

ES2631 Critique and Communication of Thinking and Design
AY2024/2025 Semester 1

SOURCES: TYPES, SELECTION, INTEGRATION AND ATTRIBUTION

Please read this document carefully. It provides instruction on academic source types, selection using NUS library resources, integration and proper attribution. It also includes a link to the NUS policy on **plagiarism** (2021) and relevant extracts from the NUS interim policy on **AI use** (2023).

I. Source types and selection

In academic research, we **categorize sources into these three types**:

Primary sources	Secondary sources	Tertiary sources
These provide “raw” or, as yet, uninterpreted data. Primary sources vary by discipline and can include observations, surveys/questionnaires, experimental data, original reports, policy or legal documents, photographs, news articles, social media posts/comments, advertisements/commercials, interviews, objects, literature and film.	These are papers that interpret primary data in order to make an argument or solve a research problem. Mainly published in academic journals, they are written for scholarly or professional audiences, use theories, concepts and methodologies relevant to the field and, in doing so, engage with and contribute to the area of inquiry.	These are books and articles that summarize, synthesize or report on secondary sources. They are meant for a general audience and include textbooks, manuals, encyclopaedias and articles in subject specific popular magazines like <i>MIT Technology Review</i> , <i>Computer World</i> or <i>Wired</i> .

In general, **academic secondary sources** help researchers (a) determine what has already been written on the subject to identify gaps, tensions, contexts and problems worth examining, (b) derive concepts, models or frameworks that can be used to analyze the problem and/or primary data, (c) derive or develop an appropriate research methodology for analysis, and (d) support, extend, problematize or contest claims or perspectives on the topic.

It is important that you consider the reliability of sources before you use them in your work. The quality of your sources will play a central role in determining the credibility and persuasiveness of your argument or solution to your research problem. If your argument or solution is largely based on secondary sources, you must select them carefully. You may use a combination of scholarly and popular sources such as news articles from reputable media publications for your assignments.

Scholarly secondary sources go through a meticulous peer review process (by fellow experts/academics) before they are deemed fit for publication in an academic journal or book. If using an article from a journal, find out whether the journal is peer reviewed or refereed by looking up its website. Books published by university presses (e.g., OUP, MIT Press, University of Minnesota Press, Duke University Press, NUS Press, etc.) are generally regarded as scholarly. A few other presses such as Routledge, Springer, Palgrave-Macmillan, Lexington, Verso, etc. also publish refereed academic work. Examining the references (notes and bibliography) may also help you decide whether a book is academic.

NUS Libraries offers students free access to a wide range of academic databases, journals and books. You can also access academic articles on Google Scholar by connecting your NUS library account to it. Follow the steps outlined on the right of this page: <https://libguides.nus.edu.sg/findfulltext>. Instructions on searching for academic articles and books can be found here: https://libguides.nus.edu.sg/find_library_resources/books_articles

Consider the following criteria to evaluate source credibility:

Criteria	Evaluation
Authority	<ul style="list-style-type: none"> • Source. Where was this article published? Is the place of publication (press, journal, newspaper, company website) reputable? • Author. Who wrote this book or article? Is the author considered an expert in the field? What else has s/he published on the subject?
Relevance	<ul style="list-style-type: none"> • Is the source related to your topic or research question? • Is the context of the study relevant to your project? • For whom is the work intended: an academic or general audience? What level of expertise in the field does the author assume the audience has? Is the level appropriate for your project?
Timeliness or currency	<ul style="list-style-type: none"> • When was this source first published? Is its argument or solution still timely? • Does it engage with recent research on the subject? <p><u>Note:</u> Notions of timeliness vary by discipline. In engineering, for example, a source published five years ago may no longer be timely because technology changes so rapidly. In disciplines that study society, language and culture which are slower to change, a source published over two decades ago may still be relevant.</p>
Accuracy	<ul style="list-style-type: none"> • Where does the author's evidence come from? • Does the evidence adequately support the author's claims? • If the source is a website, does it provide references and/or links to further information and is this information reliable? Are the links active? When was the information last updated?
Purpose	<ul style="list-style-type: none"> • What is the author's objective in making this argument? • Can you detect particular disciplinary, cultural or ideological biases? • How do the author's biases affect his or her arguments and conclusions? • If the source is a website, is it sponsored? Is the source an advertisement for a product, place or service? How do these questions affect the credibility of the site?

