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"Should It Be Considered Plagiarism?" Student Perceptions of Complex Citation Issues

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Abstract Most research on student plagiarism defines the concept very narrowly or with much ambiguity. Many studies focus on plagiarism involving large swaths of text copied and pasted from unattributed sources, a type of plagiarism that the overwhelming majority of students seem to have little trouble identifying. Other studies rely on ambiguous definitions, assuming students understand what the term means and requesting that they self-report how well they understand the concept. This study attempts to avoid these problems by examining student perceptions of more complex citation issues. We presented 240 students with a series of examples, asked them to indicate whether or not each should be considered plagiarism, and followed up with a series of demographic and attitudinal questions. The examples fell within the spectrum of inadequate citation, patchwriting, and the reuse of other people's ideas. Half were excerpted from publicized cases of academic plagiarism, and half were modified from other sources. Our findings indicated that students shared a very strong agreement that near verbatim copy and paste and patchwriting should be considered plagiarism, but that they were much more conflicted regarding the reuse of ideas. Additionally, this study found significant correlation between self-reported confidence in their understanding and the identification of more complex cases as plagiarism, but this study found little correlation between academic class status or exposure to plagiarism detection software and perceptions of plagiarism. The latter finding goes against a prevailing sentiment in the academic literature that the ability to recognize plagiarism is inherently linked to academic literacy. Overall, our findings indicate that more pedagogical emphasis may need to be placed on complex forms of plagiarism.

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Introduction

Over the last two decades, considerable academic research has been done on the topic of student plagiarism. However, despite some recent calls for a more nuanced approach, most of this research has focused either on an overly narrow conception of plagiarism or an ambiguous one. Many studies examine only instances of plagiarism that involve large swaths of text copied and pasted from sources without any form of acknowledgement, the kind of plagiarism that the vast majority of students and professors have little trouble identifying as such. Focusing on this kind of plagiarism is understandable: student perceptions of clear-cut examples can be readily compared to sound citation practices. Moreover, verbatim copy-and-paste without reference is the type of plagiarism that is the easiest to quantify, police, and to attribute to intentional misconduct. Nonetheless, many forms of plagiarism are not so straightforward. Research that does not involve egregious instances often relies on vague definitions and simply assumes that students adequately understand what the term means. Such studies often use student self-reporting as a means of data collection, potentially a further cause of equivocal results.

To assess where pedagogy regarding sound citations practices may need to be improved, a more refined sense of what students do and do not understand about plagiarism is necessary. The present study attempts to contribute to this goal by utilizing direct student evaluations of citation issues that go beyond unattributed copy-and-paste. This study presented 240 students with a series of example passages and asked them to indicate whether or not each should be considered plagiarism. The examples encompassed several issues including patchwriting (the reuse of others' words with some alteration), the unreferenced reuse of others' ideas, and mere inadequate citation. Students also were asked several questions about their general attitudes towards plagiarism and plagiarism detection software.

Three research interests motivated our study. First, we wanted to better understand what students would and would not identify as plagiarism in a range of examples. While numerous studies have concluded that the vast majority of students recognize copying and pasting large amounts of unreferenced text as plagiarism (Eisner and Vicinus 2008, Emerson 2008; Gullifer and Tyson 2014), others indicate that students experience confusion and anxiety about issues of proper citation (Power 2009; Ali 2013). We thus hypothesized widespread agreement from our participants regarding near-verbatim examples and less agreement about cases involving patchwriting or the reuse of ideas alone. Second, we wanted to know if students' views about what should be considered plagiarism is significantly correlated with other variables such as their academic class and a positive assessment of their own reading or writing abilities. Many studies have demonstrated that in the abstract, students are confident of their ability to recognize plagiarism (Emerson 2008; Gullifer and Tyson 2014; Risquez et al. 2013); others have shown that knowledge of proper citation practices depends on students' experience with academic discourse (Pecorari and Shaw 2012). We hypothesized that students who reported greater confidence in their understanding of plagiarism or were relatively advanced in their studies would be comparatively likely to characterize subtle examples as plagiarism. Third, we wanted to explore potential correlations between students' attitudes towards plagiarism detection software and their views of what should be counted as plagiarism. By its nature,

anti-plagiarism software such as Turnitin.com encourages a focus on verbatim plagiarism, given that it functions by detecting matching text. We hypothesized that students with more exposure to Turnitin.com would be more likely to think of plagiarism only as verbatim (or near verbatim) copying. We also hypothesized that students who had a positive attitude towards the software would differ from those who had a negative attitude in terms of what they perceive to be plagiarism. For instance, students who regard the software adversely may be less willing to classify borderline examples as plagiarism.

Literature Review

Much research on student plagiarism focuses on plagiarism's rate of incidence, the motivations for it, or related demographics. However, the aspect of this considerable academic literature most relevant to the present study concerns how plagiarism has typically been conceived by students and researchers alike. Two themes regarding the latter recur prominently in past research. The first is a predominant reliance on uncited verbatim copying to represent all forms of plagiarism. The second is extensive use of student self-reporting as a research methodology. Unfortunately, both tendencies potentially obscure what and how much students actually understand about proper citation.

