

# **Academic Integrity: Information Systems Education Perspective**

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## **ABSTRACT**

Academic integrity receives a great deal of attention in institutions of higher education. Universities and colleges provide specific honor codes or have administrative units to promote good behaviors and resolve dishonesty allegations. Students, faculty, and staff have stakes in maintaining high levels of academic integrity to ensure their degrees' value and preserve respect for their institutions. Often, these efforts result in disparate local dialogs and various approaches to create and maintain cultures of integrity. Despite this, academic integrity receives relatively little attention in the academic literature. Several underlying reasons may exist. First, people generally do not want to reveal dishonest actions and this makes research difficult. Second, students come from a variety of backgrounds and cultural settings with different perspectives on academic integrity; some from high school environments with differing views on academic integrity. This context has resulted in the growth of information services and software products designed to structure and enable academic integrity activities and compliance. However, taken by themselves, these services provide only a partial solution. The current special issue is set against this dynamic backdrop and seeks to bring necessary discussions into the open, particularly for those teaching and researching in areas related to information systems. Our special issue offers a venue where research and practice come together in the voices of our contributors. Specifically, our articles include perspectives of academic integrity in online courses; using reflective methods to reduce plagiarism; giving voice to values as a means of promoting ethical actions; and general perspectives on a large-scale academic integrity program.

**Keywords:** Academic integrity, Ethics, Academic integrity program, Plagiarism, Academic dishonesty, Information & communication technologies (ICT)

## **1. INTRODUCTION**

“Whoever is careless with the truth in small matters cannot be trusted with important matters.” — Albert Einstein

Academic integrity is not a new subject. As such, research summaries and literature reviews have periodically appeared over the last 20 years (e.g., Jordan, 2001; Keith-Spiegel et al., 1998; McCabe et al., 2001; Molnar et al., 2008). These studies demonstrate that while concepts and reasons for ensuring academic integrity remain relatively constant, environments for learning are dramatically different in

today's digitally enhanced version of higher education (McHaney, 2011). Several researchers have studied academic integrity to further understand these phenomena, and offer explanations and solutions (see Other Suggested References Section for key works). In recent years, educators have seen shifts in information acquisition and access, exchange, and storage with direct impact on integrity. For instance, the information revolution has resulted in internationalization of educational institutions, global information exchange and sharing, proliferation of mobile devices, social media interactions, and ubiquitous access to easily copied and manipulated information. These changes

alter how students navigate educational experiences, how educators deliver and assess content, and how educators must view student expectations. There is no doubt that maintaining academic integrity is a cornerstone of education (and society). Intellectual progress of both students and their teachers requires that truthfulness remains central. Without trust, the free exchange of ideas becomes little more than trading documents.

## **2. CURRENT ISSUES IN ACADEMIC INTEGRITY RESEARCH**

Academic integrity research comprises several key areas. In their recent work, Macfarlane and colleagues (2014, pp. 343–344) provide a general literature review detailing many of these areas. Of specific interest to the current issue are codes of conduct, plagiarism, and proposed solutions.

### **2.1 Codes of Conduct**

In early academic integrity research, McCabe, Trevino, and Butterfield (1996, p. 461) discussed codes of conduct defined as “a community’s attempt to communicate its expectations and standards of ethical behaviors.” They went on to suggest that college represented a “period of significant change and moral development for many college students” (p. 462). This gives educators a unique opportunity to positively influence moral development which in turn may influence ethics-based behaviors throughout an individual’s lifetime. Adding credence to this are McCabe et al.’s (1996) findings that self-reported ethical behaviors among people in the workplace correlated with collegiate honor code experiences. Subsequent research affirmed the importance of codes of conduct and provided insight into implementation considerations (McCabe, Butterfield, and Trevino, 2003, 2006). Other research indicated college codes of conduct, considering both student and faculty behaviors, often suggested a “low road” approach (Rezaee, Elmore, and Szendi, 2001) and needed reevaluation. Improvements such as: (1) greater emphasis on preventing financial, scientific, and academic fraud; (2) more inclusion of faculty in the process; and (3) establishment of proper processes for implementation of the code all provide more effective outcomes.

