Plagiarism in a Digital World:

Worldwide Plagiarism Rates in Secondary and Higher Education

This is Part 2 in the "Plagiarism in a Digital World" series. This five-part series investigates the definition, frequency, causes, consequences and institutional response to incidents of plagiarism.

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INTRODUCTION

Plagiarism has always been a problem for those who are concerned with copyright infringement and the ownership of ideas--namely authors and publishers. And yes, plagiarism is also a concern in academic settings as well. Only recently, however, has plagiarism become an increasingly pressing issue for educators, researchers and the general public as new cases of plagiarism seem to occur on a daily basis. Whether it is plagiarism of a song, in a scientific journal, a speech by a politician or by students at a university, plagiarism seems to be increasing in frequency.

This paper shares data about levels of plagiarism among students in both secondary and higher education around the world. It will focus on plagiarism in an academic environment with the belief that if students learn the importance of proper research and citation practices early, they will be able to avoid the missteps that have appeared on such a regular basis.

The report will show that levels of unoriginal content in student papers are quite consistent across both secondary and higher education globally. Additionally, it will show that implied rates of plagiarism globally should be cause for concern among educators in that tens of millions of plagiarised papers are being submitted and not identified as unoriginal.

Means and Motives of Plagiarism

The most common explanation for the rise in plagiarism cases relates to the shift from an analogue to a digital society that began more than 60 years ago and accelerated with the birth of the World Wide Web in the mid 1990s. With a few clicks, students have at their disposal a corpus of information that would be unimaginable to students of previous generations. Search technology, most notably Google Search, allows for students to quickly discover information on very specific terms that would have previously required students to manually research, critique, synthesise and communicate.

While the Internet has provided the means for plagiarism, there still needs to be a motive. Research by D. R. Cressey (Cressey, 1950) presents the theory that misconduct requires three traits: pressure, opportunity and the ability to rationalise actions.[1] The Internet certainly presents an easier opportunity to plagiarise, while the growing importance of acceptance and success in university as a means to a fulfilling and lucrative career provides the increased pressure that can lead to plagiarism. Finally, in terms of rationalisation, it seems that norms around appropriation have eased in the digital age, providing students with an excuse to plagiarise. "If everyone else is doing it, why shouldn't I?"

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[1] Cressey, D. R. (1950). The criminal violation of financial trust. American Sociological Review, 15(6), 738-743.

Growing Rates of Plagiarism in Secondary and Higher Education

There is a growing body of research that examines what students say about the frequency of plagiarism in academic work. In 2010, The Josephson Institute Center for Youth Ethics surveyed 43,000 U.S. secondary students and asked them about the frequency of academic misconduct, including plagiarism, in their academic lives. Fifty-nine per cent of respondents admitted to cheating on a test in the last year, while one out of three high school students admitted that they used the Internet to plagiarise an assignment.[2]

Donald McCabe, founder of the International Center for Academic Integrity, conducted a series of studies on cheating in academia. In a survey of 24,000 students at 79 U.S. high schools, McCabe found that 58 per cent admitted to plagiarism during their high school careers.[3]

In a separate study of cheating among university students, McCabe found that more than 75 per cent of undergraduate students admitted to some form of academic misconduct. The report concluded that plagiarism was a growing problem in academia.[4]

In a 2011 survey, Pew Research surveyed 1,055 university presidents as to whether plagiarism has increased, decreased or stayed the same in the last 10 years. Fifty-five per cent of university presidents believed that plagiarism had increased in the last 10 years while 40 per cent believed it had stayed the same. Only two per cent of university presidents believed plagiarism had declined the last 10 years.[5]

[2] The Josephson Institute Center for Youth Ethics" "2010 Report Card on the Ethics of American Youth,"
http://charactercounts.org/programs/reportcard/2010/installment02_report-card_honesty-integrity.html

[3] "Donald McCabe. "Students' Cheating Takes a High-Tech Turn". http://www.business.rutgers.edu/media/coverage/students-cheating-takes-high-tech-turn

[4] McCabe, D., Trevino, L., & Butterfield, K. D. (2001). Cheating in academic institutions: A decade of research. Ethics & Behavior, 11(3).

[5] Pew Research. "The Digital Revolution in Higher Education" http://www.pewinternet.org/2011/08/28/main-report-17/

RATES OF PLAGIARISM ACROSS THE WORLD

The studies cited above are focused on rates of plagiarism in secondary and higher education in the United States. With these studies focused on one part of the world, it is reasonable to ask about levels of plagiarism in different regions across the world. Is plagiarism just a U.S. phenomenon or is it found in institutions globally? If so, are there regions that commit academic plagiarism in the classroom more often than others?