In the 1990s and early 2000s, as students' use of the internet rose precipitously, plagiarism began receiving increasing amounts of academic attention. Consequently, many early studies associated plagiarism with the temptations posed by easy access to online sources (Zwagerman 2008), and plagiarism of online sources was frequently characterized as rampant and rising rapidly. Many early studies collapsed plagiarism into cheating more generally (Whitley 1998; Keith-Spiegel et al. 1998; McCabe and Trevino 1997) or assimilated it to uncited copying-and-pasting (Dant 1986; Julliard 1994; Brown and Howell 2001; Jensen et al. 2001). As a result, the idea that student plagiarism is closely related to verbatim copying and intentional deception became dominant in how scholars studied and wrote about student plagiarism. Soon this view became widespread outside of academia as well. Articles in major newspapers and prime time television news programs decried the college "cheating epidemic" and plagiarism was front and center in these reports (Howard 2007). 'Plagiarism' practically became a metonym for academic dishonesty and a perceived decline in the quality of U.S. higher education.

However, in the last 15 years there has been a significant response to this oversimplification. Howard (2001) positions much of the early handwringing about student plagiarism as inspired more by attempts to "police young adults" than concerns about effective writing pedagogy (para. 9). Arguments against militant attitudes towards student plagiarism have become a familiar refrain, such as in Zwagerman (2008); Marsh (2004); Blum (2009), and Kaposi and Dell (2012). Many surveys conclude that plagiarism stems more from a lack of student understanding rather than intended breaches of academic ethics (Briggs 2003; Emerson 2008; Dee and Jacob 2010; Pecorari and Shaw 2012; Risquez et al. 2013). Some have argued also the increased usage of plagiarism detection software has further simplified the way plagiarism is now conceived both in the classroom and in scholarly discussions. For example, critics have noted that anti-plagiarism software encourages a mechanistic approach towards academic honesty (Emerson 2008). Others have worried that out of zeal to stamp out cheating, teachers using this software may condemn botched summaries and partial paraphrases as much as the most brazen copy and paste theft (Haviland and Mullin 2009; Howard et al. 2010). On this score, research has shown that Turnitin.com is biased towards

comparatively simplistic forms of plagiarism (Ali 2013; Barron-Cedeno et al. 2013). In fact, several recent studies have incorporated Turnitin.com as a metric for determining the amount of plagiarism students engage in (Baker et al. 2008; Batane 2010; Heckler et al. 2013).

Even studies that do not use the software often fail to distinguish between different types of plagiarism. As pointed out by Ashworth et al. (2003), the value of these studies "is lessened by presuppositions as that the meaning of plagiarism is unequivocal" (p. 262). It is common for articles to draw general conclusions about students' understanding of plagiarism after examining only their grasp of a single kind of citation issue, typically uncited verbatim copying. While some research has attempted to remedy this problem, most studies still rely heavily on verbatim or near verbatim instances. For example, Walker (2010) divided plagiarism into three separate categories: "verbatim" (word for word copying of an academic source without any form acknowledgement), "sham" (verbatim copying without Citation presented as paraphrase) and "purloining" (verbatim copying of another student's work). But the study did not address more subtle issues such as patchwriting or the reuse of ideas alone. Similarly, Risquez et al. (2013) attempted to distinguish between plagiarism and cheating, arguing that "plagiarism is commonly unintentional and results from students not being aware of proper protocols" (p. 40). However, the actual study examined only on students' understanding of verbatim copying, employing this data to make claims about students' understanding of plagiarism in general.

Two important conclusions emerge from research on verbatim plagiarism. First, it is well-established that the majority of students have a fairly solid grasp of the concept. In a survey of 3405 students, Gullifer and Tyson (2014) found that 99 % identified text copied without citation as plagiarized and 94 % recognized copied text without quotation marks as plagiarism. Similarly, Eisner and Vicinus (2008) and Emerson (2008) both found that 92 % of students classified copying text without citation as plagiarism. Klitgard (2009) found when students were asked to define plagiarism, the vast majority defined it simply as copying from others without acknowledgement. Second, studies demonstrate that Turnitin.com effectively identifies and deters verbatim plagiarism (Baker et al. 2008; Buckley and Cowap 2013; Heckler et al. 2013; Savage 2004; Sheridan et al. 2005).

Conversely, little data exists on student perceptions of more subtle citation issues. Even the terminology used to discuss such citation issues is somewhat varied. Dee and Jacob (2010) examined 1256 student papers and concluded that "mosaic plagiarism"—a form of writing that involves combining language from multiple sources—was by far the most common citation issue. Howard et al. (2010) found that 89 % of the papers they examined contained patchwriting, which they defined patchwriting as "reproducing source language with some words deleted or added, some grammatical structures altered, or some synonyms used" (p. 181). A larger study by Rolfe (2011) similarly concluded that "most new students write using a 'patch work' approach, copying and pasting text from several sources, with varying degrees of rewriting" (p. 707). Given the prominence of these types of issues in the few studies that have attempted to examine them, it is clear that more research needs to be done on this score. Discussions of the uncited reuse of ideas and other types of inadequate citation are virtually nonexistent in the literature.

