theory of relativity", *Physical Review,* vol. 48, no. 1, pp. 73-77.

Harvard (as per Scopus/QuikBib)

Einstein A and Rosen N 1935 *Phys. Rev.* 48 73

Classical and Quantum Gravity

Reference Lists/Bibliographies

- Terminology differences are generally subject-based
  - e.g. reference list *vs* bibliography
  - Arts/Humanities – stricter definition/difference
- Footnote styles – presentational differences on the same two bibliographic systems (author-date or numerical)
- Appears complex and confusing because there are so many styles based on two systems
- For many styles/formats software can be used to manipulate properly collected data and produce a document with fully formatted in-text citations and a reference list. (But in small number of instances manual work may be best, or is needed for some parts of the process)

Each formatted reference answers the following questions

Who?

Who wrote it? Authors or organisations if no personal authors. Publisher details if a book

When?

When was it published? For web pages - year of publication/creation. And the date you accessed the page

What?

What is the title of the book or journal article or conference paper etc? If a journal article or conference paper - What is the title of the journal or conference proceedings?

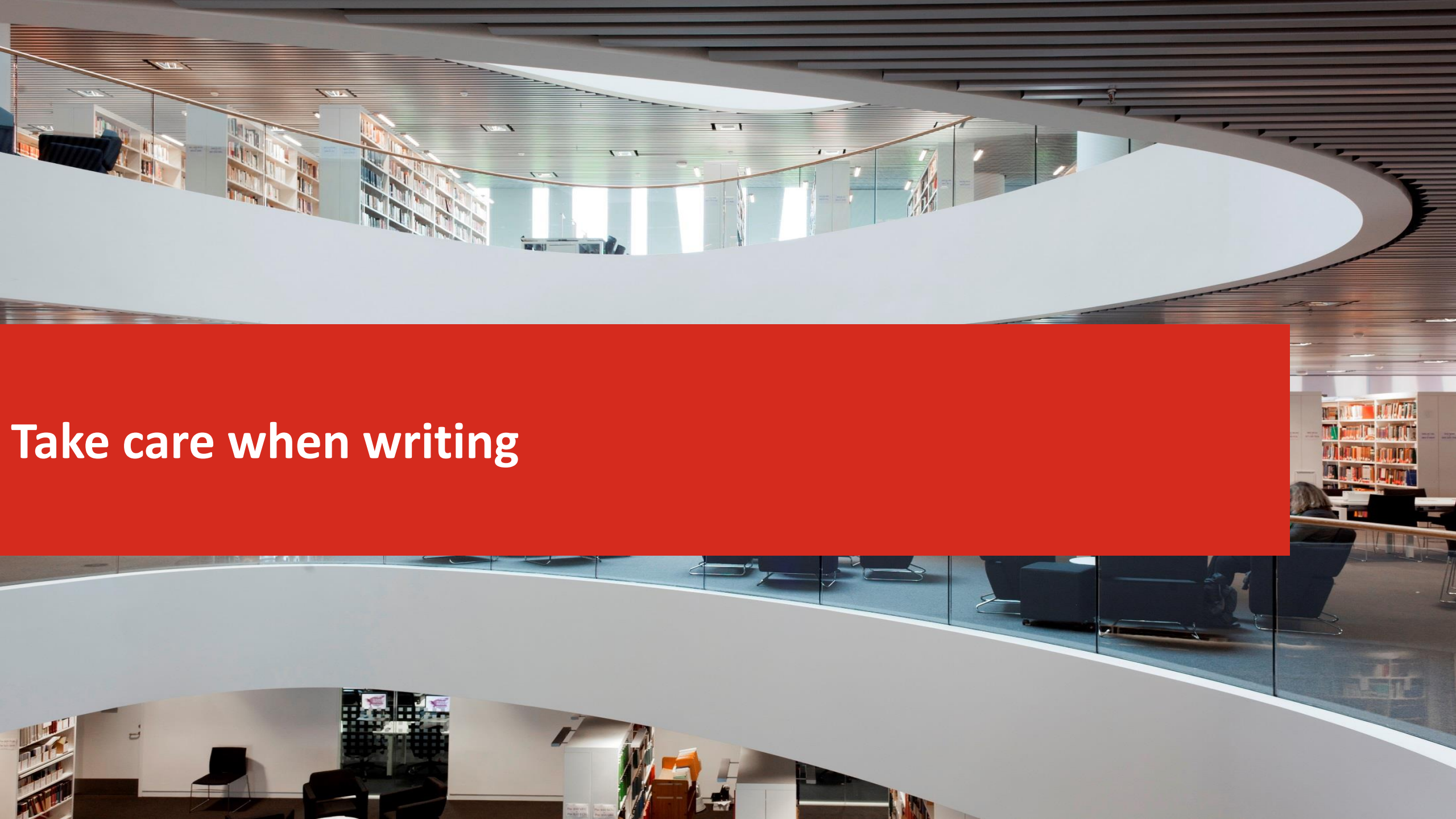
Where?