### **2.2 Plagiarism**

Without a doubt, tools that enable either intentional or unintentional plagiarism have proliferated. In her book, *Plagiarism, the Internet, and Student Learning: Improving Academic Integrity*, Sutherland-Smith (2008) provides ample examples of how modern technologies have exacerbated this issue and how educators’ concerns about the problem have skyrocketed. The ability of students to locate, copy, paste, and share information has never been easier. Making this worse are new software, sharing, and mobile tools developed specifically to make the process of cheating easier (De Paoli and Kerr, 2009; Ma, Wan, and Lu, 2008; Moran, 2008). New aspects of an old problem ensure the necessity of research in this area. Not only are new technologies facilitating the physical act of copying material, they also affect various elements within the process. For example, to be plagiarism, Sutherland-Smith (2008) suggests the following items must be present (derived from Pecorari, 2002):

An object (language, words, text) which has been taken (or borrowed, stolen, etc.) from a particular source (books, journal, Internet) by an agent (student, person, academic) without (adequate) acknowledgement and with or without intention to deceive.

Mobile computing, social media, search engines, and software tools all have impacts in each area of this definition. As such, complexities associated with plagiarism have made this area difficult to understand (Fishman, 2009). Early studies on plagiarism found that 40 to 50 percent of students had difficulty identifying material that was not appropriately paraphrased and cited, even with complete knowledge of its derivation. This suggests students might be unclear about what constitutes plagiarism (Roig, 1997). With the complexities in today’s Internet world with Creative Commons’ licenses, open copyright permissions, and so forth, the waters only become muddier. Bretag (2013) emphasizes this and suggests that “[p]lagiarism undermines the integrity of education and occurs at all levels of scholarship.” Further, that “[r]esearch indicates that both undergraduate and postgraduate students require training to avoid plagiarism” (p. e1001574).

### **2.3 Solutions**

Current research on academic integrity often focuses on impacts related to teaching and learning, particularly in institutions of higher education at the undergraduate level (Bretag, 2013). Mitigating solutions generally include codes of conduct programs, mentor or peer support systems, training programs, and resource availabilities. Driving these solutions are strategies intended to educate, deter, and replace disingenuous behaviors. Informing these strategies are detection techniques and recommended penalties. Ill-advised deterrents may confuse applying short-term tools with more meaningful and comprehensive approaches to instill long-term behaviors consistent with academic integrity. For instance, detection tools such as Turnitin, browser lockdown tools, and identity detection facilities provide teachers quick ways to check work for copying and other fraud. But, more is required. Tools by themselves are not effective ways to combat dishonest behaviors.

In general, academic dishonesty may be viewed as a symptom of cultural artifacts “that arguably [place] tangible rewards (grades, diplomas, publications, promotions, grants) above the intrinsic value of learning and knowledge creation” (Bretag, 2013). Institutions of higher education must focus on developing a culture of academic integrity that permeates entire organizations. A holistic approach that incorporates both strategic culture building activities with operational training tools, such as RAISE (Cronan et al., 2016), and detection tools, such as Turnitin, within multi-stakeholder environments appears to be a good approach.

## **3. INTRODUCTION TO SPECIAL ISSUE ARTICLES**

Past studies focused on assessing the amount and type of violations, building models to explain and predict violations, and creating strategies to prevent and deter cheating. While still useful, rapid changes in higher education’s environment

demand a new look at this dynamic and underserved area. This special issue promotes and furthers understanding of current academic integrity efforts on university campuses, and reviews how these efforts ultimately effect changes in higher education academic honesty. This issue's contributions offer perspectives based on experience that influence ways academic integrity research could adjust and adapt to changes in academia.

