

5 Ways to Reduce the Number of Erroneous Research Papers

Author

Enago Academy

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There are several types of <u>errors in research papers</u> are published every year, causing embarrassment to those who truly believe in science and academia's good procedures. Is it time for scientists to fight against academic misconduct? Even though putting an end to bad research practices sounds difficult, we suggest five ways to minimize the number of errors in scientific research papers.

Change the Rules

As long as researchers' success depends on the number of papers they publish in reputed publications, quantity will prevail over quality. Career pressure can be enormous, and therefore many risk committing academic misconduct, even though the consequences can be serious. Is this desperation what we want for our scientific researchers?

Make Motivation Count

Changing the panorama sounds like a difficult thing to do. What about changing scientists' expectations? In a society where their work were better recognized, they could focus more on improving their results and analysis methods than on publishing a certain number of papers. Improving the researchers' own recognition of their work could probably be a good way to prevent the publication of erroneous research papers.







Avoid Academic Misconduct

The consequences of scientific misconduct can be huge. However, plenty of forms of academic misconduct are observed every year in scientific papers—ghostwriting, plagiarism, manipulation of data. Plagiarism can be avoided by using plagiarism checker tools. Two forms of academic misconduct are especially problematic: fabrication and falsification. Fabrication refers to the falsification of data in papers or to the manipulation of research material and processes, while falsification refers to the fact of making up results. As long as these kinds of procedures are not penalized, as they deserve, it would be difficult to prevent the publication of erroneous research papers.

Improve Peer Review

Sooner or later, every discussion about how to prevent mistakes in scientific papers deals with <u>peer review</u>. It is the final control and therefore the last opportunity to check and evaluate a <u>research paper</u>. However, a lax consideration of this final step favors the publication of erroneous papers, while the effects of <u>corrupted peer review</u> do not help to improve scientific credibility. To ensure accuracy, correction mechanism should be improved and researchers should work to give <u>peer review</u> the importance it deserves.

Increase Responsibility

Research institutions, journals, authors, and coauthors obviously have certain responsibilities with regard to research publications. Is increasing their accountability the solution? What about colleagues? Some researchers consider taking matters into their own hands if they suspect scientific misconduct from a colleague. There is no doubt that <u>collaboration</u> and respect are needed to improve research standards and procedures. Researchers should work together and prioritize knowledge over economic benefits and prestige.

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