Academic Dishonesty: A Guide for Digital Instructors

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Abstract: Academic dishonesty threatens the integrity of collegiate education and undermines institutional objectives. Nonetheless, many students willingly compromise academic integrity for higher grades and reduced stress levels. This literature review examines why students engage in academic dishonesty and addresses preventive measures and developing technologies.

Academic dishonesty, "a transgression against academic integrity which entails taking an unfair advantage that results in a misrepresentation of a student's ability and grasp of knowledge" (King, Guyette, & Piotrowski, 2009, p. 4), undermines the missions and objections of learning institutions worldwide. Many students compromise personal and academic integrity in pursuit of higher grade point averages and reduced stress levels. Some research, however, has suggested that the justification for engaging in academic misconduct varies among distance learners and students enrolled in on-site courses (Bailey & Bailey, 2011; Kennedy, Nowak, Raghuraman, Thomas, & Davis, 2000). As massive open online courses rapidly develop across the globe, research aimed at gaining a deeper understanding of academic dishonesty must be reviewed so that university officials and faculty are able to develop both efficient and multifaceted responses. Therefore, this paper presents an overview of students' reasons for engaging in academic dishonesty, the issues that are unique to online learners, and developing technologies.

Many studies have reviewed the prevalence of academic misconduct among college students. McCabe and Bower's (1994) seminal study found that acts of academic dishonesty such as cheating on assignments, copying answers from another student's exam, and using cheat sheets increased significantly from 1963-1993 (11% to 49%, 26% to 52%, and 16% to 27%, respectively). A study conducted at Duke University's Center for Academic Integrity revealed that 75% of all college students admitted engaging in academic misconduct at least once (Kleiner & Lord, 1999). Whitley's (1998) meta-analysis of 107 studies conducted from 1970-1996 surmised that 70% of college students confessed to engaging in some form of academic misconduct. Finally, Norton, Tilley, Newstead, and Franklyn-Stokes' (2001) appraisal of 267 psychology students at four British institutions of higher education determined that at least half of all college students engaged in academic dishonesty in assessment settings. The disparities in the aforementioned findings result from multiple time frames for which students were questioned about their behavior (the prior 6 months versus at any point during the student's college career), a lack of consensus regarding the definition and operationalization of academic dishonesty, and cultural differences among student populations (Lambert, Hogan, & Barton, 2003).

The advent of the Internet during the 1990s caused an "unprecedented growth of distance learning" (Kennedy et al., 2000, p. 309) at universities around the globe. Distance learning, commonly referred to as online education, permits a teaching-learning exchange to occur between faculty and students despite the two being separated in time and space. Continued growth in distance learning is evident two decades later with the development of university associated massive open online courses (MOOCs). These online courses have brought about not

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only an exponential increase in the tens of thousands of students enrolled in online courses worldwide but also an exigent need to enhance measures to thwart students' attempts at academic dishonesty. To date, no national data exists on academic dishonesty in the virtual classroom, and the studies that do exist generally look at perceptions of academic dishonesty in distance learning rather than the actual behaviors in which students engage (Grijalva, Nowell, & Kerkvliet, 2006). The present gap in the literature warrants a closer look at academic misconduct among distance learners.

The Cheating Trifecta

For the purpose of this paper, academic dishonesty is defined as "a transgression against academic integrity which entails taking an unfair advantage that results in a misrepresentation of a student's ability and grasp of knowledge" (King et all., 2009, p. 4). Examples of academic dishonesty include the unauthorized use of material on an assignment or an examination, looking at another student's examination, and assisting another student to gain an unfair advantage relative to his or her peers. The terms academic dishonesty, academic misconduct, and cheating are used interchangeably in this paper.

Literature indicates that academic misconduct transpires upon the convergence of three elements: 1) necessity, 2) opportunity, and 3) rationalization (King et al., 2009). Necessity implies that students engage in such behaviors due to performance anxiety, time restraints associated with challenging assignments, and burdensome quantities of work (Kelley & Bonner, 2005; King et al., 2009; Naudé & Hörne, 2006). Opportunity insinuates conditions favorable for academic misconduct such as when the student is alone and free from inquisitive stares (King et al., 2009); however, unfavorable conditions may evolve into favorable ones when peers share copies of prior exams and/or answer keys and permit classmates to copy assignments (Naudé & Hörne, 2006). The final element, rationalization, signifies the beliefs and value systems subscribed to by students in an effort to justify their behaviors. For instance, students may misconstrue the lack of administrative action with acquiescence (Grijalva et al., 2006), particularly if their peers take part in similar behaviors without consequence or repercussions (Kelley & Bonner, 2005; Naudé & Horne, 2006; King et al., 2009). Moreover, students often perceive cheating as a victimless offense, thus minimizing any personal wrongdoing (Naudé & Horne, 2006). They may also defend their actions in relation to their instructors, claiming that the absence of direct and regular interaction with faculty denotes inconsequentiality of academic misconduct (Kelley & Bonner, 2005; Naudé & Hörne, 2006).