Where can I find it? For articles this includes volume, issue and page numbers as relevant, For books include place of publications

Styles/formats just differ in how much of the information to present, the order in which it is presented and the punctuation used between the different "answers"

Citing and referencing

- Check your course/programme/School handbook – follow guidance as given
  - If studying in Arts/Humanities you may be using a numerical or author-date system that is enhanced with footnotes. Footnotes can be set up within your Word document
- Check with your supervisor if the handbook is not specific enough
- Lots of style books available if you are doing it manually and want to buy a print book for your personal use
  - e.g. “Cite them right: the essential referencing guide” by Pears & Shields
- Library guides at https://www.abdn.ac.uk/library/support/library-guides-101.php#R



Take care when writing

All of these are forms of cheating

- Copying and pasting text or images without crediting the original source
- Pretending that someone else's work is your own
- Failing to indicate that a quotation is a quotation (quotation marks, or indentation of text)
- Paraphrasing, summarising or quoting material without citing the original work
- Tweaking words or phrases but keeping to the same sentence structure of a source and not acknowledging the author of the work
- Copying and pasting work that you previously used for another assignment
- Citing work that you did not read for yourself

Plagiarism: how to avoid it - 1

- Manage your time - plan your work
  - gather – search strategy, search, find
  - assess and evaluate – what is relevant
  - form opinions – analyse, think about findings
  - share – present your work

- Note-taking while reading
  - use own words where possible
  - quotation marks round direct quotes (remember to keep a note of the page number)
  - always keep a note of your source, e.g. for a web page - author, title, URL, date accessed
  - keep all your notes and drafts until final mark received

Plagiarism: how to avoid it - 2

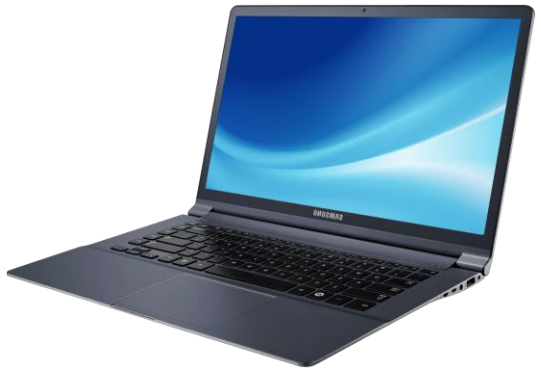
- Read through your work
  - Is this my idea/argument? If not - who's idea/argument is it?
  - Are these my words and style of writing? If not - where did I get them, have I paraphrased correctly, have I acknowledged the author(s)?
  - Is this common knowledge in my field? If not – cite and acknowledge the source
- Check your in-text citations and reference list
  - Does it match the style you have been advised to use?
  - Does is contain all the information required for the type of document it refers to, e.g. a book chapter is different from a journal article and different from a web page?
- All your in-text citations are listed in the bibliography (reference list) and vice versa?
  - Are the in-text citations consistent and correct all the way through your document?
  - Is the list the correct order, presented as specified (margins, typeface, punctuation)?

Time management

- Plan to finish your final draft several days before your submission date
- Build in time to:
  - Check the submission requirements for your discipline/School
  - Proof-read your document, Word/LaTeX formatting and check referencing
  - References
    - You may discover that you don’t have all required bibliographic information
    - If using referencing software submission and formatting errors can take a lot of time sort out if the software “misbehaves”
    - We will help where we can, but don’t leave it too late!
  - Prepare for electronic submission via Turnitin

Action – get started

- Keep track of what you are reading
- Make sure you know what referencing style you have been recommended to use
- Cite and reference when the information you are presenting has come from another source



https://www.abdn.ac.uk/library/support/information-skills-179.php