

ISP PART B: JOURNAL ARTICLE REVIEW

SBI4U

The purpose of this assignment is to help you understand how research is conducted and reported in the scientific community. You are asked to read a peer-reviewed article provided by your teacher that is connected to the course material. The article provided will either report on original research, replications of previously conducted experiments, or they will be literature reviews that presents results on a specific topic.

Analyzing and critiquing a journal article can help to improve your own research skills. When you assess the work of other researchers, you further develop your skills as a critical reader, better understand the methods applied to research in your field of study (i.e biology).

In this assignment, you are expected to read and analyse the article, and evaluate the quality of the research and its relevance to the scientific community. When critiquing an article, it is important to focus on both its strength and weaknesses.



ISP EXPECTATIONS:

For this assignment, you and a partner will have to write a critique of scientific journal article that targets content that was covered in the course. You are required to write a 3-4 pages paper that summarizes and critiques the main findings and methodology of the research.

Below are the points that must be targeted when writing the paper.

PART 1: Summary of the Text

Provide a summary of the article that clearly states the following:

- Who conducted the study, when and where was it conducted?
- Why was the research done?
- Brief background information on the topic studied: What prior observations was the research based on? What was or was not known about the topic at the time of the research?
- What was the purpose and hypothesis of the experiment?
- What methods/techniques were used to obtain data for the research?
- What were the main results that were obtained from the research and what conclusions did the researcher draw from the observations?
- Describe how the main findings compare to the researcher's original hypothesis

PART 2: Journal Article Critique

When writing your critique, you should analyze/assess each component of the article. Read the article carefully and use the questions below as a guide to help you critique the research.

INTRODUCTION:

- Does the title of the article state the topic of the research?
- Was there enough background information stated in the introduction to help the reader better understand the research? Is all of the information coherent and lead to the purpose of the research?
- What is the purpose of the research and was it clearly stated?

METHODS:

- What methods/techniques were used by the researcher to obtain data and how were they performed? Were the methods valid for studying the problem?
- Did these techniques allow the researcher to obtain data objectively?
- Are the methods clearly explained and easy to understand?
- Is the sample that the researcher selected adequate? Is the experimental design sound? Are there any important external factors that were not considered in the design that could have influenced the results obtained from these methods?

RESULTS:

- What results were obtained from the researcher?
- Were the results significant? Were there any statistical tests used to evaluate the significance of the results?
- ***Presentation of data:*** Were the results clearly shown and easy to interpret? Does the title or legend accurately describe the content? Are column headings and labels accurate? Are the data organized for ready comparison and interpretation? (*A table should be self-explanatory, with a title that accurately and concisely describes content and column headings that accurately describe information in the cells.*)
- How did each result contribute to testing the hypothesis that was stated in the introduction?
- Do the results reveal what the researcher intended in their purpose?

DISCUSSION:

- Does the discussion simply repeat the results that were stated previously? Are the results well interpreted? Do the interpretations correspond logically to the data collected or is the analysis very far-fetched?
- Has the researcher stated sources of errors and ways in which his/her experiment could have been improved?
- Are there other research possibilities/directions suggested?
- Did the research provide new factual information, a new understanding of a phenomenon in the field, a new research technique? Did the reported observations/interpretations support or refute observations or interpretations made by other researchers?

CRITIQUE OF THE ARTICLE OVERALL:

- Reread the abstract. Does it accurately summarize the article?
- Is all the content organized under the appropriate headings? Are sections divided logically into subsections or paragraphs
- **Significance of the Research:**
 - Did the research lead to new questions or hypotheses?
 - Did the research make a significant contribution to human knowledge?
 - Did the research produce any practical applications?
 - What are the social, political, technological, medical implications of this research?