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## Printed Versus Internet Plagiarism: A Study of Students' Perception

### Abstract:

Recent studies have shown a growing tendency among students to commit plagiarism, especially from online information sources. This unpleasant phenomenon has a far-reaching impact on both the scientific world and the information society. The present study aimed to examine students' perceptions toward acts of plagiarism, in order to explore whether plagiarism from internet sources is perceived differently than plagiarism from printed sources. Findings of the present study indicate that students perceive plagiarism offences from online sources as significantly less dishonest than similar offences using printed sources. Possible implications of these findings are discussed and several conclusions are noted. Analysis of these findings from a broad perspective highlights the essential need to address ethical issues concerning uses of both online and offline information sources.

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## Introduction

The term "plagiarism" is used to describe a wide range of acts (Oliphant, 2002). One well-accepted definition in literature is "the presentation of another's words or ideas as your own" (Babbie, 1998, 1).

The term, deriving from the Latin root *Plagiarius*, which means 'a kidnapper,' was first used by Martial, a Roman poet in the first century A.D. (Kolich, 1983). Traditionally, literary theft was compared to stealing a child or a slave, highlighting the powerful relationship between artistic and biological creations (Greenacre, 1978). Since the 18 century, the term plagiarism is restricted exclusively to literary theft (Garfield, 1980).

Howard (2001) discusses four types of academic plagiarism: (a) submission of a paper that was written by other student; (b) patchwriting – copying sentences from a source and mixing them with your own words without attribution; (c) failure to cite sources, and; (d) failure to use quotation marks. Amongst these categories, the last two is considered most common among students (Evans, 2000). Wadja-Jonston, Handal, Brawer & Fabricatore (2001) surveyed 246 graduate students and found that 55% admitted to "not copying word for word but changing the wording slightly from an original source while writing a paper" and 16% to "copying word for word from an original source in a paper and not using quotation marks". Less than 5% confirmed that they submitted a paper which had been copied from another student or purchased from "paper mills". Of the 40 academically dishonest behaviors which were examined in their study, students perceived the prevalence rates of the first expression as the most frequent.

Until the mid 90's, expressions of plagiarism were limited to printed sources such as books, encyclopedias, newspapers and articles. The internet, however, opened a window of opportunity for diverse and inventive acts of plagiarism (Stebelman, 1998).

The internet grants students access to vast amounts of information. It allows them to complete their assignments by copying and pasting different segments of information (Galus, 2002). Willems (2003) reported that recent research shows that the majority of students indeed perceived the internet as an auxiliary tool that enables them to prepare assignments "as quickly and painlessly as possible with minimal effort and minimal engagement" (p. 28).

McMurtry (2001) demonstrated three popular methods of using the internet to commit plagiarism. The first method, which is considered the easiest, includes locating appropriate web sites using a search engine, copying relevant texts and pasting them into an essay. The second method is comprised of receiving papers prepared by friends or students from other universities through online communications channels such as e-mail or internet forums. The third and harshest method is downloading essays from online "sites that collect and distributes papers on the web, either free or for a fee," also known as "paper mills." (ibid, p. 37).

All the aforementioned methods illustrate Bodi's (1998) argument. Compared to information on paper, online information has become much more vulnerable to plagiarism due to technological options of modifying texts, moving sections from one place to another and separating sections from an original text as a whole.

The main cause of internet plagiarism, according to the literature, is the assumption that the internet is a public domain and therefore, information on the internet may be used without attribution (Groark, Oblinger & Choa, 2001; Oliphant, 2002; Thompson, 2003).

Devoss & Rosati (2002) suggested several reasons why students use the internet to plagiarize. One of the reasons concerns the ease and popularity of copy-paste actions, which are considered natural operations in computerized environments. Another reason related to the fact that many web sites, as opposed to printed sources, fail to note the author's name. Finally, the lack of knowledge in dealing with these situations leads to plagiarism acts.

Freedman (1998) opined that alongside its numerous advantages, the internet is seen by many as a key factor in the propagation of the plagiarism plague. In his opinion, however, placing exclusive responsibility for the increase of plagiarism rates on a new technology is like "countenancing one's own failure to recognize and reward originality" (p. 40).

The main purpose of the present study was to investigate the differences between plagiarism acts from printed sources and plagiarism acts from internet sources. Examining these differences allow us to clarify whether the source of information has indeed an influence on students' perception regarding plagiarism acts.

