Critical Thinking—Logical Fallacies Examples

Common Fallacies of Insufficient Evidence

Mistakes in reasoning as the premises do not provide sufficient evidence to support the conclusion

Hasty Generalisation

Drawing a conclusion about a group based on a small or unrepresentative sample

X Based on food selection behaviour of four Indian children aged three, it can be concluded that young children will not eat beetroot.

(The sample size is too small and specific to make this generalisation)

✓ Based on the food selection behaviour of four Indian children aged three, it is suggested that some young children may have an aversion to the taste or texture of beetroot. Further research is required.

Suppressed Evidence

Drawing a conclusion while ignoring or omitting other evidence

X This study shows that 75% of children do not improve their test scores after completing the programme, so the programme should be discontinued.

(This statement singles out one study when others may also be available)

✓ This study shows that 75% of children do not improve their test scores after completing the program. We need to investigate all the relevant research so we can assess whether to continue the programmne.

Note. Icons created using GenAI. From *Copilot* (Version 2.20260122.47.0) [Large Language model], by Microsoft Corporation, 2026 (https://copilot.cloud.microsft).

False Dichotomy (either/or fallacy)

Presenting only two options when more options exist

X You are either an introvert or an extrovert

(This claim provides just two options while ignoring the spectrum of introversion, ambiversion, and introversion and contextual factors that may impact on behaviour)

✓ There is a range of introversion and extroversion behaviours which are fluid for each person depending on specific situations they may encounter.

Circular Reasoning

Using the conclusion as evidence for itself

X Speaker A: This candidate should be hired because they have a strong track record.
Speaker B: What makes their track record strong?
Speaker A: They have done a great job in previous roles.

(The answer given by Speaker A to the question posed by Speaker B simply reiterates the first statement by Speaker A rather than detailing the strengths or achievements of the candidate in previous roles)

Appeal to Authority

Using an expert's opinion as proof

X Isaac Newton believed in alchemy, and he is one of the fathers of physics, so alchemy is a valid science.

(Just because someone has the right qualifications and is deemed an expert, their claims still needs to be judged on their own merits)

✓ Isaac Newton believed in alchemy, and even though he is considered one of the fathers of physics, alchemy is considered a pseudoscience as it is based in philosophy and mysticism and is not supported by rigorous, repeatable, and falsifiable experiments.

Assumed Cause

A causal connection is assumed based on a correlation, sequence of events, or coincidence

X There is a positive correlation between class participation and student grades. Low class participation leads to lower grades.

(Correlation does not mean causation)

✓ Lack of class participation may be one factor contributing to lower student grades; however, there are multiple other factors that may also contribute to lower student grades, and more research is required to identify these factors.

Common Fallacies of Relevance

Mistakes in reasoning as the premises are logically unrelated to the conclusion

Attacking the Person (Ad Hominem)

The character, motivation, or personal attributes of the person or group making the point is attacked rather than addressing the point itself

X That witness is unreliable because they are addicted to drugs.

(The circumstance of the witness is used to discredit their testimony)

✓ All witness's testimony must be evaluated and judged on their accuracy.

Straw Man

A point is countered by misrepresenting, oversimplifying, or distorting the argument

Statement: The Ministry of Health recommends reducing intake of sugar to lower obesity.

Straw Man version: The government plan to control everyone' diet and stop them enjoying their food.

(The straw man version is a fallacy because

- the recommendation was from bureaucrats, not the government
- it was a suggestion to reduce sugar, not a decree to control people's diet
- the reason was to lower obesity, not to stop people enjoying food)

Bandwagon Fallacy

Assuming something is accurate because many others support it

X This journal has the highest impact factor, so its articles must have more credibility.

(Impact factor is based on the number of citations of articles within the journal; the impact factor does not directly reflect the quality of articles in the journal)

✓ This journal has the highest impact factor, but we still must undertake an independent evaluation of the journal articles selected to ensure they are robust, crredible research

Bibliography

Bassham, G., Irwin, W., Nardone, H., & Wallace, J. M. (2023). *Critical thinking: A student's introduction* (7th ed.). McGraw Hill.

Microsoft Corporation. (2026). *Copilot* (Version 2.20260122.47.0) [Large Language model]. https://copilot.cloud.microsft

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