

Περί Επιστημονικής  
εγκυρότητας και ιστοσελίδων:  
τι θέλει τέλος πάντων απο  
μένα αυτός ο καθηγητής;

Ηλίας Περάκης, Αν. Καθ.  
Φυσικής

## Accuracy

- A central question is the factual accuracy of the information.
- To make an assessment of the accuracy of a resource, you could search a site about which you have some knowledge or expertise, or perhaps consult an expert. However, you may not have the necessary knowledge/expertise, you may not have access to an accommodating expert, or there may not be a simple right or wrong version of the information!
- There are numerous other factors that indicate the likely accuracy of material, such as whether the information has been refereed, whether the information has a research basis, and whether the information is supported by published research findings. Look for references to published information, indications that the information has a research-basis, or indications of refereeing or editorial control.
- Another issue is the potential for bias - you will need to consider the motivations of those involved in the production and dissemination of the information and whether this is likely to impact upon its accuracy. Some sources offer facilities for sending corrections to inaccurate material, suggesting a concern for accuracy, and the overall professionalism of a site (e.g. whether there are typographical or grammatical errors) also suggests a similar concern. Moreover, positive evaluations of authority can provide a strong indication of likely accuracy.

## Key questions

- Is the information accurate?
- Has the information been through a process of editing or refereeing?
- Does the information have a research basis?
- Is the information supported by published research findings?
- Is there any evidence that the source may be biased by those involved in its production and/or dissemination?
- Is there a facility for sending corrections to inaccurate information?
- Is the source professionally presented? Are there any typographical or grammatical errors?

# Currency

- Ascertaining the **currency** of information and the frequency and regularity of its updating also form an important aspect of the overall evaluation for many types of materials. For example, while it is less important that an anatomy tutorial dates from 1984, outdated figures for HIV infection will be misleading or inaccurate. Therefore, tips are provided in the step-by-step guide for identifying when information has been produced, whether it is current, whether it will be updated, and whether the frequency and regularity of updating are appropriate to the type of information concerned.

## *Key questions*

- Is the information up-to-date?
- Is the information likely to be kept up-to-date?
- Where applicable, how frequently and/or regularly is the information updated? Is this appropriate to the type of information?

- **Analyse the URL**
- Different countries and organisational domains are represented differently in URLs. A site with '.edu' in the address is from a US-based educational establishment, '.com', a US-based commercial establishment, and '.gov', a US-based government body. Countries outside the US have an additional country code (e.g. '.uk, .gr'), but if a page has no country code it does not necessarily mean it is US-based. In addition, the domain names vary according to the country (governmental bodies in the UK are '.gov.uk' but educational establishments are '.ac.uk').
- For more information about country codes and domain names, see: [alldomains.com](http://alldomains.com). This site has a complete list of country codes and you can select a country (from the left-hand frame) to view all the sub-domains within that country.
- **Deleting parts of the URL to find out more:** A useful technique for finding out about a source is to delete the last part or parts of the URL (after the last '/') to see where the new, shorter URL takes you.
- **Key questions you are trying to answer:**
- Where has the information come from?
- Has an individual or group taken responsibility for the resource? Are they qualified to provide this information? Are contact details available?
- Is an organisation responsible for the information (publishers, sponsors or funding agencies)? Is it reputable and recognised?

## ***Follow links to find out as much as possible about the resource***

- A good starting place when you are evaluating a resource is usually a home page, parent document, FAQ, help file or newsletter, where these are available. Following links to these can provide details about the intended scope and audience, as well as whether the information is likely to be updated, and how often. Make a note of these different factors so that you can verify them when examining the content of the resource. There may also be details about any access restrictions - again, make a note of these where applicable as you will need to include the relevant details in the resource description.
- You can also often find out where the information has come from and who has produced it. This might include whether any individuals or groups are responsible for the information, details of their expertise, details of any organisations involved in the production and dissemination of the information, and details of their reputation and expertise within the field. Also look for contact details and copyright information (usually located towards the end of a page where available). These details will all be influential in assessing the likely authority of the information.

- ***Key questions you are trying to answer:***

- Where has the information come from?
- Has an individual or group taken responsibility for the resource? Are they qualified to provide this information? Are contact details available?
- Is an organisation responsible for the information? Are any organisations associated with the resource, such as publishers, sponsors or funding agencies, reputable and recognised?
- Is the resource well known and/or heavily used?
- What is the provenance of the resource?
- Does it have a print or electronic predecessor and how long has it been available?
- Is the information likely to be kept up-to-date?
- Are there any access restrictions?

- ***Information you need to make a note of:***

- The intended coverage
- The intended audience
- Details of any organisations and/or individuals involved in the production and dissemination of the information, including the author, webmaster or equivalent, copyright owner, publisher, sponsor, etc.
- Contact details
- The copyright statement
- Whether there is a policy about updating and maintenance
- Any access restrictions

- ***Obtain any additional information***
- Once you have completed all of the above, you will probably have a good idea of the likely quality of a resource. However, you may feel that you want more information or simply a second opinion. Reviews in professional and academic journals are often helpful.
- If you wish to find out more about the reputation of a resource within a field, you could examine the pages of relevant professional organisations to determine whether they link to the resource. Another option is to search using its 'link' facility. If you want to know more about the expertise of an individual or group involved in producing a resource, you may wish to search a bibliographical database to determine whether they have published in the area.
- ***Key questions you are trying to answer:***
- If an individual or group has taken responsibility, are they qualified to provide this information?
- Is the resource well known and/or heavily used?

# Peer Review

- **Peer review** or **refereeing** is a process of subjecting an author's **scholarly** work or **ideas** to the scrutiny of **experts**
- It is used primarily by **publishers**, to select and screen submitted **manuscripts**, and by funding agencies, to decide the awarding of monies for research.
- The peer review process is aimed at getting **authors** to meet the standards of their discipline and of science generally.
- A rationale for peer review is that it is rare for the author to spot every mistake or flaw in a complicated piece of work. The **anonymity** and **independence** of reviewers is intended to foster unvarnished criticism and discourage **cronyism** in funding and publication decisions.
- In addition, since the reviewers are normally selected from experts in the fields discussed in the article, the process of peer review is considered critical to establishing a reliable body of research and knowledge. Scholars reading the published articles can only be expert in a limited area; they rely to some degree on the peer-review process to provide reliable and credible research which they can build upon for subsequent or related research.

- When scholars and scientists *use* the published work of other scholars and scientists in their own published work, they *cite* it, giving the author, year, title, and locus of publication (journal, book, or other). Such **citations** can be counted as measures of the usage and impact of the cited work. This is called **citation analysis** or **bibliometrics**. Among the measures that have emerged from citation analysis are the citation count for (1) an individual article (how often it was cited], for (2) an author (total citations, or average citation count per article), and (3) for a journal (**journal impact factor**, or the average citation count for the articles in the journal). Citation counts are **correlated** with other measures of scholarly/scientific performance and impact