A second major theme in the academic literature on plagiarism is the extensive use of student self-reporting as the primary means of data collection. An example of this technique might involve asking students to indicate their agreement with "I have a good understanding of plagiarism" or a similar statement. Several articles have pointed out that for various reasons, self-reports are often an unreliable way of determining student comprehension and behavior (Dee and Jacob 2010; Kaposi and Dell 2012; Walker 2010; Risquez et al. 2013). Just because

students say they understand a concept does not necessarily mean that they do. Furthermore, asking them about their grasp of plagiarism provides little insight into what they do and do not comprehend about it. Despite these concerns, however, many articles on student plagiarism continue to rely on self-reported data, presumably because such studies are relatively easy to design and conduct.

One way some research has avoided the shortcomings of self-reporting is by qualitative or mixed methods approaches in which students are asked to detail their views and attitudes (Ashworth et al. 2003; Power 2009; Klitgard 2009; Blum 2009; Roberts and Wasieleski 2011, Ali 2013). This work has revealed that students frequently are uncertain and anxious about what does and does not need to be cited. However, these studies tend to involve small sample sizes, making further generalizations or comparisons of results difficult.

A second alternative to self-reports involves asking students whether or not questionable citation practices described in general terms—practices such as the reuse of exact words without quotation marks—constitute plagiarism (Eisner and Vicinus 2008, Emerson 2008; Rettinger and Kramer 2009). While better than relying on self-reports alone, this approach typically introduces ambiguities of its own. As nearly a hundred years of research on grammar pedagogy has demonstrated, recognizing something by a general description does not always translate into recognizing particular instances of it in the context of academic writing (Weaver 1996).

A third way to eschew self-reports is to analyze student papers directly. In recent years, an increasing number of studies have taken this tack (Dee and Jacob 2010; Heckler et al. 2013; Baker et al. 2008; Batane 2010; and Walker 2010). The advantage of this method is obvious: it focuses on what students actually do. However, it is not always clear why students are in fact doing what they do. The relationship between their citation practices and their views on plagiarism is also not clear. A poorly cited passage might reveal an attempt to deceive, a misunderstanding, or mere sloppiness. Without further input, it may be hard to discern the difference between these possibilities. Moreover, studies that utilize this approach often employ plagiarism detection software to quantify the amount of plagiarism found which introduces problems of its own, as noted above.

A final means of avoiding self-reporting is to ask students to assess whether or not writing samples involve plagiarism, the method employed in this study. Comparatively little research has used this approach and only rarely has it involved asking participants to assess anything other than overt and obvious instances. The study methodologically closest to ours in this respect was that of Brown and Howell (2001). In it, 219 students were given two sets of brief passages side by side, one designated as from a text book and one presented as if it were from a student essay. Participants were then asked a series of questions about whether or not the second passage was adequately cited. However, students were presented with only two examples, and the study's main purpose was to examine the influence of policy statements on student perceptions.

Methodology

This study recruited 240 students at a state university with no honor code in the southeastern United States to examine their perceptions of plagiarism and Turnitin.com. Of the 240 students who began the questionnaire, 234 completed it and six did not finish. The majority of the participants were recruited from a pool of incoming freshman enrolled in an online University

101 course. Participants were recruited also through on campus flyers and in-class announcements. Of those who completed the survey, 140 (59.8 %) were freshman, 29 (12.4 %) were sophomores, 43 (18.4 %) were juniors, 16 (6.8 %) were seniors, and 6 (2.6 %) were graduate students. A significant majority (71 %) indicated that they had previous exposure to plagiarism software. As an incentive for participation, students were offered the opportunity to enter a randomized drawing for a $100 Amazon gift card.

Questionnaires were distributed anonymously through Qualtrics. No identifiable data was collected with the exception of email addresses given voluntarily by participants to enter the drawing. The questionnaire employed six examples of potential plagiarism followed by 3 demographic questions and 10 attitudinal questions. All examples and attitudinal questions used a 4 point Likert-type scale of strongly agree, agree, disagree, and strongly disagree. This scale was used because it offered a set of clearly delineated choices and forced students to make a binary determination about whether or not a passage contained plagiarized material much as would an instructor or journal editor. The end of the questionnaire included a pedagogical tutorial pertaining to the examples participants had just assessed. To test and validate the survey instrument, two separate student pilot surveys were conducted. The results of the pilot studies were analyzed in SPSS for potential anomalies and then feedback was solicited and received from four experts from the fields of Library Science, Education, English, and Statistics to validate the instrument. Further refinements yielded a questionnaire that was both validated and acceptably reliable ($\alpha = 0.749$) for the six examples. Prior approval from the university's IRB was received for both the pilots and the final study data collection.

