

Scientific misconduct

Scientific misconduct is the violation of the standard codes of scholarly conduct and ethical behavior in the publication of professional scientific research. In other words the Scientific misconduct is a Intentional distortion of the research process by fabrication of data, text, hypothesis, or methods from another researcher's manuscript form or publication.

Fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results is also Scientific misconduct.

Reasons for Scientific misconduct

A range of possible reasons are:

- Career and funding pressures
- Desire to publish more number of research papers.
- Institutional failures of oversight
- Inadequate training

Types of Scientific misconduct

There are various Scientific misconduct are identified in the scholallry world. Some of the Scientific misconduct are:

i) Fabrication

Fabrication is the construction and/or addition of data, observations, or characterizations that never occurred in the gathering of data or running of experiments. In scientific inquiry and academic research, data fabrication is the intentional misrepresentation of research results. As with other forms of scientific misconduct, it is the intent to deceive that marks fabrication as unethical, and thus different from scientists deceiving themselves. Experimental data can be fabricated by reporting experiments that were never conducted, and accurate data can be manipulated or misrepresented to suit a desired outcome.

ii) Falsification

Falsification is the changing or omission of research results (data) to support claims, hypotheses, other data, etc. Falsification can include the manipulation of research instrumentation, materials, or processes. In other words falsification is process of manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record.

iii) False authorship

Including a colleague as an author on a paper in return for a favor even though the colleague did not make a serious contribution to the paper.

iv) Piracy

It is an act of illegally reproducing or disseminating copyrighted material, such as computer programs, books, music, and films. Although any form of copyright infringement can and has been referred to as piracy

v) Ghost writers

A ghostwriter is hired to write literary or journalistic works, speeches, or other texts that are officially credited to another person as the author. Ghostwriters will often spend from several months to a full year researching, writing, and editing non-fiction and fiction works for a client, and they are paid based on a price per hour, per word or per page.

vi) Predatory journals

Predatory journals are a global threat. They accept articles for publication along with authors' fees without performing promised quality checks for issues such as plagiarism or ethical approval. Naive readers are not the only victims. Many researchers have been duped into submitting to predatory journals, in which their work can be overlooked. Predatory publishers sow confusion, promote shoddy scholarship and waste resources.

Predatory publishers are entities that prioritize self-interest at the expense of scholarship and are characterized by false or misleading information, deviation from best editorial and publication practices, a lack of transparency, and/or the use of aggressive and indiscriminate solicitation practices

vii) Plagiarism

Plagiarism means using someone else's work without giving them proper credit. In academic writing, plagiarizing involves using words, ideas, or information from a source without citing it correctly. Plagiarism is the unethical practice of using words or ideas (either planned or accidental) of another author/researcher or your own previous works without proper acknowledgment.

According to the Merriam-Webster online dictionary, to "plagiarize" means:

- to steal and pass off (the ideas or words of another) as one's own
- to use (another's production) without crediting the source
- to commit literary theft
- to present as new and original an idea or product derived from an existing source

All of the following are considered plagiarism:

- turning in someone else's work as your own
- copying words or ideas from someone else without giving credit
- giving incorrect information about the source of a quotation
- changing words but copying the sentence structure of a source without giving credit
- copying so many words or ideas from a source that it makes up the majority of your work, whether you give credit or not.

Types of Plagiarism

a) Complete Plagiarism

Complete plagiarism is the most severe form of plagiarism where a researcher takes a manuscript or study that someone else created, and submits it under his or her name. It is tantamount to intellectual theft and stealing.

b) Source-based Plagiarism

Plagiarism may occur because of the different types of sources. For example, when a researcher references a source that is incorrect or does not exist, it is a misleading citation. Plagiarism also occurs when a researcher uses a secondary source of data or information, but only cites the primary source of information. Both these types lead to an increase in the number of references sources. This, in turn, increases the citation number of the references.

c) Direct Plagiarism

Direct or verbatim plagiarism occurs when an author copies the text of another author, word for word, without the use of quotation marks or attribution, thus passing it as his or her own. In that way, it is like complete plagiarism, but it refers to sections (rather than all) of another paper. This type of plagiarism is considered dishonest and it calls for academic disciplinary actions. It is not as common, but it is a serious infraction of academic rules and ethics.