Our four articles approach academic integrity from a variety of perspectives. Our first two papers speak from an operational perspective. Students are more likely to act with integrity when mechanisms are in place to create and support their work. Interactions with instructor and peers can be key in this process. We offer examples from online courses where synchronous video conferencing becomes a useful tool and in traditional courses where reflective essays support integrity related interaction. Our third article uses the multidimensional ethics scale (MES) to gain insight into student reasoning related to academic integrity scenarios. Understanding student concerns and pressures helps instructors and mentors bring rationalizations commonly used to justify dishonest behaviors to light and then 'arms' students with levers that provide an alternate view. Appropriately applied, information from MES can provide information valuable to instilling a culture based on integrity. Our final paper provides a comprehensive view of a ten-year effort to implement a wide ranging, academic integrity program. Both strategic and operation details offer ideas to move others in the same direction. The following sections provide more details on each article.

### **3.1 Academic Integrity in Online Courses with Synchronous Video Conferences**

The growth of software products and services designed to increase academic integrity compliance has boomed in recent years. These services focus on identity management and plagiarism control to help ensure instructors know their students, and that students do their own work. While these approaches are helpful, taken alone they will fall short. This article focuses on academic dishonesty prevention. One approach, particularly relevant to online courses, is use of video conferencing to provide interaction opportunities. Among this approach's benefits are faculty presence, development of personal relationships, authentication of work, and student progress assessment. Synchronous video conferences create challenges in implementation, which this article addresses in a constructive, proactive manner. The authors describe three important ways academic integrity improves using their prescribed approach. First, the technique provides structured spaces for faculty to be *present* with students in virtual face-to-face manners. This removes concerns about identity and reduces a sense of anonymity, which correlates with willingness to be dishonest. Second, discussions with students, in a directed manner, offer checks to ensure the submitter created submitted artifacts. This accountability helps avoid impersonation schemes common to online coursework. Finally, by regularly *meeting* with students, teachers assist in keeping the individual on track with course material. This mitigates temptation to cheat by ensuring work is not crowded into a short period at the end of the course. Overall, we see that video conferencing in

small groups or individually helps instructors build integrity into online courses. A protocol, based on Social Sharing of Technology theory, provides a structured method of accomplishing these objectives.

### **3.2 Reflective Means to Handle Plagiarism**

Our second article presents practical wisdom regarding handling plagiarism in information systems (IS) courses using a reflective component. As teachers in IS realize, numerous opportunities for cheating exist, ranging from copying internet-based material to borrowing code from friends. The idea of using reflective approaches for dealing with plagiarism or other violations of academic integrity is relatively new but provides promising and useful methods to enact transformative changes. Rather than just detect plagiarism and administer punishment, our authors seek holistic understandings of motivations by those engaged in these practices. They suggest traditional approaches to "prevent, deter, reduce, detect, and handle plagiarism" improve with reflection and self-understanding. The authors offer three reflective practices to help alter academic culture. The first involves creation of deep dialogues between instructor and students to provide opportunities for students to reflect on their work, particularly if it appears copied from non-authorized sources, in a non-threatening space. A chance to discuss problems, particularly in coding or other technical assignments, means that students can learn from mistakes without fear. The second practice takes the initial dialogue to the next level. Here, a reflective essay written by a student shows how they honestly examined circumstances that led to plagiarism and reflected on learning from the experience. In the third and final phase, instructors non-judgmentally read and reflect on the process. The authors emphasize that plagiarism is not condoned, but instead recommend making it into a learning experience. Likewise, prescribed university sanctions apply but efforts to transform a bad experience into learning becomes the goal.

### **3.3 Using Giving Voice to Values to Improve Academic Integrity**

Our third article reminds us that academic integrity issues remain challenging in a practical sense, and methods for conveying ethical behaviors are difficult at best. This study takes an interesting approach using the multidimensional ethics scale (MES) to gain insight into student behaviors and motivations. The *Giving Voice to Values* ethics pedagogy informs the scale and helps arm students with reasons to dispel common rationales for making poor ethical choices. This study recommends several common rationales used to reduce cognitive dissonance associated with poor ethical choices and then provides countering levers together with suggestions to incorporate findings with teaching tools to promote ethical behaviors. MES, as described in this study, allows teachers and researchers to understand student reasoning that could result in dishonest behaviors. MES offers insight into both student decisions and underlying reasoning, which makes it easier to discuss ethical behavior from informed perspectives.