For the six example questions, participants were given an original passage and an instance of potential plagiarism placed directly beneath it so as to allow easy, single-screen comparisons. The examples were presented in a random order to mitigate possible pattern bias or survey fatigue. In each case, participants were asked to indicate agreement with the following statement: "The example on the bottom should be considered plagiarism." In choosing our examples, we tried to represent a range of non-verbatim citation issues, from inadequately cited cases of patchwriting to instances involving the mere reuse of ideas. None of them were examples of wholesale verbatim copying, though two included substantial amounts of copied text. Three were drawn from publicized cases of purported plagiarism by academic professionals and three were modified from other sources. We make no claims about whether or not the examples are in fact instances of plagiarism; our interest lies in how the participants evaluated them.

To facilitate comparison, we analyzed each set of passages using Flesch reading ease and Flesch-Kincaid reading level metrics. While these indices have not been frequently employed in plagiarism research, both are widely used in the education, medical, and legal fields. Both metrics use the number of syllables per word and the number of words per sentence to evaluate the reading difficulty level of a writing sample. The higher the score on the Flesch readability index, the easier a passage is to read, whereas lower numbers on the Flesch-Kincaid grade level indicate increased readability. Scores of between 60 and 30 on the Flesch readability scale are estimated to correspond roughly to a high school senior to college senior reading level range (Flesch 1979). Our examples ranged from 53.8 to 42.7 with one outlier of a 10.8 (college graduate level). On the Flesch-Kincaid grade level scale they ranged from a 10.1 (high school sophomore) to an 18.2 (college senior). We also calculated the shared number of words between the original passage and the passage of potential plagiarism and submitted each excerpt individually to Turnitin.com using the default settings to see if the software would return a percentage match between the original sources and the passages of potential plagiarism.

Results

As hypothesized, the responses of participants demonstrated significance differentiation in regards to how students view different types of potential plagiarism. Of the six examples, there was almost unanimous agreement that two of them should be considered plagiarism. Another example was characterized by the overwhelming majority as one that should not be considered to be plagiarism, with moderate agreement that the other three examples should not be considered plagiarism either. Arguably, five of the examples demonstrate a lack of best academic practices in some fashion, but one would typically be regarded as an instance of proper citation. Of the five that do not represent best practices, two are instances of what is commonly referred to as "patchwriting," one could be labeled inaccurate or potentially misleading citation, and two could be characterized as a reuse of ideas or paraphrase without proper citation.[1] The instance of proper citation was deemed not plagiarism by 92 % of the students while participants almost unanimously characterized the two patchwriting cases as plagiarism (95 % and 97 %). The majority of participants indicated the instance of inadequate citation alone should not be considered plagiarism (67 %). Finally, there was general agreement the two cases involving a reuse of ideas or concepts alone without citation should not be considered plagiarism (65 % and 70 %), but the majority in each case demonstrated less conviction in their judgments than in the other examples.

As Table 1 demonstrates, participant responses correspond broadly to kinds of citations issues. Reactions to the two cases of potential patchwriting were distributed similarly and responses to the two reuse of ideas alone examples were likewise comparable. Detailed discussion of each example follows below, displayed in exactly the same manner in which it was presented to participants (Fig. 1).

The passage of potential plagiarism in this example was composed by the researchers for the purpose of this study.[2] Compared to the other examples in the questionnaire, it contains the least similarity to its source, with no meaningful overlap in language from the original and an unambiguous citation acknowledging the source. The passages have a combined Flesch reading ease of 48 and a Flesch-Kincaid Grade level of 10.1. Using the default settings, Turnitin.com did not return a match between these passages. Students overwhelmingly identified this passage as one that should not be considered plagiarism (92 %). Moreover, 63 % strongly disagreed the example should be considered plagiarism. Only 1 % strongly agreed that the example should be considered plagiarism (Fig. 2).

The passage of potential plagiarism in this example is from an academic journal article published in 2010, later retracted due to "similarities" between it and the Bradford & Weitz.[3] The passages have a combined Flesch reading ease of 50 and a Flesch-Kincaid Grade level of 18.2. Of all of the examples presented in the survey, this one is the closest to verbatim plagiarism, with only four words distinguishing the potential plagiarism from the source passage. Turnitin.com gave an overall match of 93 % between the two passages. The strong

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[1] While various terms are used in the academic literature to refer to different kinds of plagiarism, this study defines mere inadequate citation as referencing an original source but in an ambiguous way that does not clearly indicate what, exactly, is taken from the source. This study follows Howard et al. (2010) in their definition of patchwriting cited above. By "reuse of others' ideas alone" this study refers to replicating concepts or argumentative structures with minimal repetition of the source text.

[2] The original source is Keddy et al. (2009).

[3] The original source is Bradford and Weitz (2009). The potential plagiarism is from Bobot (2010).

