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Digital plagiarism: An experimental study of the effect of instructional goals and copy-and-paste affordance

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ABSTRACT

This paper presents an empirical study of digital plagiarism. Under two experimental conditions, undergraduate writers were guided by different achievement goals to write an essay with or without the copy-and-paste function on a website. The study focused on two possible influences on digital plagiarism, a) instructional goals for writing, and b) the affordances of digital learning environments specifically the availability of a copy-paste function. A 2 × 2 factorial design was used to analyze the effects of these contextual variables on digital plagiarism. Results indicated that overall 79.5% of the writers engaged in digital plagiarism. There was a significant interaction in which instructional performance goals lead to more plagiarism when copy-paste is available. Findings highlight individual-environment interactions, including a writer's adopted goals for writing as set by writing prompt instructions (learning goals vs. performance goals) and the affordances of the writing environment including the ease of copy-paste or precautions taken to protect text (such as using jpegs of text). Rather than being principally directed by student's beliefs prior to, or when they begin a writing task, the on-the-fly interactions they have during the writing task may best explain their tendency toward plagiarism.

1. Introduction

Among prevalent problems within American high schools and colleges, academic dishonesty has been persistently discussed and specifically deliberated in scholarly studies and mass media reports (e.g., Glater, 2006; Keilman, 2012; Moneo, 2014; Pérez-Peña, 2012). Currently, the rapid development and expansion of technology has "evolved" academic dishonesty into "digital cheating" in school settings. With the intention of investigating differences between conventional and digital forms of academic dishonesty, Stephens, Young, and Calabrese (2007) indicated that the use of digital forms of plagiarism (e.g., cutting and pasting from the Internet) by college students has surpassed the rate of conventional approaches to plagiarize. According to Alzahrani, Salim, and Abraham (2012), acts of plagiarism can range from copying texts to adopting ideas without citing sources. In addition, they provided a taxonomy of plagiarism describing different aspects of plagiarism such as linguistic patterns, text features, and detection methods. But any of these forms of plagiarism, may be less effortful in digital environments it, particularly with the ease of using a copy-and-paste (CP) function. For example, Internet search engines with immediate access to large amounts of information, such as Google™ or Bing™, have become a tool allowing students to use the CP function to mash up materials they find online and present it as their own work. Research has shown that the use of CP was a common student behavior when students gathered information electronically from Internet sources to write for classwork (e.g., Igo, Bruning, & McCrudden, 2005). However, when students use CP in writing assignments without proper citation, this behavior could become a type of academic misconduct. This form of academic misconduct was defined in several studies and school or association policies as "digital" or "cyber plagiarism" (e.g., Association for Computing Machinery, 2006; O'Connor, 2003; Sutherland-Smith, 2005).

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Prior to further exploring how and why students use digital technology to plagiarize, we first should ask if there is a different environmental feature or changed perceptual element that prompts students to engage in "digital plagiarism." It is unlikely the underlying reasons for cheating and students' awareness of digital plagiarism are dissimilar to the long-established problem of academic cheating in non-digital environments. Numerous studies have documented that the reasons students give for cheating are anchored in individuals' general motivation (e.g., self-efficacy for specific-domain learning performance) or personal understandings of cheating consequences (e.g., outcome expectancies) based on individual's beliefs. Using this presumption, several current studies have been conducted to investigate how and why students cheated from the perspectives of individual's achievement goals (e.g., Murdock & Anderman, 2006; Pintrich & Schunk, 2002) identified that. Studies from this perspective have generally concluded that students' goals were related to individuals' pre-writing decisions to engage in cheating behaviors and the reasons of such cheating behaviors include the following personal goals: getting a good grade, avoiding looking incompetent, getting admission into college/graduate school, getting published in academic journal, preparing for career success, getting homework credits (including programming codes) or impressing the teacher or/and peers (e.g., Anderman & Midgley, 2004; Honz, Kiewra, & Yang, 2010; Liu, Lo, & Wang, 2013; Murdock & Anderman, 2006; Yang, Jiau, & Ssu, 2014).