Now, for each of your sources, answer the following questions.

1. Should you use this source? If so, how will it support your project?
2. Will your audience find this source credible and persuasive? Why?
3. Is the credibility of this source suspect in any way? How?

II. Integrating sources into your writing

Sources must *support* your argument, not make it for you. To maintain your authorial voice, it is important to use sources "strategically" and "purposefully" (Alfano & O'Brien, 2008, p. 190).

We typically integrate sources into our writing in three ways:

1. **Summary:** to synthesize and condense ideas from one or more sources
2. **Paraphrase:** to rephrase a quotation in your own words (but with the same level of detail as the original)
3. **Direct quotation:** providing an excerpt from the source in quotation marks

Keep direct quotations to a minimum in your papers. While quoting the occasional term, concept or phrase can be impactful, too many direct quotations may convey the impression that you have not understood the source material or that you could not be bothered to communicate it in your own language.

Here are some tips for integrating quotations effectively into a paragraph (adapted from Alfand & O'Brien, 2008, pp. 190-193):

Integrating Quotations	Examples
<p>1. Use a lead-in clause/phrase to introduce the quote.</p> <p>Incorporate the quote into your sentence.</p>	<p>In their recent article on Open AI's ChatGPT, Chomsky et al (2023) argue that such language learning models "differ profoundly from how humans reason and use language."</p> <p><i>Note:</i> This is an online source without page numbers. APA 7th edition recommends that quotes from such sources be referenced by paragraph no (para 3), section no. or a combination of these. However, since your assignments have word limits, using quotation marks and providing just the year of publication should be sufficient for sources without page nos.</p>
<p>2. If the original sentence is long, consider breaking it up using an interrupted structure.</p>	<p>"By emphasizing the basic moral identity and equality of human beings and animals," Calarco argues that the identity-based approach "calls for a fundamental rethinking of a whole host of human activities that impact animals in negative and harmful ways" (Calarco, 2011, p. 43).</p>
<p>3. After inserting the quotation, provide a closing comment or explanation that either emphasizes the relevance of the quotation or helps advance the argument in some way.</p>	<p>By dismissing the film as "propaganda," Smith (2010) fails to consider its use of evidence from different sources to convey its point about the impacts of climate change.</p>

Please use **APA referencing style** (7th edition) for all assignments. APA includes in-text citations and a reference list. You can find more information here:

https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_guide/index.html

III. Attribution and citation

Attribution is a key component of knowledge construction in academia. We cite other authors to situate our research within a disciplinary field or knowledge community, demonstrate our familiarity with existing scholarship and contribute to it through critical and creative engagements. Not

acknowledging our sources properly may lead to **plagiarism**, information on which may be accessed here: <https://myportal.nus.edu.sg/studentportal/student-discipline/all/docs/NUS-Plagiarism-Policy.pdf>

NUS has also developed a **Policy on AI use** (University Policy Workgroup for AI in Teaching and Learning, 2024). Extracts relevant to a critical thinking and expression course like ES2631 are pasted below for your reference. As stated in the policy document, the following are always improper uses of AI tools:

- Generating an output and presenting it as your own work or idea.
- Generating a draft output that is then paraphrased and presented as your own work or idea.
- Processing an original source not created by yourself to plagiarize it (e.g., using an AI paraphrasing tool to disguise someone else's original work, or even the output of another AI tool, and then presenting the final output as your own work or idea).

All of the above violate NUS policies on academic dishonesty and anyone found to have done any of them will be dealt with accordingly.

The same document lists the limitations of using current generation of AI tools:

- The quality of the output is dependent on the quality of the users' prompts.
- Their output may be out of date, as they are dependent on the available training data.
- Their output is not always accurate (they don't always present information that is true, the 'citations' they may generate may be made-up and point to non-existent sources).
- Their output may only represent dominant values and opinions, rather than what is objective.
- Their output is not always aligned with moral values (they sometimes present outputs that are offensive or discriminatory).

