

**S05**

## Society needs reliable information: Be aware of fake news!

### Description and background

This learning unit:

- Introduces citizens to reliable information*
- Enables citizens to differentiate between casual texts, propaganda and research papers*
- Emphasises an understanding of reliable research results in our knowledge-based society*



*An advocate for research integrity*

*Philippe Grandjean*

### Keywords

*Disinformation and misinformation; reliable sources; references; citations*

*This unit has been prepared for non-disciplinary learning groups.*

### Learning objectives

- 1 Understand the importance of reliable research results*
- 2 Describe criteria for reliable academic information*
- 3 Explain the importance of correct citations and reliable sources*
- 4 Weigh different criteria for academic writing*

### Learning stages

- 1 Become familiar with the topic*
- 2 Dive into an interesting story*
- 3 Discuss the importance of reliable sources and correct citation*
- 4 Engage in storytelling*
- 5 Reflect on rules for academic writing*

**“High ethical standards are necessary in science publication.”  
(Philippe Grandjean, an advocate for research integrity)**





## 1 Become familiar with the topic:

Read your school's or department's guidelines on citation and academic writing, if they exist.

## 2 Dive into an interesting story:

Review or look up the story from LONA Science Centre (video or text).

Briefly summarise the story.

Choose one who reads aloud in front of the class:

Imagine that Prof. Weis decided not to manipulate the results, and that she continued to conduct research. Today Prof. Weis meets with the mayor and the head of the fire brigade to discuss how to improve trainings for firefighters. With strength Prof. Weis squeezes the papers in her hands, which contain results from her, several other credible, trustworthy and objective references such as 'Surinares, K. (2019) Helping firefighters to survive extreme wildfires, Journal of Scientific Research, 56(4), 55–59.'

which argue to alter the trainings routine.



### Assess reliability

- Check how scholarly the paper is. To inform not to persuade should be the main purpose.
- Check how accurate, complete and unbiased the information of the paper is. Compare the content to other sources.
- Check if the paper has taken status quo and existing evidence into account. Look at the paper's references and compare them with other sources.
- Check the expertise of authors and publishing organisations. Consider their education, experience and standing in the scientific community.
- Check how up to date the paper is. Search for more recent findings, and/or if these papers state the original argument. The original (older) source is more valuable than secondary sources.

## 3 Discuss the importance of reliable sources and correct citation:

As a class, share what you know about the following terms:

- What is a reliable source?
- What is a scientific source?
- What does it mean to cite?

## 4 Engage in storytelling:

Come together in small groups (three to four people) and write down a short story about Prof. Weis defending her findings to be reliable against the mayor and the head of fire brigade.

Insert in your story criteria for reliable academic information and underline them.

Read some of your stories aloud.

### To ensure reliability academic writing contains

#### 1. Direct quotes

Authors use someone's text (or image, chart, table etc.) word-for-word, stating the source and original author. They indicate where the original text starts and ends by enclosing the quoted section in quotation marks. They add a reference at the end of the quote.

#### 2. Paraphrases

Authors take a statement, idea or text of somebody else and tell it in their own words. They acknowledge the original source by using a reference at the end of the paraphrased session.

#### 3. Summaries

Authors describe the basic idea of a piece of work in their own words. They state the original source of the summarised ideas.

(This section was prepared by Lisa Häberlein.)



## 5 Reflect on rules for academic writing:

**Come together as a class.**

Collect the criteria you have underlined on a chalk board and turn them together into rules for academic writing. Write them into your notebook.

In which situations do rules from the chalk board contradict each other? Which rules are important when?