

LECTURE THREE

EVALUATING INFORMATION SOURCES AND PEER-REVIEWED JOURNALS

1.1 Objectives

By the end of this lecture, you should be able to:

- a) Explain what academic journals are
- b) Distinguish scholarly and peer-reviewed journals
- c) Evaluate information sources

1.2 Introduction

For you to carry out any meaningful research, you need sources of information. And in this era of the Internet, there is plenty to choose from. Just run a Google search and see how many websites pop up. Often, the first site that emerges is *Wikipedia* and chances are, you have been discouraged from using it by your instructor. The question is, how can you tell an authentic source from an inauthentic source? Which source should you believe? This lecture deals with how to properly evaluate information sources.

This lecture will also cover peer-reviewed journals. No doubt you have been referred to journals for your assignments, but do you understand what they are? We will look at what they are, why you should use them and how to evaluate and retrieve data out of journal articles.

Lastly, at the end of your paper, proposal, dissertation or thesis, is a list of books and materials that you used. The list is called the 'Reference' section. To make your points, you may need to quote or cite an author. You will need what we call 'in-text citation,' which will also be covered in this section.

1.3 Criteria for Evaluating Information Sources

All you want is a credible source that provides you with high quality material useful for your research or study. There is a great variety of information sources such as magazines, newspapers, expert opinion, videos, audio-recordings, books, journal articles, websites, specialized databases and other materials. The following criteria inspired/provided by Brock University Library (2020) will assist you determine a source's worth and credibility.

1. Purpose and intended audience

Suppose you are working on a term paper on the use of videos to assist autistic children. You run through YouTube and identify several videos you can use as your sources. It would be useful to ask yourself the purpose of that video. Is it meant to provide information? To persuade? To advocate on an issue? To entertain? To make the video trend by going viral? To sell a product or service? Thinking through the purpose will help you decide whether to use the material. If the purpose was to attract likes and causing the video to go viral, you may want to stay away. But if a paediatrician on Ted Talk (a respectable series on YouTube) shares

on the value of certain professionally produced videos to autistic children, you may want to use that source.

Intended audiences can also help you determine whether that material is suitable for you. Perhaps your source is a journal article intended for researchers with specialized knowledge. Perhaps the material is meant for the general public without specialized knowledge. Or the material is intended for students in high school, college or university. Again, depending on the purpose of your study, you would know if you fit in that category of audiences. Using the same example of a medic who appears on Ted Talk to talk about videos and autistic children. What if his audience is fellow medics where he uses jargon only understood by them? If you are a medical or nursing student, you may find the information useful since you possess specialized knowledge in the medical field.

2. Authority and credibility

The Internet has provided a platform for anyone to compose/ compile information and share it through websites and blogs (paid or free). It is important to find out who the author is before you pick that material as your source. The source could be an individual, say a History professor; or it could be an organisation like a government agency, a corporate entity or non-profit organisation.

How can you tell that an author is authentic and credible? A simple Google search will bring him/her up. Even if they stopped writing, you will still be able to find them because their works are continuously being cited. Some authors have created social media pages including a professional profile on LinkedIn. You should obtain answers to such queries as the author's occupation, experience and educational background. You will get information about the author's subject matter expertise, and whether he/she is affiliated to any university, non-profit organisation, government agency or corporation. Remember, we have many academic frauds too, so due diligence on your part is required.

You also need to be careful about such details as a publisher. Who has published that book? Some universities, like the University of Nairobi and Moi University publish books. Rarely will you get unauthenticated books from university publishers. We also have commercial publishers who employ editors and other staff to ensure quality of material. However, you must be cautious with some commercial publishers because some individuals set up publishing houses as business models and may deliberately compromise on the quality of material. You will need to conduct further research on the credibility of these publishing houses.

We will look at journal authors in the section below. Concerning websites, you need to find out if it's an organisational website or a personal blog. Personal blogs are not acceptable in some situations. For example, if you are trying to find out which the most popular social networking site is. You are better off consulting a website or database that carries published scholarly journals than a personal blog. The blogger may suffer from bias and compromise your answer but consulting genuine journal articles will provide you with the facts, evidences and statistics you need to back your answer.

3. Accuracy and reliability

How accurate and reliable is your information? Is it well-researched? To answer these questions, there are certain things you can look at. One is the reference section. Look at the citations, footnotes and bibliography. They are the support offered to claims made in your source. If a work has no references, then it's questionable. If the references themselves are questionable, then that work is suspect. Check if your source includes facts or statistical data. Any statistical data should be verifiable via another source. For instance, if a researcher from Australia claims that Kenya's population is 44 million, look for the Kenya Demographic Health Survey and the Kenya National Bureau of Statistics and confirm. If you are consulting a source that used original data such as surveys, examine the data collection method. For example, if the author generates findings from a sample of 10 in a quantitative study whose population was 10,000 students, then those results are neither reliable nor valid.