To answer these questions, we looked at data from submissions to Turnitin to see how levels of unoriginal content differed across geographies and divisions of study. Turnitin submissions were anonymised except for location, level and the percentage of unoriginal content. Submissions with unoriginal content totalling more than 50 per cent of the paper - meaning that 50 per cent of the content of the paper matched content archived in Turnitin's databases - were deemed highly unoriginal. While the designation of plagiarism is left to the instructor and administrator, degrees of highly unoriginal content can serve as a proxy for papers that contain potential plagiarism.

To investigate rates of plagiarism globally, the study analysed submissions from the 2013-2014 academic year (July 1, 2013 to June 30, 2014) at both the secondary and higher education levels for representative countries in the following regions: US/Canada, Latin America, United Kingdom, Europe, Australia/New Zealand, Middle East, Africa, and East Asia.

Count of Papers Analysed by Country and Region, 2013-2014

Region	USA/Canada	Latin America	United Kingdom	Europe	Oceania	Africa	Middle East	East Asia
Countries Represented	USA Canada	Mexico Brazil Columbia Peru	United Kingdom	Germany Netherlands France	Australia New Zealand	Kenya Nigeria South Africa	Egypt Saudi Arabia Turkey	Japan Korea China
Total Higher & Secondary Ed Papers	82,228,187	196,691	9,090,438	280,300	6,163,880	790,350	394,849	232,683

While the submission counts vary greatly - submissions from each region total in the tens of thousands - they present a much more exhaustive data set than can be compiled from inspection of papers from a survey of students in a few schools. Nevertheless, this study must be qualified in that these papers were being submitted to Turnitin, which may have biased the results. Moreover, the schools represented may not provide a representative cross-section of schools within a given country or region.

While there is some variance in the rates of unoriginal content across regions, the results show that levels of unoriginal content are remarkably consistent across regions of the world.

Per cent of Unoriginal Content by Region, 2013-2014

Region	USA/ Canada	Latin America	United Kingdom	Europe	Oceania	Africa	Middle East	East Asia
% of Unoriginal Content in Total Submissions	11 %	12 %	7 %	11 %	10 %	9 %	9 %	14 %

*% of papers containing more than 50 per cent unoriginal content

In higher education, the range spans from a rate of seven per cent of unoriginal papers in United Kingdom to 14 per cent in Japan, Korea and China.

The narrow range of unoriginal content across countries shows that plagiarism is not a country or regional issue, but a global one. Students appear to show the same types of behaviour whether they are in a classroom in Vancouver, Nairobi or Shanghai. The implications of these findings are far-reaching

IMPLIED RATES OF PLAGIARISM AROUND THE WORLD

To gain a better appreciation for the implications of not having a plagiarism detection system in place, if we assume that 10 per cent of a country's population attends secondary school or university at any given time and that those students submit just four papers per year (a conservative estimate for certain, based on data extrapolated from the US, Canadian, British and Australian population, matriculation, and paper submission rates, applying the rates of unoriginal content for each region from the chart above shows some startling figures.

Implied Rates of Unoriginal Content by Country and Region

Region	USA/ Canada	Latin America	United Kingdom	Europe	Oceania	Africa	Middle East	East Asia
Countries Represented	USA Canada	Mexico Brazil Columbia Peru	United Kingdom	Germany Netherlands France	Australia New Zealand	Kenya Nigeria South Africa	Egypt Saudi Arabia Turkey	Japan Korea China
Population[6]	354M	401M	65M	164M	28M	278M	194M	1.5B
10% of Population in Higher or Secondary	35.4M	40.1M	6.5M	16.4M	2.8M	27.8M	19.4M	150M
Four submissions per year	141.6M	160.4M	26M	65.6M	11.2M	111.2M	77.6M	600M
Implied rate of unoriginality	15.6M	19.2M	1.8M	7.2M	1.1M	10M	7M	84M

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[6] See http://en.wikipedia.org/wiki/List_of_countries_by_population

CONCLUSION

These rough estimates show that educators can expect over 100 million highly unoriginal papers to be submitted in a given year in the countries analysed. By comparison, Turnitin identified only 10.5 million highly unoriginal papers in the same countries as usage levels vary from less than five to 50 per cent of schools in the countries analysed. Accounting for other plagiarism detection technologies that may be in place would make only a small impact on this very large number, as adoption of plagiarism detection systems is quite limited globally.

The implications are clear - educators are struggling to address the global, common issue of plagiarism and thus are not able to teach students the importance of citation and enforce fairness in the classroom. The consequences of plagiarism globally will be addressed in a forthcoming study.

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