## Method

### Sample

Participants were students, who had at least one year of academic experience (i.e., were registered for second-year classes at the B.A level or higher). In order to ensure proper representation of the existing diversity of university majors and academic levels, participants were selected randomly after a multi-stage sampling procedure (faculties – majors – academic levels – courses).

A total of 284 students completed the questionnaire. The average age of respondents was 27.7 years (range: 20-52). The sample was comprised of 215 females and 69 males. Students from two faculties were examined: 177 students from the Faculty of Social Sciences and 107 students from the Faculty of Humanities. The entire sample was comprised of 154 students at the B.A level and 130 students at the M.A level.

### Survey instrument

A questionnaire was specifically constructed for the purpose of this study, following Roig's (1997) "Plagiarism Knowledge Survey" (PKS). The questionnaire comprised four items of identical structure. Each section contained a small paragraph taken from an original source including its bibliographic details, followed by a plagiarized version of the source, taken from a student's essay. A plagiarized version means that the student used the materials while committing plagiarism. Illustrations from two classes of plagiarism were used in the present study. In the "word for word" illustration, text was copied from the source without quotation marks. In the "paraphrasing" illustration, ideas from the source were used with no mention of the author's name. Two descriptions were taken from printed sources and the other two from internet sources.

In conclusion, each item was comprised of a unique combination of an information source (printed / internet) and its student (plagiarized) version ("word for word" / "paraphrasing").

After reading each item, respondents were requested to express an opinion regarding whether the author of the student version acted according to the acceptable citation rules. Respondents marked one of three options below:

1. "Yes" – the student version is consistent with accepted citation rules.
2. "Can't decide" – I am unable to determine.
3. "No" – the student version does not meet accepted citation rules.

In addition, participants who marked "No" were asked to explain their answers. Since the aim of this study was to explore student's perceptions only, data collected from this segment was not entered to the present research report.

### Procedure

Questionnaires were distributed during class hours, to ensure both full concentration and adequate time to complete the questionnaires.

First, a short introduction about the aim of the research, which was presented as testing the students' citation habits, has been said to the participant. Then, questionnaires were distributed, accompanied by oral instructions on completion. The questionnaire's anonymity and the fact that data would be used exclusively for research purposes was repeatedly noted.

## Results

Perceptions of the differences between plagiarism from printed sources and plagiarism from internet sources were examined by analyzing participants' perceptions of the consistency of the students' version with accepted rules of citation. Figure 1 separately presents frequencies for every plagiarism category, by source medium.