Therefore, we present our experimental investigation to understand and identify the "digital" influence on academic plagiarism that may emerge during writing rather than before. Additionally, we adopt the theoretical framework of achievement goals by Dweck and Leggett (1988), used in previous studies (e.g., Anderman & Midgley, 2004) to examine the concept of students' incentives to engage in digital plagiarism. Specifically, the research we present not only focuses on the straightforward relationship between task demands (writing task instructions) and plagiarism affordances of digital learning environments but also seeks to address the larger question: what can educators, school administrator, and educational researchers do to not only passively decrease digital plagiarism, but also impact students' positive attitude toward academic writing and increase students' understanding of using digital technology to facilitate academic writing.

1.1. Achievement goals and academic cheating

According to Dweck and Leggett's (1988) achievement goal theory, learning-goal oriented people focus on increasing their abilities over time and choosing a mastery-oriented approach to overcome obstacles. For instance, they may use meaningful cognitive strategies to solve problems and show persistent effort. In contrast, mainly with the intention of maintaining positive judgments of peers and valued others, people with performance goals believe success is determined by comparing each other's performance. For that reason, they tend to use shallow processing strategies rather than developing a well-integrated understanding of the learning content. Numerous studies have demonstrated that individuals' goals are associated with academic cheating. For example, Jordan (2001) assessed the cheating behaviors of college students with personal mastery versus extrinsic goals. Results of this factorial design study indicated that, at least in courses in which they had admitted to cheating, students who cheated were less mastery oriented and more extrinsically motivated. In addition, Schraw et al. (2007) conducted a qualitative study that showed that the students having higher self-efficacy and being more intrinsic-goal oriented had higher personal interest in the subject. Consequently, high personal interest decreases the likelihood of cheating. Furthermore, their study indicated that situational interest was negatively correlated with cheating. That is to say, in the realm of academic cheating, not only do personal interest and goals relate to students' cheating behaviors, but also the content of a class (situational interest) may interact to influence students' decisions to cheat.

1.2. Instructional goal structure and academic cheating

Direct and indirect class messages reflecting the purpose of instruction (e.g., class policies and teaching strategies) conveyed to and interpreted by students also influence their academic behaviors. For example, Murdock, Hale, and Weber (2001) indicated that classroom goal orientations could predict cheating by measuring individual- and classroom-level achievement motivational variables including academic self-efficacy, personal and classroom extrinsic and task goal orientations. Specifically, based on their results, if a student has lower academic self-efficacy, holds personal extrinsic goals, and perceives performance-oriented classroom goals, it could be significantly predicted that she or he has a greater likelihood of cheating. Additionally, Anderman and Midgley (2004) specified the impact of the two structures of classroom goals in learning outcomes: students' perceptions of a mastery goal structure that addressed the process of learning, making effort, and getting self-improvement were related to positive outcomes; whereas, perceptions of a performance goal structure that emphasized the demonstration of ability and competing with others were related to negative outcomes. In view of that, they conducted a longitudinal study to further investigate the relation between the perceived classroom goal structure, particularly students' perceptions of performance classroom goal structure, and the likelihood of engaging in cheating. The results indicated that across high school transition, self-reported cheating in math was related positively to perception of a performance classroom goal. In other words, the students' self-reported cheating results decreased for those who moved from high to low performance-oriented math classrooms. What is more, in an effort to further explore the influence of classroom goal variables on student cheating, Murdock, Miller, and Anderman (2005) reanalyzed data from two previous studies using hierarchical linear modeling (HLM). The results of their analysis indicated that the rates of cheating differed significantly across classrooms in both sets of data. Accordingly, correlational, comparative, and longitudinal data have provided empirical evidence to support the assumption that extrinsic rewards or the competitiveness of the classroom (learning) environment impacts cheating. However, the environment influence is not simply the result of an individual's first impressions of the situation (Bandura, 2001). The interactions between a human agent and the environment may be rich, complex and continuous. Therefore, while global environmental effects on cheating are well established by current cheating studies it remains in question whether this is a broad general effect of instructional goals given by teachers, or a more moment-to-moment emergent effect from dynamic student-environment interactions, particularly in digital learning environment.