The AI use policy document provides instructions on how to cite and reference information acquired through the use of generative AI.

All submitted assignments for this course, including the team OP, **must** include the following declaration:

I [insert full name] declare that I have/have not (delete as appropriate) used generative AI in the process of completing this assignment. If I have used generative AI in any way to complete the assignment, this use has been documented in an appendix submitted with my assignment.

If you complete any work with the aid of an AI tool, **assuming a setting in which the instructor gave permission for such tools to be used**, you should **always acknowledge the use**. Using the outputs of an AI tool without proper acknowledgement is equivalent to lifting or paraphrasing a paragraph from a source without citation and attracts the same sanctions.

You can provide this acknowledgement in an appendix at the end of the assignment explaining which AI tools were used and what they were used for, e.g., in which parts of the process it was used, what were the prompts used to generate results, and what you did with the outputs to add value. One way this can be done is in a tabular form as shown below:

AI Tool Used	Prompt and output	How the output is used in the assignment
ChatGPT	1. What are different types of mechanical levers?	Based on information given, we selected the best options (combination of first- and

	2. Which lever is best for pulley to lift 100kg?	second-class levers) to incorporate into our design.
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Alternatively, if an AI tool was used to generate a more extensive set of intermediate outputs that were then developed into a final product, you should **preserve a full transcript of the relevant interactions with the AI as an appendix for submission with your assignment**. For ES2631, if AI tools were not used in your assignment, you should **declare that explicitly at the end of the assignment**: “No AI tools were used for this assignment.”

Structures of Attribution and Their Uses

There are two structures of attribution. For stylistic variety, you could use both structures in your writing:

Structures	Integral	Non-integral
Location of author name	The cited author is named in the sentence.	The author is referenced in parentheses (if using APA) or using superscript numbers.
Objective	To emphasize the author or agent; useful for foregrounding your authorial voice when engaging with scholarship.	To emphasize the reported message or process over the author/writer.
Examples	<p>(a) In her discussion of recent advances in machine learning, Archer (2022) explains how ...</p> <p>(b) Chomsky et al (2022) argue that ...</p>	<p>(a) The contemporary university has a close relationship with both state and society and as such, has a duty to engage in socially responsible activities (Barnett 2012b; Kimura-Walsh 2010; Manathunga et al. 2012).</p> <p>(b) Despite differing terms, at the heart of all these varieties is the desire to provoke students to go beyond the world they know and feel comfortable in, to expand their understanding of a range of social possibilities and achieve a more equal and just future (Freire 1996; Giroux 2011).</p> <p>Sentences taken from: Jeyaraj, JJ. & Harland, T. (2016). Teaching with critical pedagogy in ELT: the problems of indoctrination and risk. <i>Pedagogy, Culture & Society</i>, 24(4): 587-598.</p>

Reporting verbs

How you refer to an author or article also shapes your message and stance. Based on his analysis of articles across a range of disciplines, Ken Hyland (1999; also see Hyland & Jiang, 2019) classifies reporting verbs in academic writing into four categories (three denotative and one evaluative):

Function of Verbs	Examples
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Convey Research Acts (findings and procedures)	<ul style="list-style-type: none"> Findings – <i>observe, discover, notice, show</i> Procedures – <i>analyze, calculate, measure, assay, explore</i>
Convey Cognition Acts related to mental processes	<i>believe, conceptualize, suspect, view</i>
Convey Discourse Acts related to verbal expression	<i>ascribe, discuss, hypothesize, explain, state, remark, mention, articulate, convey</i>
Convey Evaluation by attributing a position to the author being cited and sometimes communicating the writer's stance or judgment on the cited source	Reporting the information cited as <ul style="list-style-type: none"> true: <i>acknowledge, point out, establish</i> negative: <i>fail, overlook, exaggerate, ignore</i> positive: <i>advocate, argue, hold, see</i> neutral: <i>address, cite, comment, examine</i> tentative: <i>allude to, hypothesize, believe, suggest</i> critical: <i>attack, condemn, object, refute</i>

For more examples of reporting verbs, you may refer to this handout:

<https://www.ncl.ac.uk/mediav8/academic-skills-kit/file-downloads/Reporting%20verbs.pdf>

References

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