

Critical Appraisal in STEM

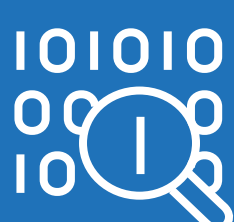
Not all information sources have equal value. Prior to including a source in your research, it is essential to evaluate, or critically appraise its merit.

Critical appraisal uses a systematic process to identify strengths and weaknesses of research while determining the applicability and validity of the content to your research.



RADAR is a tool that can be employed for this goal. The RADAR framework contains guiding questions that will help to appraise information sources critically.

Relevance



Relevance is important because you are expected to support your ideas with pertinent information.

Guiding Questions

- Why was this information created/published?
- Who is the intended audience?
- How does this information help me accomplish my goals and/or answer my question?
- How is this information related to the task at hand?

Authority



Authority is important in judging the credibility of the author's assertions.

Guiding Questions

- Who created the information? One person? Many people? Government? A Corporation? A Non-Profit?
- What is the reputation of this author? Do they do work in this field often? Who are they affiliated with? Have other people cited this work or author?

Date



Date is important to note because information can quickly become obsolete.

Guiding Questions

- When was the information created or last updated?
- Is currency important to this question or discipline?

Appearance & Accuracy



Appearance is important as different types of sources are identifiable through their appearance and context clues. **Accuracy** is important because errors and untruths distort a line of reasoning. When you present inaccurate information, you undermine your own credibility.

Guiding Questions

- Is the information presented professionally and/or academical?
- Are there editing errors such as spelling, grammar, or typos?
- Does the presentation follow the appropriate scholarly formats?
- Has this information been peer-reviewed?

Reason



Reason is important because books, articles, web pages, and other information sources are made to serve a purpose. Varied points of view can be valid if they are based on good reasoning and careful use of evidence.

Guiding Questions

- Why has this information been made available? To inform, sell, educate, entertain, or convince?
- How has the information been presented? A book, an academic journal, a popular magazine, a website?
- Who has funded this research? Has the information been written with an objective point of view or is it biased?

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