*Giving Voice to Values* (Gentile, 2010) emphasizes actions required by students to carry out ethical decisions. Using this approach, students can recognize common

rationalizations used for not voicing important values and then learn to counter those rationalizations purposefully. These discussions help form a connection between faculty and students. This paper offers several illustrative scenarios. For instance, (1) *Improper internet citations* – reasons for copying are provided and levers to counteract those rationalizations are offered; (2) *Placement essays* – this provides a venue for teachers to describe the importance of academic integrity in the workplace and why it is important to begin a habit of honesty now; and (3) *Social media* – where common themes of payback, hurt feelings, and senses of greater purpose lead to unethical behaviors. The authors again offer alternate behavior choices. In the context of these specific cases, we receive advice to deal with students that have spent formative years living in shadows cast by numerous business and corporate scandals. As our authors suggest, “[i]nteractive learning can be facilitated by engaging the students in dialogues applying common rationales and levers of improper and proper behavior regarding their use of IT.”

### 3.4 Ten Years of Experience in Academic Integrity

Our final article describes an Academic Integrity Program (AIP) launched after ten years of experience working to instill values to promote and protect academic integrity. Key elements of the program include both strategic and operational considerations. For instance, all commencing students take an extensive online academic integrity module followed by a test designed to assess comprehension. As a method to illustrate the usefulness and necessity of their program, the authors provide descriptive cases involving plagiarism, collusion, and contract cheating. They measure both student knowledge of academic integrity with a test and assess outcomes by analyzing quantitative data from the faculty *Plagiarism Recording System*. Overall, their Academic Integrity Program educates 15,000 new students a year. They offer reflections on specific cases, informed by their experience and related literature. They offer nine specific findings to the broader academic community:

- (1) *Improve education* – make education of students and staff a long-term, sustainable activity.
- (2) *Get students to take greater responsibility for academic integrity* – dishonest behaviors affect the value of student degrees and reputation.
- (3) *Link academic integrity to professional integrity and ethics* – graduates that understand the importance of integrity in their profession are more likely to take on those values themselves.
- (4) *Improve data collection and analysis to determine patterns of academic misconduct* – centralization of data collection provides a quantitative way of showing improvement and identifying problem areas.
- (5) *Consider the drivers of academic misconduct* – when possible, make academic misconduct difficult.
- (6) *Improve processing of academic misconduct* – support teachers in their efforts to identify and respond to misconduct.

- (7) *Reduce opportunities for plagiarism through assessment design* – customization, scaffolding, and applying requirements to sources can help build in integrity.
- (8) *Increase support services* – provide communication, referencing, and counselling for at risk students.
- (9) *Provide cultural transition courses* – remember not all students spend their formative education under similar circumstances.

Overall, these reminders and suggestions from academics engaged in ensuring integrity provide valuable advice for all teachers and researchers.

## 4. CHALLENGE TO READERS

Academic Integrity is essential to maintain the value of educational organizations. The lack of integrity will irreparably detract from the value of original, scholarly work, and from institutions developed to further human knowledge and create future generations of scholars. Moreover, these academic integrity principles should carry over to the workplace (and to society). We hope this special issue of the *Journal of Information Systems Education* will stimulate discussions within the IS community and encourage scholars and teachers to take this important issue to heart. As suggested by the selection of articles in this issue, much work remains in terms of research and daily application. Part of the solution is to develop a culture of integrity. We need to set the bar for our students and work hard to make academic integrity an integral part of our activities. No individual or institution has all the answers nor can ensure problems will not occur. We can move our academy in the correct direction and work hard to inspire others to do the same. We, therefore, must recognize the need for a holistic, multi-stakeholder effort that encourages a community of scholars and learners based on shared philosophies and practices that enhance academic integrity. We encourage you to rise to the challenge.

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