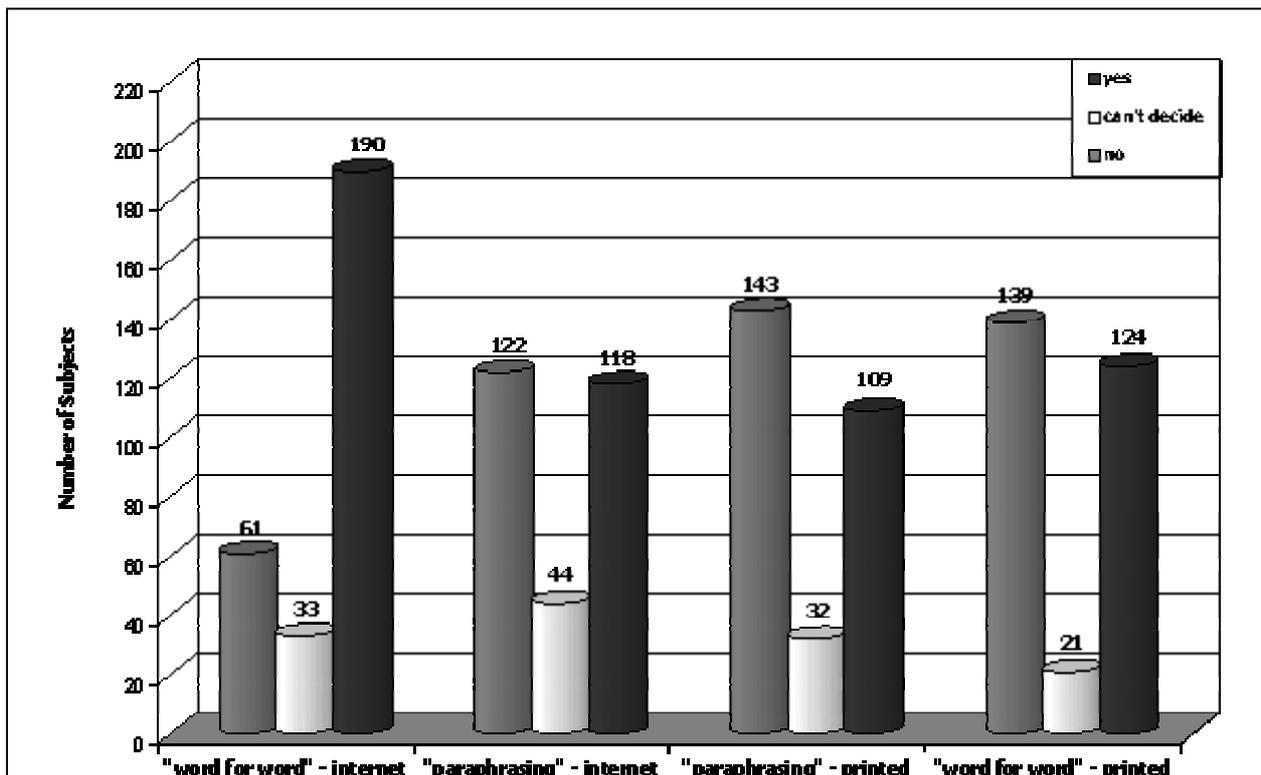


Figure 1. Distribution of students' perception for each of the four descriptions

As shown in Figure 1, most respondents believed they were able to determine whether the student's version was or was not consistent with accepted rules of citation. The minority preferred to mark "can't decide". Furthermore, approximately 40% of the respondents marked "yes" in the first three items ("word for word"-print; "paraphrasing" – print and internet) and approximately 65% marked "yes" in the fourth item ("word for word" – internet). This indicates a poor knowledge of the accepted rules of citation.

Next, a general perception score was calculated for each respondent, by enumerating the number of times the answer "no" was marked for each source text. A score of "0" indicated that both items were perceived as consistent with accepted rules of citation, the score "1" indicated that only one item was perceived to be inconsistent with these rules and the score "2" indicated that both items were perceived to be inconsistent with accepted rules of citation. Due to the ordinal nature of the general perception score, a Wilcoxon matched-pairs signed-rank test was conducted to determine whether there was a difference between printed and internet sources. Results of the analysis revealed a significant difference in perception ( $z=-7.04$ ,  $N=284$ ,  $p<.001$ ). Specifically, more participants tended to

perceive the student's version as inconsistent with accepted rules of citation when the source text used was a printed source ( $M=.99$ ,  $SS=100$ ) compared to an internet sources ( $M=.64$ ,  $SS=21$ ).

In addition, the differences between sources were examined by comparing the participant's perception separately for each item of plagiarism.

The dichotomous nature of the dependent variable (1=marking "yes"<sup>1</sup>, 2= marking "no") supported the use of McNemar tests for repeated measures. Table 1 presents results of respondents' perceptions and the McNemar's  $\chi^2$  results.

<sup>1</sup> Because of the small amount of respondents who marked "unable to decide" (compared to the other categories), this category was united with the "yes" category. The rationale for this act was that both categories represent the same first impression: although an example of plagiarism, the student's version was not perceived as inconsistent with accepted rules of citation.

	<u>Printed source</u>		$\chi^2 (1)$
	"yes"	"no"	
<b><u>"word for word"</u></b>			
<u>internet source</u>	"yes" 132	91	57.01 ***
	"no" 13	48	
<b><u>"paraphrasing"</u></b>			
<u>internet source</u>	"yes" 116	46	5.63 *
	"no" 25	97	

**Table 1. A comparison of perceived correctness of Plagiarism expression between printed sources and internet sources (N=284)**  
**Legend: \* p < .05 \*\* p < .01 \*\*\* p < .001**

Table 1 indicates that the number of participants who found students' versions modified from print sources as inconsistent with citation rules and found students' version of internet sources as consistent with these rules, was significantly higher than the number of respondents with converse answers (i.e., "no" in internet sources and "yes" in printed sources). In other words, the modification of print source texts was judged more harshly compared to perceptions regarding modifications of the same type, of internet source texts.