4. Currency and timeliness

When the information was published can also be a critical factor to consider. Books and journal articles carry the date so it's easy to verify. The trouble comes in with websites, some of which are never or hardly updated. In which case you will need to check when the website was created or updated. Whether you need current information will be determined by your purpose or research question. For example, if you are working on a historical paper that wants to trace historical flus that have afflicted mankind, then the age of the data doesn't matter. However, if you are dealing with a current issue, say the current composition of social media consumers, then data when social media emerged or who the consumers were at the time, may not be relevant to you.

5. Objectivity or bias

Some research may require you to stick to facts. Quantitative research especially is facts-based while qualitative research is perspectives-based. It will depend on what research question you are tackling. Hence, ask yourself if your source contains opinion or fact; whether the information presented in the source is objective (unbiased) or subjective; whether the information promotes a political, religious, or social agenda; and whether advertising content (usually found in business magazines or newspapers) is clearly labelled. We are not saying bias is wrong or that objectivity is right. Just be careful that you are not citing an author who is heavily biased and offers nothing but unsubstantiated conjectures.

1.4 Peer-reviewed Journals

1.4.1 What are peer-reviewed and scholarly journals?

You may have heard of scholarly and peer-reviewed (refereed) journals. Academicians or scholars often conduct research and report their findings in journals. There are all kinds of journals out there. Let's distinguish scholarly from peer-reviewed journals.

Scholarly journals are written by experts in their academic fields. These journals target academic audiences. The purpose of journals is to collect ideas, theories, research findings and more, and publish them for people to access and stay abreast of developments. For instance, in the wake of the Covid-19 pandemic from December 2019 through 2020, Miller et

al. (2020), published a research paper whose main finding was that countries with a universal BCG vaccine policy recorded fewer cases than countries that do not have this policy or who have relaxed on this policy. This was an important finding since it opened further opportunities for research to find a remedy for the pandemic. Scholarly journals are academically focused on research which includes original research, methodology and so on. They will usually be published by a professional association or academic press and cited properly in the form of a bibliography or footnotes and in-text citations. In addition, such journals are professional in appearance, with no spelling or grammatical errors, advertisements, or unrelated images.

According to Shapiro Library (2020), peer-reviewed journals meet all the above criteria. The only difference is that the content for peer-reviewed journals has undergone a more rigorous check by fellow peers. In short, an expert in his field wrote the article and another expert scholar in the same field or on the topic took the article through a feedback process and iteration before it was published. The reviewer checks the article for quality, accuracy and other indicators. Usually, the expert reviewer will edit or recommend necessary changes to the article before it can be published. Peer-reviewed journals have an editorial board of subject experts or a panel of experts (referees) responsible for evaluating submitted articles (Shapiro Library, 2020). Hence, a journal may be a scholarly journal but not peer-reviewed. After a paper has been submitted, the editorial board evaluate it using a set criterion that may include excellence, novelty and significance of the research (Shapiro Library, 2020). The panelists may accept the article as it is, recommend changes or reject it altogether. It is a sure way to protect and maintain the quality of all the articles that appear in that journal.

1.4.2 Why use peer-reviewed journals?

The fact that these journals have been reviewed by a panel of experts qualifies them as good sources of information. They are more reliable and of a higher standard than scholarly journals. Peer-reviewed journals are more trustworthy than any scholarly journal because they have undergone a process of review. In addition, peer-reviewed journals are organized into tiers. The more rigorous the process, the higher the place these journals occupy in the ranking order. The journals are also assigned an impact factor, which is a measure of the frequency with which other scholars cite the articles in these journals in a given period or year (Illinois University Library, 2019). The articles in these journals represent the best practice in the field, and therefore, more authoritative as sources. It is generally accepted that top-tier journals are likely to be good sources of well-researched articles for use by fellow researchers, students and faculty.

1.4.3 How to evaluate and retrieve data from journals

Determine if the article is found in peer-reviewed or non-peer reviewed articles. This is not to say that all non-peer reviewed articles are not good sources. However, you are better off with material gleaned from a community of peers. How can you tell that a journal is peer-reviewed or reputable?