d) Self or Auto Plagiarism

Auto-plagiarism, also known as self-plagiarism or duplication, happens when an author reuses significant portions of his or her previously published work without attribution. Thus, this type of plagiarism is most likely to involve published researchers, rather than university students. The severity of this kind of infraction is under debate, depending on the copied content. Many academic journals, however, have strict criteria on the percentage of author's work that is reusable. Many journals run manuscripts through a plagiarism-detection software before considering them for review.

e) Paraphrasing plagiarism

It involves the use of someone else's writing with some minor changes in the sentences and using it as one's own. Even if the words differ, the original idea remains the same and plagiarism occurs. Because students often do not have a clear understanding of what constitutes plagiarism, there are recommendations for research and writing available to reduce the risk of paraphrasing plagiarism.

f) Inaccurate Authorship

Inaccurate authorship or misleading attribution can happen in two ways:

In one form, when an individual contributes to a manuscript but does not get credit for it. The second form is the opposite: when an individual gets credit without contributing to the work. This type of plagiarism, whichever way it occurs, is a violation of the code of conduct in research.

It is also possible to commit this form of plagiarism when someone else edits a manuscript, leading to substantive changes. In this case, the recommendation is to acknowledge the contributors at the time of publication, even if they are not listed as authors.

g) Mosaic Plagiarism

Mosaic plagiarism may be more difficult to detect because it interlays someone else's phrases or text within its research. It is also known as patchwork plagiarism and it is intentional and dishonest.

h) Accidental Plagiarism

Whether intended or unintended, there is no excuse for plagiarism and the consequences are often the same. However, plagiarism may be accidental if it occurred because of neglect, mistake, or unintentional paraphrasing. Students are likely to commit accidental plagiarism, so universities should stress the importance of education about this form of plagiarism.

UGC Regulations, 2018

(Promotion of Academic Integrity and Prevention of Plagiarism in Higher Educational Institutions)

Detection/Reporting/Handling of Plagiarism

If any member of the academic community suspects with appropriate proof that a case of plagiarism has happened in any document, he or she shall report it to the Departmental Academic Integrity Panel (DAIP). Upon receipt of such a complaint or

allegation the DAIP shall investigate the matter and submit its recommendations to the Institutional Academic Integrity Panel (IAIP) of the HEI. The authorities of HEI can also take suomotu notice of an act of plagiarism and initiate proceedings under these regulations. Similarly, proceedings can also be initiated by the HEI on the basis of findings of an examiner. All such cases will be investigated by the IAIP.

Penalties Penalties in the cases of plagiarism shall be imposed on students pursuing studies at the level of Masters and Research programs and on researcher, faculty & staff of the HEI only after academic misconduct on the part of the individual has been established without doubt, when all avenues of appeal have been exhausted and individual in question has been provided enough opportunity to defend himself or herself in a fair or transparent manner.

Penalties in case of plagiarism in **submission of thesis and dissertations** Institutional Academic Integrity Panel (IAIP) shall impose penalty considering the severity of the Plagiarism.

- i. Level 0: Similarities upto 10% - Minor Similarities, no penalty.
- ii. Level 1: Similarities above 10% to 40% - Such student shall be asked to submit a revised script within a stipulated time period not exceeding 6 months.
- iii. Level 2: Similarities above 40% to 60% - Such student shall be debarred from submitting a revised script for a period of one year.
- iv. Level 3: Similarities above 60% -Such student registration for that programme shall be cancelled.

Other Scientific misconduct

Some of the other scientific misconduct are:

- Submitting the same paper to different journals without telling the editors
- Publishing the same paper in two different journals without telling the editors
- Discussing with your colleagues confidential data from a paper that you are reviewing for a journal
- Using data, ideas, or methods you learn about while reviewing a papers without permission
- Using an inappropriate statistical technique in order to enhance the significance of your research
- Bypassing the peer review process and announcing your results through a press conference without giving peers adequate information to review your work
- Conducting a review of the literature that fails to acknowledge the contributions of other people in the field or relevant prior work
- Failing to keep good research records
- Failing to maintain research data for a reasonable period of time
- Making derogatory comments and personal attacks in your review of author's submission
- Wasting animals in research

References:

<https://www.e-education.psu.edu/bioet533/node/654>

<https://libguides.lindsey.edu/plagiarism/types>

<https://www.scribbr.com/category/plagiarism/>

<https://www.enago.com/academy/fraud-research-many-types-plagiarism/>

https://www.ugc.ac.in/pdfnews/7771545_academic-integrity-Regulation2018.pdf

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