

Students beware! When you indulge either in literal plagiarism or intelligent plagiarism either knowingly or unknowingly, you are putting all the authors in the manuscript at risk. Detection of plagiarism after publishing the paper can result in serious consequences to the organization where you work, and can severely damage your reputation and that of the co-authors.

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Folks:

The posting below looks at the important and sometimes murky area of academic plagiarism. It is by M. Jagadesh Kumar, Dept of Electrical Engg., IIT, New Delhi, INDIA and is from his blog posted on April 11, 2012 at: <http://mamidala.wordpress.com/2012/04/11/275/> Reprinted with permission.

Regards,

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UP NEXT: Measuring Student Progress with E-Portfolios

Tomorrow's Research

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----- 1,359 words -----

### Literal and Intelligent Plagiarism: Students Beware!

Academic plagiarism has become like a viral fever that can affect even a healthy person if sufficient preventive measures are not taken. Untrained research students, who need to write good quality research papers under tight time constraints, are usually the victims. It is not uncommon for research supervisors to experience a psychological burden while approving the student's paper for submission to a journal or conference. Who knows if a sentence copied by the student while writing a research paper may be detected years later, subjecting

the research supervisor to a great embarrassment. When the supervisor asks them to be careful about plagiarism, the students may also feel that they are being treated with suspicion. Let us look at how incautious writing of a research paper can lead us to these potential plagiarism risks.

You write a research paper when your experiments are complete and you feel that the results are unique and a significant advancement in knowledge. Research papers typically contain an abstract, an introduction, experimental details, analysis of results including tables and figures, conclusions and a list of references. Preparing figures or tables, analyzing the results and making conclusions are the easier tasks of writing a research paper since you must have spent a couple of years working on the problem. However, writing the introduction of the paper is the most difficult task and is often written at the end just to make sure that no important points of rationale that support your work are left out. The reader should get an overall picture and important highlights of your contribution after reading the introduction so that he is enticed to delve further into your paper.

In the introduction, you briefly survey the field, and identify the limitations of the known approaches to justify why you have taken up the current research problem. You then go on to state the results you have obtained and why they are important in the present context. You may also highlight the limitations of your work in the broader context. In my view, writing the introduction part of a research paper is not easy because this is where you are making that emphatic selling point for your research. Students are generally clueless on writing the introduction to the research paper since it requires taking a broader view of the research area. This invariably leads them to read a variety of published papers to look for leads on how to build their case as the most novel and original idea with respect to the knowledge already known.

Borrowing a few words from others sentences to beautify the sentences in your own manuscript by itself cannot be called plagiarism as long as you have not borrowed the ideas. However, students whose native language is not English or those who are not fluent in English are tempted to use the easier way of “copying and pasting” entire sentences. This is called literal plagiarism. The introduction of a thesis or a research paper is the one where you will find most cases of literal plagiarism. Even if cosmetic changes are made in the sentences, it does not keep you from being called a plagiarist. Let me illustrate this with an example. The following sentences are from my research paper.

Original text: Bipolar transistors exhibit a number of significant advantages such as well-controllable characteristics, high speed, high gain, and low output resistance. These are excellent properties for mixed-signal circuit design and analog amplifiers. An emergent trend in modern high-density Very Large Scale Integrated circuits is the integration of bipolar transistors with complementary metal-oxide-semiconductor (CMOS) technology on thin silicon-on-insulator (SOI).

Let us say an author copies the above text in his paper with slight modifications (in italics) as given below.

Copied text with minor modifications: Bipolar transistors *show* a number of significant advantages such as well-controllable characteristics, *high gain*, high speed, and small output resistance. These are useful characteristics for mixed-signal circuit design and analog amplifiers. A *modern* trend in high-density VLSI circuits is the integration of bipolar transistors with CMOS technology on thin silicon-on-insulator (SOI).

Carefully check the above two paragraphs. There are only a few changes in the choice of words. The modified and copied text will still be considered as literal plagiarism if the original source is not cited at the end of the copied text. I would even suggest that you put the modified and copied text in quotes or in italics and cite the original reference. This is to make sure that the reader is aware that the material has been taken from a different source. But this does not mean that you put every sentence in a written paragraph in quotes followed by a reference. This indeed has happened with one of my students. He brought a manuscript in which every alternate sentence is in quotes followed by a reference number. Such a collection of quotes does not lead to any original intellectual contribution and looks awkward.

If you examine the original text given above, it has three sentences. The first/second sentence is a general statement about bipolar transistors and therefore is standard stuff. However, the third sentence conveys an idea or a thought attributable to the original author. Only an expert working in the field could say it authoritatively. When the student copies a statement or thought from another paper because that sentence perfectly conveys what the student wanted to say, there is another danger. You might have copied an idea too along with the language of the sentence. You might not have used this idea in your paper. However, you have failed to acknowledge that the original author is the one who has presented that point of view. This is called idea adoption. If the plagiarist tries to hide the original source to represent the idea as his own during the idea adoption, it leads to intelligent plagiarism.

What we tend to forget is that it is not possible for two different human beings to exactly write the same set of sentences on a given idea. If you have watched a nice movie and wanted to convey the story to your friend, I am sure you would tell it in your own words. We can similarly summarize a written text without the need to copy from the original source. Let me re-write my original text given above to illustrate how you can avoid literal plagiarism.

Modified text: The significant advantages of bipolar transistors are (i) well-controllable characteristics, (ii) high speed, (iii) high gain, and (iv) low output resistance. These benefits make them highly useful in mixed-signal and analog amplifier circuit design. Integration of bipolar transistors with complementary metal-oxide-semiconductor (CMOS) technology on thin silicon-on-insulator (SOI) is an emerging trend in modern high-density VLSI integrated circuits.

While there is no literal plagiarism in the above paragraph, the viewpoint expressed in the last sentence needs a citation of the original source although the viewpoint is re-written. However nicely you may summarize an idea of another author, you must remember that the idea is not yours and must, therefore, acknowledge the original source. Failure to do so can land you in intelligent plagiarism which is even more malicious compared to literal plagiarism.

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Academic institutes should evolve an enforceable policy defining the boundaries between fair use and plagiarism and make this policy widely available to their communities via their websites. This plagiarism policy should help the academic communities in improving their self-awareness about (i) what constitutes plagiarism and (ii) the consequences of plagiarism. Providing easy access to plagiarism detection tools through campus-wide licensing will make it easier both for the students and the faculty to keep out of situations that can be classified as plagiarism.

We need to recognize that while plagiarism is bad, we can definitely prevent it from happening through good practices.

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