Table 1 The Example Should Be Considered Plagiarism

	Strongly agree	Agree	Disagree	Strongly disagree
Example 1 (Proper Citation)	3 (1.3 %)	17 (7.2 %)	68 (28.8 %)	148 (62.7 %)
Example 2 (Patchwriting)	163 (69.1 %)	58 (24.6 %)	15 (6.4 %)	0 (0 %)
Example 3 (Patchwriting)	120 (67.2 %)	72 (30.3 %)	6 (2.5 %)	0 (0 %)
Example 4 (Inadequate Citation)	22 (9.2 %)	56 (23.3 %)	80 (33.3 %)	82 (34.2 %)
Example 5 (Reuse of Ideas)	13 (5.4 %)	60 (25.1 %)	116 (48.5 %)	50 (20.9 %)
Example 6 (Reuse of Ideas)	19 (8.0 %)	64 (27.0 %)	102 (43 %)	52 (21.9 %)

similarity of language is reflected in participant responses, as 69 % strongly agreed this should be considered plagiarism (the highest level of conviction of all the examples) and 25 % agreed that it should. Only 6 % of students disagreed and 0 % strongly disagreed (Fig. 3).

The passage of potential plagiarism in this example is from a journal article published in 1979.[4] The similarity between it and Peterson & Davis was noted by Bartlett and Smallwood (2004) but no retraction was ever made. The passages have a combined Flesch reading ease of 42.7 and a Flesch-Kincaid Grade level of 12.5; the second passage shares 63 of the original article's 88 words. Turnitin.com gave the two passages a match of 71 %. Overall, 97 % indicated that the example should be considered plagiarism with 67 % of participants strongly agreed. Only 3 % of students disagreed that this passage represented plagiarism and none strongly disagreed. More participants judged that this should be considered plagiarism than any other example in our study. This result is somewhat surprising given that there is less similarity between these passages than the previous potential patchwriting example, but the difference in responses is not statistically significant (Fig. 4).

The passage of potential plagiarism in this example was from a student paper provided by Moore et al. (2010).[5] They identify 31 copied words in the second passage out of 54 words in the original (p. 186). The citation at the end of the last sentence in the passages is ambiguous as to what is derived from the source. Furthermore, as Moore, Serviss & Rodrigue point out, much of the original language is repurposed and rearranged sentence-by-sentence. The passages have a combined Flesch reading ease of 48 and a Flesch-Kincaid Grade level of 10.1. Using the default settings, Turnitin.com did not return a match between these two passages. This passage was ranked second highest by students as not plagiarism: 33 % disagreed that the second passage should be considered plagiarism and 34 % strongly disagreed. Only 23 % of respondents agreed the passage should be counted as plagiarism while 9 % strongly agreed (Fig. 5).

This example of potential plagiarism is adapted from a case example of reuse of ideas provided by the Harvard College Writing Program.[6] The two passages have a combined Flesch reading ease of 10.8 and a Flesch-Kincaid Grade level of 18.0 with little overlap in wording. However, the ideas in the second passage are repurposed from the original sentence-by-sentence with no citation. Using the default settings, Turnitin.com did not return a match between these two passages. The majority of participants did not indicate this should be

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[4] The original source is from Peterson and Davis (1975). The potential plagiarism is from Carney (1979).
[5] Original source and potential plagiarism from Moore et al. (2010). Reused by permission.
[6] Original source and potential plagiarism from "What constitutes plagiarism?" (2015). Reused by permission.

Should It Be Considered Plagiarism?

ORIGINAL SOURCE - Keddy et al., "Wet and Wonderful," 2009.

The Amazon River has more species of fish (approximately 2000) than any other river in the world, with particularly large numbers of species of characoids and silunroids (Lowe-McConnell 1975). The former group includes the fruit-eating fish in the genus Colossoma that forages in forests during high-water periods. It also includes the carnivorous piranha. The latter group includes the many species of catfish that forage in deeper water.

POTENTIAL PLAGIARISM

The diversity of species in the Amazon River is particularly impressive. The variety of fish found in it spans from peace loving vegetarians that eat only fruit to ferocious hunters like the piranha (Keddy et al., 2009).

Fig. 1 Potential plagiarism example 1

considered plagiarism. 21 % strongly disagreed and 49 % disagreed. However, this passage produced a high variability of responses as 30 % either agreed or strongly agreed that it should be considered plagiarism (Fig. 6).

Should It Be Considered Plagiarisim?

ORIGINAL SOURCE - Bradford & Weitz, "Sales Persons," 2009.

In order to obtain addition variance in the types of relationships, we randomly asked some respondents to choose a customer with whom they had a good, long-standing relationship, and others were asked to choose a customer with whom their relationship was in the early stages of development. There were 131 salespeople who answered with regard to good, longstanding relationships and 104 who answered with regard to a customer in the early relationship stages.

POTENTIAL PLAGIARISM

To obtain addition variance in the types of relationships, we randomly asked some respondents to choose a customer with whom they had a good, long-standing relationship, and others were asked to choose a customer with whom their relationship was in the early stages of development. There were 109 salespeople who answered with regard to good, long-standing relationships and 93 in the early relationship stages.