Issues Unique to Distance Learners

Students and faculty postulate that academic dishonesty occurs with greater regularity in virtual classrooms relative to traditional campus-based courses (Grijalva et al., 2006; King et al., 2009). Such speculation ensues from the presumption that isolation and separation from instructors facilitates academic dishonesty (Bailey & Bailey, 2011; Kennedy et al., 2000). More specifically, online learners purportedly lack direct interaction with their instructors, which breeds feelings of isolation as well as perceptions of inaccessibility and distance (Kennedy et al., 2000). In turn, these feelings and perceptions inhibit students from seeking assistance when needed, thereby exacerbating their stress levels, the result of which may be temptation to engage in academic misconduct (Grijalva et al., 2006).

The extant literature suggests variations with respect to how online students comprehend academic dishonesty and the behaviors constituting such dishonesty as compared to their on-campus counterparts (Bailey & Bailey, 2011). For instance, King et al. (2009) explored the attitudes of business students (N = 121) towards behaviors that constitute cheating when taking

an online exam. Students' beliefs differed depending upon whether or not the instructor had an explicit policy against cheating. They believed that it was appropriate to use a book, reference sources, and class notes during an exam as long as the professor did not have an explicit policy stating otherwise. The same students, however, acknowledged that having another person take the exam, securing a copy of a test prior to the exam period, and text messaging to send and/or receive answers from another student was inappropriate irrespective of the presence or absence of a written policy.

Additionally, students born after the advent of the Internet regard material available online as part of the "public domain" and "subject to fair use" (King et al., 2009), thus demonstrating a complete lack of understanding regarding the use of online materials in the academic setting (Conway-Klaassen & Keil, 2010; Bailey & Bailey, 2011). Online students seemingly lack the boundaries taken for granted in the traditional classroom (Conway-Klaassen & Keil, 2010). Students in the traditional classroom, for example, appreciate the academic conventions prohibiting the use of electronic devices during examinations (Kennedy et al., 2000) whereas online students seem to be either unaware or indifferent to such policies, suggesting that the perceptions that students possess regarding the appropriateness of the behaviors in which they engage varies, both, culturally and contextually (Bailey & Bailey, 2011).

Current Technology-Based Prevention Measures

The presumption that online students engage in academic misconduct with greater regularity than their campus-based counterparts, and the alleged ease with which online students obtain unfair advantages academically (Grijalva et al., 2006) dictates the implementation of special measures designed to reduce misconduct. To begin, departments of instructional technology universally advise online instructors to require students to install lockdown browsers on their computers that preclude student access to Internet search engines during examination periods (Tazoe, 2011). In addition, faculty members striving to minimize opportunities for academic dishonesty can create challenging time-sensitive exams that do not afford students ample time to comb through the text for answers (Conway-Klaassen & Keil, 2010; Grijalva et al., 2006; King et al., 2009). Last, instructional staff may also utilize learning management systems such as Blackboard and Angel to release questions individually, prohibit students from returning to earlier questions, and randomize test questions and answers (Conway-Klaassen & Keil, 2010), thus thwarting collusion attempts among students.

New and Developing Technology

The alarming rates of academic misconduct in higher education instigated the development of innovative technologies designed to reduce the prevalence of such behaviors. Developed in 2006, the Securexam Remote Proctor System affords online students the freedom to test anywhere using a standalone device connected to their computer via a USB cable (Software Secure, 2011). In an effort to preserve academic integrity, a built-in camera captures an initial 360-degree video of the area surrounding the student (Young, 2012) as well as a still-life photograph for comparison to university records (Securexam Remote Proctor, 2012). The camera continuously monitors the testing site for suspicious audiovisual changes and, subsequently, notifies the instructor and/or university officials (Software Secure, 2011). In addition, an attached digital scanner collects the student's fingerprints prior to granting access to the exam (Securexam Remote Proctor, 2012; Young, 2012). Finally, the Securexam Browser locks down the student's hard-drive and prevents access to the Internet, eliminating the possibility of accessing external storage devices or files as well as limiting opportunities to seek assistance from third parties online (Software Secure, 2011).