In order to explore these differences more thoroughly, we investigated the possible influence respondents' age on perception, using a simple logistic regression. Separate analyses were conducted for each unique combination of plagiarized version ("paraphrasing"/"word for word") and information source (printed/internet).

Of the four combinations which were examined, only "paraphrasing of a printed source" yielded a significant overall model (LR  $\chi^2 (1)=7.32$ ,  $p<.01$ ), whereas the other combinations were not statistically significant ("paraphrasing of an internet

source": LR  $\chi^2 (1)=.63$ ,  $p>.05$  ; "word for word of -printed source": LR  $\chi^2 (1)=1.01$ ,  $p>.05$  ; "word for word of an internet source": LR  $\chi^2 (1)=.15$ ,  $p>.05$ ).

The results suggested that respondents' age was a significant predictor of their perceptions of the student's version characterized by the use of ideas from printed sources, with no mention of the author's name (Wald=6.92, B=.052,  $p<.01$ ). The 'Odd ratio' for the age variable was 1.05, with a 95% confidence interval of [1.01, 1.09]. This suggests that for every additional year of age, the probability of perceiving the student's version as inconsistent with accepted rules of citation, increase by 5%.

## Discussion and Conclusions

The present study offers empirical evidence on the differential perceptions of plagiarism from internet and printed sources. The findings of the present study all confirm that plagiarism from internet sources is perceived as less dishonest than a similar act of plagiarism using a printed source.

It should be noted that there are very few studies dealing explicitly with the differences between printed and internet plagiarism. These studies refer primarily to students' self-reported commission of plagiarism and their perceptions concerning the prevalence of plagiarism by other students on campus. In this context, the literature reported that students do not distinguish between types of information sources and commit plagiarism equally from both sources (e.g., Scanlon & Neumann, 2002; Scribner, 2003).

Nonetheless, several theoretical ideas may clarify our findings.

The most common argument for internet plagiarism is related to the widespread opinion among students that information on the internet belongs to the public domain, the use of which is unrestricted and requires no citation (Moeck, 2002; Oliphant, 2002). According to this approach, different perceptions of printed and internet plagiarism stem from the belief that the transfer of information to the internet renders the content free and available for anyone to copy or use as they please.

In our opinion, this assumption results from the highly accessible nature of the internet as an information source, available to almost anyone, anywhere at anytime. On the other hand, access to

printed sources requires a specific location, where sources are stored, sometimes in a limited degree of availability. Furthermore, access to such sources itself may be restricted.

Another argument supporting the perceived differences between sources is the lack of agreement between style guides on the rules of citation for internet sources (Auer & Krupar, 2001; Oliphant, 2002). Numerous types of information sources exist on the internet (i.e., web sites, discussion groups, e-mails, etc.) and no uniform code exists regarding citation requirements. Lack of knowledge and clarity surrounding the issue of citing internet sources may also contribute to plagiarism. Furthermore, many websites make no mention of the author's name, a fact which reinforces the supposition that the information has no "official owner." Parenthetically, it should be noted that style guides allow the notation of the organization name or the page title instead of the author's name, in the case of internet sources (Thompson, 2003).

In the present study, we also found that the participants' age had an influence on their perceptions regarding the use of "ideas without mention of the author's name" from printed sources, although this influence was not statistically significant in similar examples of plagiarism from internet sources. In other words, the differences in perceptions between the younger and the older generations in respect of the need to mention the author's name when using a printed source were discernible, while both generations held similar attitudes towards internet sources. A possible explanation for these findings is the lack of clarity, shared by all age groups, regarding the legal status of the online content as intellectual property. As for printed sources, the present findings support the argument that the older generation holds an awareness of the importance of proper citation and the concept that ideas belong to the person who wrote them (Community College Week, 2003).

In conclusion, the findings of the present study suggested that students distinguish printed and internet sources and perceive the information on the internet as bona-vacantia and free for use. This emphasizes the need to treat potential information sources separately in research, in order to gain a full understanding of the phenomenon. It is also essential to: a) perfect students' insights regarding the ethical use of online information; b) teach them how to cite internet sources properly and c) explain the importance of protecting intellectual property rights. By doing so, universities can reduce the extent of

plagiarism, and particularly internet plagiarism, committed by students.

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