Fig. 2 Potential plagiarism example 2

Should It Be Considered Plagiarism?

ORIGINAL SOURCE - Peterson & Davis, "The Fertile Crescent," 1975.

Thus, for example, Harlan County, Kentucky people moving to Detroit tend to settle near others from eastern Kentucky. Moreover, living in a new environment having strange ways, often intensifies their sentimental attachment to the area from which they have moved. Thus, "born in Harlan County" may tell us more about a person's upbringing than "raised in Detroit." For these reasons, place of birth is not only the most readily available, but also probably the best single index of a performer's heritage.

POTENTIAL PLAGIARISM

For example, Harlan County people moving to Detroit often settle near others who are also from eastern Kentucky. Moreover, living in a new environment with different cultural norms often intensifies the sentimental attachment to the area from which people have moved. "Born in Harlan County" may tell us more about the upbringing of a person than the fact that he or she "grew up in Detroit." Thus, place of birth is not only the most readily available information, but also the best single indicator of a performer's heritage.

Fig. 3 Potential plagiarism example 3

Should it Be Considered Plagiarism?

ORIGINAL SOURCE - L. West, "How to Recycle," 2007.

Number 2 [plastic] is reserved for high-density polyethylene plastics. These include heavier containers that hold laundry detergents and bleaches as well as milk, shampoo, and motor oil. Plastic labeled with the number 2 is often recycled into toys, piping, plastic, lumber and rope. Like plastic designated number 1, it is widely accepted at recycling centers.

POTENTIAL PLAGIARISM

Plastic labeled number two is a high density polyethylene plastic, also known as HDPE. These plastics are most commonly found in containers holding heavier liquids, such as milk cartons, shampoo bottles, and laundry detergents. HDPE is also very commonly, and fairly easily recycled but can only be recycled once. HDPE is often recycled into toys, plastic lumber, and piping (West, 2007).

Fig. 4 Potential plagiarism example 4

Should It Be Considered Plagiarism?

ORIGINAL SOURCE – Graves & Peterson, "Predatory Lending," 2005.

Much of military compensation comes in the form of non-fungible in-kind goods and services, rather than a traditional paycheck. Military health care, future tuition assistance, military housing, military food, access to commissaries, and access to military recreational facilities and entertainment are all important components of the compensation package for military personnel. Military recruiters understandably use these side benefits as a way of explaining and justifying relatively low military pay. Nevertheless, the non-fungible nature of non-cash compensation prevents military personnel from converting a significant portion of their resources to overcome income shocks and unexpected expenses.

POTENTIAL PLAGIARISM

Besides the problem of low wages, however, military members are also faced with the reality that much of their compensation is not paid in cash. While civilians can allot their cash earnings to pay for, say, car repairs, a military household cannot convert their illiquid medical, housing, food, or tuition assistance benefits into cash to cover unexpected expenses. As a result, many military personnel find that the amount and the type of compensation they receive are not conducive to smoothing temporary spikes in expenditures.

Fig. 5 Potential plagiarism example 5

Should It Be Considered Plagiarism?

ORIGINAL SOURCE - Lance Morrow, "The Shoes of Imelda Marcos," 1986.

One took the spectacle in with a feeling of wonder and disgust, something like one's reaction, as a child, upon learning that Egypt's King Farouk ate 600 oysters a week…Did [Imelda Marcos, his wife] display her shoes the way that Jay Gatsby reveled in his wonderful shirts? Or were the Marcos shoes, like the billions of stolen dollars, merely grotesque? The Russian word poshlost suggests the transcendent vulgarity at work in the Marcos spectacle. Poshlost is something preposterously overdone but without self-knowledge or irony. It is comic and sad and awful.

POTENTIAL PLAGIARISM

I like the term poshlost because it implies that this is where posh is lost, in unappreciated parody, in meaningless display. To be sure, it tends toward the grotesque, like the countless designer shoes of Imelda Marcos…This is parodic display of luxury: comic, sad, awful, and weirdly alluring… And what of Egypt's King Farouk, the Donald Trump of my childhood, who drained much of the value from luxury by brute force, by furious consumption? He always had more oysters than he could eat.

Fig. 6 Potential plagiarism example 6

The passage of potential plagiarism in this example is excerpted from a book published in 2002.[7] Stripling (2008) highlighted the similarities between the book and the Morrow article. Of particular note is the reuse of highly distinctive language such as "poshlost," "grotesque," "comic," and "sad." The second passage also repeats the same examples of extravagance (oyster consumption and shoe purchases) and recapitulates the general idea of childhood memories of King Farouk. No citation of the original is provided. The two passages have a combined Flesch reading ease of 53.8 and a Flesch-Kincaid Grade level of 10.6. Turnitin.com did not return a match between them. The majority characterized the second passage as not plagiarism, as 43 % disagreed that it should be considered plagiarism and 22 % strongly disagreed. However, this passage resulted in the largest amount of variability in responses: 35 % either agreed or strongly agreed that it should be considered plagiarism.

