

Research Ethics in STEM

Avoiding Plagiarism, Data
Falsification, and Data Fabrication



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PLAGIARISM

- What is it?
- How can we avoid it?



5 BASIC TYPES OF PLAGIARISM



STEALING

This is exactly what it sounds like!

1

How can we
avoid it?

If you take a sentence, or even a unique turn of phrase, and pass it off as your own, this is stealing.

PATCHWRITING

Using words and phrases from a source text (that may or may not be acknowledged), and patching them together into new sentences.

A hand is holding a white rectangular card against a background of a blue sky with light clouds. The card contains the number '2' and the text 'How can we avoid it?'.

2

How can we
avoid it?

INSUFFICIENT PARAPHRASING

Taking an author's words and changing them slightly, without quoting the actual text is plagiarism.

Say it entirely in your own words, otherwise put the author's text in quotes and reference the source.

Instructors know when this happens because everyone has their own style of writing and seeing styles change throughout a document is a red flag that plagiarism has occurred.

A hand is holding a white rectangular sign against a background of a blue sky with light clouds. The sign features a large black number '3' and the text 'How can we avoid it?' in a smaller black font.

3

How can we
avoid it?

MISQUOTING

When you quote another author in your own work, always be sure to quote exactly what was said.

Never change or misrepresent another's words to make your own argument stronger.

4

How can we
avoid it?

SELF-PLAGIARISM

You can not reuse/recycle your own paper for use in another assignment without explicit permission from the instructor.

This is plagiarism and it's possible to plagiarize **yourself** if you don't give credit to your own work.

A hand is holding a white rectangular sign against a background of a blue sky with light clouds. The sign contains the number 5 and a question.

5

How can we
avoid it?



Intentional or Unintentional Plagiarism = Academic Dishonesty

“Unintentional:

- Collaborative work on a paper must be acknowledged.
- Reworking the paper submitted for another course must have the current instructor’s permission.

Intentional:

- To copy a work, or part of a work directly from a source, word for word, without citing it.
- To submit a paper written by another person.
- To intersperse works of another within your work without giving credit.”

(“Library Plagiarism Policies,” Manhattanville College, p. 68. 2007.)



ACADEMIC DISHONESTY IN THE SCIENCES

- “Making up data or results (fabrication);
- Changing or misreporting data or results (falsification);
- Using the ideas or words of another person without giving appropriate credit (plagiarism) —these three issues strike at the heart of the values on which science is based.

...even infractions that may seem minor at the time can end up being severely punished.”

From National Academy of Sciences (U.S.), & NetLibrary, Inc. (1995).

[On being a scientist: responsible conduct in research](#). Washington, D.C.: National Academy Press, p.16.

A hand holding a blank white sign against a blue sky with clouds.

WHAT IS EXPECTED OF YOU?

- Develop a topic based on earlier work
BUT: *write your own ideas*
- Rely on experts' opinions
BUT: *analyze, improve on, or disagree with them*
- Give credit to others' work
BUT: *include your own contribution*
- Keep others' ideas intact and in context
BUT: *use your own words*

COMMON MISTAKES

- Cut & paste from electronic/Internet sources without using quotes or properly citing the source.
- Download audio, visual, or arts without proper permission. (Copyright issues)
- Cite statistics/facts without the source, unless they are common knowledge.



Basic Guidelines

- 2/3 your words, 1/3 authors for summarizing safety
- Even if you don't use words verbatim, you must cite if you use the author's ideas
- If you reference a scientific concept that is not commonly known, cite the source
- You do not need to cite if you are using universally understood concepts or common knowledge
- When in doubt, **CITE**

[Adapted in part from PLAGIARISM. What is it? [Accessed 8 June 2009, <http://bahealthsci.php.ufl.edu/tools/PLAGIARISM.ppt> - 2008-09-05]