Questioning as we learn: An introduction to critical thinking
Material for Higher Education students in Sierra Leone by INASP, UK

Assuring

Quality Higher Education

in Sierra Leone
(AQHEd-SL)

Provided by the Critical Thinking Taskforce (CTTF)
within the project AQHEd-SL

Unit 3 - Snippet 72

As mentioned before, there are two types of reasoning. After having learned about *deductive* arguments, you will now get a better understanding of *inductive* arguments.

Inductive arguments

An inductive argument follows inductively from its premises. In other words, we base our argument on the inference of a general law from particular instances. Inductive arguments are not truth-preserving. This means that in an inductive argument the premises can be true without the conclusion having to be true. The truth of the premises merely raises the probability of the truth of the conclusion.

Inductive arguments can be strong (high probability that the truth of the conclusion follows the truth of the premises) or weak (low probability that the truth of the conclusion follows the truth of the premises).

A strong inductive argument is called cogent (i.e. good, believable, probably true) when all the premises are true, and uncogent (bad, unbelievable) when not all the premises are true.

Consider the following inductive argument:

Premise: Every morning in the history of mankind, the sun has risen.

Conclusion: Therefore, the sun will rise tomorrow morning.

This argument is believable or cogent, as the probability of the sun rising tomorrow morning is hard to doubt. However, we will have to wait until tomorrow to be absolutely sure of it. 'Tomorrow morning' is not part of 'the history of mankind'; it is its future.