Regarding the attitudinal questions, participants were generally confident in their reading and writing abilities and in their understanding of the term "plagiarism." Of those surveyed, 20 % strongly agreed that they were "fairly good writers," 64 % agreed, 15 % disagreed and only 1 % strongly disagreed. Students were even more confident in their reading abilities, as 40 % strongly agreed they were a "fairly good reader," while 54 % agreed, 6 % disagreed and 0 % strongly disagreed. An overwhelming 99 % said they either strongly agree or agree that they have a "good understanding of plagiarism." 31 % strongly agreed, 66 % agreed, 3 % disagreed and 0 % strongly disagreed.

The results indicated that students had a very positive attitude towards plagiarism detection software and its usefulness (6 items; α =0.749). When asked if more teachers should use such software, 34 % strongly agreed, 54 % agreed, 10 % disagreed and only 2 % strongly disagreed. When asked if the software benefits students, 35 % strongly agreed, 53 % agreed, 11 % disagreed and only 1 % strongly disagreed. Even more surprisingly, very few saw it as an invasion of their privacy and over two-thirds did not see its use by instructors as indicating distrust. No participant strongly agreed with the statement "plagiarism detection software is an invasion of student privacy" and only 8 % agreed. These findings support a growing body of research indicating positive student attitudes towards plagiarism detection software (Dahl 2007; Ali 2013; Rolfe 2011). Despite strong positive feelings about the software and considerable exposure to it, the data showed no significant difference in terms of how those with past experience with it perceived plagiarism in the six examples compared to those who had not used it before, contrary to our hypothesis.

Discussion

The study found an approximately moderate correlation between attitudes toward being a good writer ("I think I am a fairly good writer") and a positive attitude towards anti-plagiarism software, r(234) = 0.267, $p < 0.01$. No such correlation was found, however, between attitudes toward being a good reader and the software, r(234) = 0.093, p = n.s. An approximately moderate correlation was found also between students' views of their understanding of plagiarism ("I have a good understanding of what plagiarism is") and attitudes towards the software, r(234) = 0.264, $p < 0.01$. Perhaps surprisingly, whether or not students indicated having used anti-plagiarism software in a previous class had no meaningful relationship to their attitudes towards it and neither did it correlate with their grade status. Seniors seemed

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[7] The original source is Morrow (1986). The potential plagiarism is from Twitchell (2002).

equally supportive of the software as freshman, for example. A plausible conjecture relevant to these findings is that students who believe they are strong writers and who believe they have a solid grasp of plagiarism think that anti-plagiarism software is generally helpful to them. Likely, they assume that it will deter other students from plagiarizing or conduce to these students' being caught. Also, these results may indicate a kind of status quo bias towards the software from participants, given that Turnitin.com and similar programs are now widely used.

To determine whether students' perceptions of their own understanding of plagiarism were related to their likelihood of indicating that one of the six examples should be considered plagiarism, the study employed three 2 condition (plagiarism, non-plagiarism) × 2 understanding of plagiarism (agree, disagree) univariate ANOVAs. For purposes of the analysis, results were grouped together the two patchwriting cases (Examples 2 and 3), the two instances of reuse of ideas alone (Examples 5 and 6) and the two more debatable cases (Examples 1 and 4). Results were also grouped together based upon responses to the self-reported understanding of plagiarism question, positive and negative respectively, combining "agree" and "strongly agree" and combining "disagree" and "strongly disagree." Importantly, the results indicated a significant correlation between participants' reports of their understanding of plagiarism and their tendency to designate that the two patchwriting cases should be classified as plagiarism, $F(2, 231) = 4.23$, $p = 0.016$. The results also indicated a significant correlation between participant' understanding of plagiarism and their disagreement that the two more borderline examples should be considered plagiarism, $F(2, 231) = 3.99$, $p = 0.020$.

However, the results showed no meaningful relationship between grade level and response to the examples. The examples' readability ratings also had no discernable impact on participant responses. The two examples of potential patchwriting represented significantly different Flesch-Kincaid grade reading levels (18.2 and 12.5), but there was little disparity in participant reaction to them. The two reuse of ideas alone cases were even more different in grade reading levels (18.0 and 10.6), but participants responded to both comparably as well.

Conclusion

Overall, the students surveyed strongly agreed that both uncited near verbatim copying and patchwriting should be considered plagiarism. This result indicated that students may have more sensitivity to recommended citation practices than is often claimed in the academic literature on student plagiarism. However, as hypothesized, students were more conflicted about examples involving the unreferenced reuse of ideas. The majority did not find that the reuse of ideas alone should be considered plagiarism. This supports our hypothesis that as examples move further away from verbatim copying, the less conviction there is about designating them as plagiarism. Results demonstrated a positive correlation between self-reported confidence in their understanding and students' likelihood of identifying subtle cases as plagiarism, but surprisingly, no significant correlation between the latter and student's academic status or previous experience with plagiarism detection software was found. Finally, the data indicated that students generally had an overwhelmingly positive attitude towards plagiarism detection software but that there were no significant correlations between these attitudes and students' perceptions of what should be considered plagiarism.