- Run a check through certain websites like *UlrichsWeb.com* or <https://www.scimagojr.com/> by entering the title or ISSN number of the journal. Once you find your journal, look for the basic description of that journal. You will learn

whether the journal is refereed or not. You will also find the ranking of the journal from Scimago. Scopus journals are highly ranked and quite difficult to get publication space unless your article is of a high quality. Scopus itself is ranked into Scopus 1, 2,3 4. Scopus 1 is the highest rank.

- Examine information about the journal. Clicking on the title of the journal can bring up details about the publication including whether it is peer-reviewed. Some of the information could include the details of the reviewers such as name, designation, work experience and so on.

Once you have located the best journals you can use, you need to know how to retrieve data from those journals. It's possible to be swamped by too much material so that you end up selecting irrelevant information. Suppose your search yields 50 relevant journal articles, yet your assignment is a 10-page term paper? Ask yourself if you will need all that information.

1.4.4 Tips on quick retrieval of information

1. At the point of searching for a relevant article, ensure to search only for those journal articles that are relevant to your study. We earlier mentioned about using Boolean operators and Truncation phrases. Hence, use only the key words that will bring up the relevant papers.
2. Once you have assembled the relevant articles, begin by reading all the abstracts of your, say, 50 articles. Abstracts are good because they capture the entire study in about 300 words. A careful reading of the abstract will help eliminate those articles you thought were relevant. For instance, if you are doing a paper on articles that used qualitative methods only, and only 14 of the 50 used the method, then it means your relevant sources right now are the 14. And the quickest way to find out is to read the abstract.
3. Once you have narrowed down your search, you should ideally read through the entire article as quickly as you can to get the gist of the paper. Thereafter, you can concentrate on the relevant portions. For instance, if you have been asked to summarize the findings in those 14 articles, after reading the entire article the first time, you can now zero in on the findings section bearing the objectives of the said study in mind.
4. Get help through such techniques as skimming and scanning. These techniques use rapid eye movements and key words to move quickly through a text. Suppose you are using all the 50 articles; you will need to skim through because you can't pick everything from them. When you skim, you want to get a general overview of the text while to scan is to read rapidly to find specific details.
5. Pay attention to sub-headings in an article. These provide a quick guide to relevant material.

1.5 In-text Citation and Referencing

The information in this section has been sourced from Purdue Online Writing Lab (2020), an online source that extensively details how to cite and reference for different style guides.

In between your sentences and paragraphs, you will need to acknowledge your sources. We call this 'in-text citation.' At the end of your article or project, you are expected to provide a list of sources that you used in your work. There exist different style guides that can be used to do in-text citation and referencing. The most used include the American Psychological Association (APA) which is popular with Education, Psychology and the Sciences. There is

the Modern Language Association (MLA) style used by the Humanities while Business, History and the Fine Arts mostly use Chicago/Turabian style. Harvard referencing is another style guide.

1.5.1 In-text citation

You need to insert an in-text citation when you directly quote someone else's work or when you paraphrase. It is a way of granting credit to people for their creative and intellectual work. It typically includes an author's name, date, location of the publishing company or DOI (Digital Object Identifier (Purdue Online Writing Lab, 2020). For example, in APA, an in-text citation will look like this:

Quotation: "Mind and body are critical but not more critical than spirit" (Anjao, 2020, p.45).

Paraphrase: Anjao (2020) claimed that even though mind and body are critical, they are not as critical as spirit.

Page numbers are necessary under APA if it's a direct quote. In all cases in APA, the in-text citation follows the author-date method of citation (Purdue Online Writing Lab, 2020).

1.5.2 Reference

The reference list comes at the end of your work. You need to follow your institution's style guide. Let's take the example of APA. The following formatting guidelines are required:

- Title the page 'Reference' and center it at the top without bold, italics or quotation marks
- The Reference section should start on its own page
- The Reference should be in a hanging indent format
- The entire list is double-spaced
- The authors are listed in alphabetical order, starting with their surnames (Purdue Online Writing Lab, 2020).

There are more guidelines than that. I advise you to carefully study the style guides your institution is using. A useful online tool is Purdue Online Writing Lab, a website that has extensively covered the topic of referencing and in-text citations.

1.6 Conclusion

In this lecture, we looked at how to evaluate information sources. It's essential that you use only credible information sources. You also need working knowledge of journals so that you use proper sources. You probably are, or one day will be a researcher who is publishing articles. You must not fall prey to predatory or fake journals. Knowing how to cite and reference properly is a good way of avoiding plagiarism.

1.7 Activities

1. Pick one subject area and form about 2-3 research questions. Then Google up as many journals as possible related to your research questions. Group them into scholarly and peer-reviewed journals.
2. Visit https://owl.purdue.edu/owl/purdue_owl.html and explore the various in-text and referencing styles available.

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