IT8x10 On Critiquing Research Papers and Articles

Academic reading and writing concerns critique. Critique, means that the reader identifies both the strengths and weaknesses of an academic article or conference paper (I will just call them papers from now on), with the aim of assessing the scientific merit of the research described in the paper. A critique is a way to review the validity of the research that others in your field have published.

Although papers are peer reviewed by other scientists before they are published, an article can still have strengths (good things) and weaknesses (bad things) that you, the reader, can identify. Scientists often carry out this sort of analysis when they want to find out the following.

1. What is known on a topic and what research literature has been written on a topic.
2. What is not known on a topic and what the gaps are in our knowledge about that topic. These gaps are the potential topics that researchers should consider investigating if they want to carry out original research.

Here are some strengths to look for when reading a paper. This list does not cover every possible strength; it is just a starter list.

* The title accurately reflects what the paper is about.
* The abstract fully explains the justification, research design, and main contributions of the research.
* The writing is in simple clear readable English.
* Prior research on the topic of the paper is cited and referenced correctly.
* Current research papers are cited, not just very old (pre-2000) research papers.
* Seminal (very important) research papers are cited (these papers might be very old).

The paper includes (this is for empirical papers, which are papers based on the analysis of observed data).

* A justification for the research (the author explains why the research is necessary).
* A research question or clearly stated research problem.
* A clearly stated research design including details of all research techniques used.
* A description of the source of the data, how it was collected, and how it was analysed.
* Clearly stated results that arise from properly executed data analysis.
* A clear explanation of what the research has contributed to the field.

Weaknesses of papers should always be described somewhere in the paper. These weaknesses are called “Limitations”. The limitations should include the general limitations of the research methods used, and also any limitations of the research as it was carried out (e.g., a survey with only 40 respondents which did not allow for proper inferential statistics to analyse the results; a series of case studies that cannot be generalised to populations). Sometimes the paper has weaknesses that the authors have not identified in the limitation section. These might include:

* Poorly written English; correct but overly complex English.
* Not citing major authors who have published on the topic; citing only very old or out of date papers.
* Not citing major journals in the field – only citing minor sources.
* Not justifying the need for the research or identifying the gap in knowledge the research will fill.
* Omitting to explain the research problem or not providing any research questions.
* Having almost no literature review section.
* Not describing the research method clearly; not explaining in detail how the data was collected or analysed.
* Drawing conclusions from the data that are not apparent in the results (i.e. over claiming).
* Not explaining why the research result is important or what the research contributes to theory or practice.
* Not describing the limitations of the research.

I hope these ideas help you in critiquing the papers you read.