

feature story

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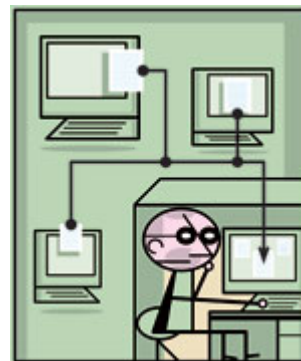
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Copy-and-Paste Papers Put Profs on the Offensive

BY ANNA BOGDANOWICZ

More incidents of college students plagiarizing others' work are popping up today than ever before, according to engineering professors queried by *The Institute*. And a recent U.S. survey released by the Center for Academic Integrity of 50 000 undergraduates shows the problem is on the rise. According to the center, 10 percent admitted to plagiarizing in 1999, whereas almost 40 percent said they did so in 2005.

And last year, for example, 21 mechanical engineering graduates from Ohio University, in Athens, were found to have plagiarized their master's and doctoral theses, and others at the school are now under investigation. The problem is growing at universities around the world as well.



Many professors place the blame on the Internet, which has made plagiarizing a simple copy-and-paste process. But there are other reasons for the increase, they say, including a misunderstanding of what plagiarism is. Other factors include differences in how plagiarism is perceived, a lack of basic education in ethics and, to put it simply, the ability to get away with it because professors are too busy to check every paper.

The consequences of growing up with little feel for ethical behavior could be devastating, says IEEE Member Richard Wiltshire, a former part-time lecturer in electrical engineering at Queensland University of Technology, in Brisbane, Australia. "I find plagiarism by engineering students of particular concern because engineers are responsible in many ways for keeping the community safe. If a student has no understanding of proper ethical behavior now, what will that person be like later?" Wiltshire asks.

That's one reason why incidents of plagiarism are being taken seriously. For example, the IEEE has developed a number of sanctions for plagiarists that range from sending a letter of apology to being banned from publishing with the IEEE for up to five years.

REINFORCEMENT One key to stopping plagiarism is to make sure students understand proper attribution. Although most students are taught in high school to cite their sources, that principle needs to be reinforced in college, says IEEE Member Michael Hoffmann, a professor of microwave engineering at the Institute of Microwave Techniques, part of the University of Ulm, in Germany.

"Before students begin to write, I go over our institute's rules of conduct, how to cite a source, and what makes good scientific writing," he says. Students must sign a document stating that they understand the rules. Just telling students their theses will be checked for plagiarism seems to dissuade them from copying, Hoffmann adds.

IEEE Fellow Lloyd "Pete" Morley, who retired in late December from his post as a professor of electrical engineering at the University of Alabama, Tuscaloosa, made sure that his students understood from day one of class what constitutes plagiarism and why it's a serious offense. Students need such reminders because "they may have heard about plagiarism, but not truly understood what it meant," Morley says.

Sometimes students are uncertain when they might be crossing the line. Vikrant Agarwal, an engineering junior at the Pune Institute of Computer Technology, in India, and chair of the school's IEEE student branch, says it's unclear how many words writers can copy before attributing the information to a source. To be safe, Agarwal says, he always cites his sources, even if he's referencing only a few words.

Senior Member Bruce McNair, a professor of electrical and computer engineering at Stevens Institute of Technology, in Hoboken, N.J., sets strict limits. For McNair, using more than four consecutive words or lifting an uncommon phrase may be plagiarizing.

PERCEPTION PROBLEMS That plagiarism is unethical is not universally understood, according to several professors.

In one of Wiltshire's classes, 35 students were copying each other's papers. "They didn't think they were plagiarizing—they thought they were just pulling resources from each other," he says.

And when McNair confronted one of his students with plagiarism, he said the student told him it's an honor for the sources when someone takes their words directly without attribution.

But students at India's Pune Institute, for one, are being taught that copying another's work is unethical. "Plagiarism is a very serious offense at my university," Agarwal says, adding that in serious cases, students receive a failing grade.

Although spotting plagiarism has gotten easier with search engines such as Google and special detection software, professors don't always apply the technology. They rarely run every paper through a plagiarism check because it's so time-consuming, Wiltshire says.

Instead, most look for telltale signs—an inconsistent writing style, say, or a paper that is suspiciously well written—and then either search for the phrases on the Web or use a detection program such as Turnitin. That program checks papers against other student manuscripts submitted through Turnitin, and it also checks the Internet.

At most schools, punishments vary from having students rewrite their paper to, in extreme cases, expelling them. In most cases, students are given a second chance.

Still, some professors say plagiarism has little to do with a lack of understanding. "Students ought to know if they're stealing somebody else's work. I think sometimes it's a temptation because they think it's an easy way out," says Life Senior Member Charles Hickman, an adjunct professor in the electrical and computer engineering department at the University of Alabama at Birmingham.

Others say that in the end it's just a culture of getting away with it. "Students think if they're not caught, then plagiarism is not a bad thing," Hoffmann says.

For more information on the plagiarism survey of students conducted by the Center for Academic Integrity, a consortium of more than 390 institutions affiliated with the Kenan Institute for Ethics at Duke University, in Durham, N.C., visit http://www.academicintegrity.org/cai_research.asp.