Similar in purpose to the Securexam Remote Proctor System, Kryterion's Webassessor permits proctors to monitor students from remote locations using webcams (Dorman, 2013; Young, 2012). The Webassessor captures an initial photograph of the student upon logging into the site and another upon attempting to access the examination. Then, facial recognition software confirms the student's identity (Dorman, 2013). Next, the Webassessor analyzes each student's typing style using keystroke biometrics. The "time spent on the keys and between the keys" (Keystroke Biometrics, 2012) is initially determined at login after which the rhythms are authenticated (Secure Authentication, 2012). Then, the student's computer locks down, denying the student access to the hard-drive, external storage devices, and the Internet (Dorman, 2013). From remote locations around the globe, Kryterion proctors monitor the exams in real-time, watching for suspicious activities such as rapid eye movements, movement from the field of vision, and noises not associated with the testing site (Dorman, 2013). Proctors noticing such irregularities may stop the examination.

In 2008, the examiners of the Graduate Management Admissions Council announced plans to commence palm vein scanning for students taking the Graduate Management Admissions Test (Hechinger, 2008). The palm vein scan, which replaces digital fingerprinting commonly used to grant students access to testing centers, verifies student identity prior to the examination and following each break, thus, minimizing opportunities for the impersonation of registered test-takers (Bland, 2008). Students place their hands over a device emitting an infrared light that is reflected by arteries and absorbed by veins, providing a unique palm print for each individual (Bland, 2008; Hechinger, 2008). The image is encrypted and archived along with the student's test results. Therefore, the computers linked with the palm-readers "flag anyone whose current name and palm don't match previous records" (Clark, 2008). Although not currently used in the university setting, palm vein scans may constitute the future of security measures for distance learning students.

Finally, John Fontaine, senior director of technology evangelism for Blackboard Learning Management Systems is currently developing technologies that create document fingerprints (Young, 2012). Individuals typically use certain words or phrases repeatedly as they draft essays. As such, analysts are able to review writing assignments throughout the academic term and create, in essence, a fingerprint of the student's writing style (Young, 2012). Assignments subsequently submitted can then be compared to the original document fingerprint for writing style compatibility (Young, 2012). Assignments substantially different from the fingerprint would be flagged, allowing faculty to investigate the issue further.

Conclusion

Many of today's college students cannot remember a time when neither the Internet nor personal computers were at their fingertips; they are, in essence, digital natives (Prensky, 2001). Because these students have matured during an era of constantly evolving technologies, they may willingly rely upon the same to gain unfair academic advantages over their peers (Kitahara & Westfall, 2007). For instance, distance learners may permit others to impersonate them by sitting for the exam in their place, access unauthorized material or collaborate with other students—all without the instructor's knowledge. Therefore, faculty and course designers must implement technology to thwart student efforts.

Online instructors often express concern regarding the ability to authenticate students' identities; this is especially true as it relates to accreditation matters (Software Secure, 2011). Software and devices such as the Securexam Remote Proctor System and Kryterion's Webassessor allow faculty to authenticate student identity before and during assessments

through the use of biometric identifiers, for example, that match a photograph taken before the examination begins with a photograph in the students' university records (Photo Matching Authentication, 2012; Secure Authentication, 2012). Faculty members also ponder the methods available to thwart academic misconduct in the virtual classroom. The use of lockdown browsers that disable Internet access as well as access to USB's and computer hard drives reduce the use of unauthorized material during exams while remote live proctors trained to detect suspicious activity (i.e., rapid eye movement, the use of telephones, and talking to others) discourage collusive efforts by students attempting to engage in acts of academic dishonesty (Dorman, 2013; Live Video Monitoring, 2012).

In sum, academic misconduct has become commonplace on university campuses world. The advent of the Internet and other constantly evolving technologies have facilitated academic dishonesty, particularly in terms of distance learning where students may feel isolated from peers and faculty (Kennedy et al., 2000). Hence, the burden is upon faculty and university officials to not only reduce feelings of isolation and inaccessibility but to also commit to the use of current and developing technologies aimed at reducing academic dishonesty and restoring academic integrity.

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