Results also showed a high confidence level in self-reported understanding of plagiarism correlates with student perceptions of plagiarism, even in more complex cases. In this sense, self-reported understanding seems consistent with reliable recognition of good citation

practices and participants' self-reported understanding does not seem to be merely superficial. However, the data indicated no significant correlation between academic experience or the readability of examples and responses to them. This suggests that contrary to what studies such as Pecorari and Shaw 2012 have shown, and contrary to our second research hypothesis, familiarity with academic writing may bear less relation to students' sensitivity to plagiarism than is sometimes suggested in the literature. Even if true, however, it would not follow from this that academic experience is irrelevant to students' own citation errors since there may be a gap between student's sense of other's plagiarism and their own writing practices.

Less than a third of participants identified the two reuse of ideas alone examples as plagiarism. This is consistent with our third research hypothesis. One might conjecture that students with past experience using plagiarism detection software would be comparatively likely to associate plagiarism with verbatim plagiarism, given the nature of the technology. Most participants had used Turnitin.com or similar programs in the past, and in fact the data suggest a tendency of participants to associate plagiarism only with its verbatim version. However, the possibility of one or more confounding variables cannot reasonably be ruled out, particularly given the fact such a large percentage of participants had experience with the software. It could be argued, for example, that the ubiquity of this software's usage and its impact on academic culture extends far beyond those who have actually used it. Even those who may not have had direct experience with it may be impacted by the perception of plagiarism its usage indirectly promotes. At a minimum, the fact the majority of participants did not believe that a reuse of ideas without citation should be considered plagiarism may indicate that not enough emphasis is placed on the importance of crediting the source of ideas in academic writing pedagogy.

Three limitations of this study are worthy of mention. First, the results may be colored by a selection bias. Given that the participants were volunteers, they may have been somewhat more academically motivated or talented than peers who preferred not to respond to the invitation to participate. Relatedly, our sample did not include a large number of upperclassmen and the reading level range of our examples was fairly limited. Both points suggest lack of correlations in the data between the tendency to designate examples as plagiarism and academic status are somewhat preliminary. Second, the limited number of examples provided does not represent the entire range citation issues. A follow-up study could usefully provide a more granular understanding of student perceptions and assessments.

Finally, one ambiguity in the questions asked to participants should be noted. The 'should' in "Should [this] be considered plagiarism?" can be interpreted in at least two ways. On one hand, participants might have read the example questions straightforwardly to be about the definition of plagiarism. On the other, they might have understand them to be asking whether or not the author of the potentially plagiarized passages should be punished. This ambiguity stems in part from complexity in the concept of plagiarism itself. Plagiarism is what ethicists refer to as a "thick" concept, that is, one that has both descriptive and normative aspects (Williams 1985). Sometimes 'plagiarism' is used simply to connote materials derived from another's work used without appropriate citation. At other times, though, the concept is narrowed to include only instances in which the copying is intentional and should be punished. On this point, in a previous qualitative study, the authors found that instructors were frequently reluctant to penalize anything beyond egregious copy and paste, and they would often define plagiarism as a form of cheating on their syllabi while indicating in interviews that they believed it mostly occurred accidentally (reference and bibliographic Citation withheld for blind review). As a result, students' hesitancy to designate some of the examples in the present

study should be considered plagiarism reflects their experience regarding what faculty members actually punish as much as their sense of what does and does not satisfy standard definitions of plagiarism. This sort of descriptive and normative complexity may have been important, for instance, in Example 4. Although a majority indicated it should not be considered plagiarism, many may have been thinking that it would be unfair to punish a student for this sort of borderline or trifling violation of academic standards. It may also have mattered to the reuse of ideas examples (Examples 5 and 6). In fact, merely using ideas that have been previously articulated by others is not necessarily plagiarism if, for example, the subsequent author does not know of their previous use. Thus, to some extent participants may have been reacting to the fact the mere similarity of two peoples' ideas does not indicate plagiarism and punishment would be inappropriate.

The results also point towards some important areas for further study. One of these may involve a closer examination of the complex territory of "common knowledge." Since students frequently express confusion over what counts as "common knowledge" (Ashworth et al. 2003; Klitgard 2009), there is a need for additional research in this area. Second, studies that attempt to compare directly students' perceptions of plagiarism with the way students employ citations in their academic writing would be pedagogically useful. Moving away from research based on overly simplistic conceptions of plagiarism or self-reported data will undoubtedly help better understand students' grasp of sound academic citation practices, but there is a good deal of research that remains to be done in this area.

Overall, the data in this study shows the importance of discussing with students a range of poor citation practices and the varieties of plagiarism in a more nuanced way. Aside from issues of fairness and cheating, we are potentially limiting the ability of students to successfully navigate the world of academic writing when verbatim or near verbatim copying and pasting is both the beginning and the end of our pedagogical conversations about plagiarism.

Compliance with Ethical Standards

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