Exploring Reflective Means to Handle Plagiarism

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ABSTRACT

Plagiarism has become widespread in the university teaching environment. This article presents practical wisdom from several years of experience handling plagiarism in two Information Systems (IS) courses with the exploratory use of reflective means such as dialogues and essays. There has been very little work on the use of reflective approaches for dealing with plagiarism in general, let alone in IS pedagogy. Based on our experiences, reflective approaches are feasible, promising, and potentially capable of creating transformative change. Plagiarism must be understood in a holistic context. Approaches to prevent, deter, reduce, detect, and handle plagiarism will benefit from the inclusion of reflection and self-understanding in the standard institutional approach based on policies, procedures, and sanctions. Implications for IS educators are discussed. Future directions are suggested.

Keywords: Plagiarism, Academic integrity, Reflective means, Pedagogy

1. INTRODUCTION

By most indicators, plagiarism and other violations of academic integrity have become widespread in the university-teaching environment (Campbell, 2006; McCabe, 2005; Parker et al., 2011). Plagiarism relates to taking the work of others and passing them off as one's own intentionally or otherwise. This paper summarizes observations, insights, and questions that have resulted from experiences over several years exploring reflective ways to handle incidents of plagiarism in two information systems courses taught by the author. The paper builds upon the main findings from Dalal (2015), which describes in more detail the theoretical basis and procedures of the reflective approaches mentioned here. While this article reflects an educator's perspective and is primarily written for instructors, the key learnings can be applied to a departmental or institutional context as well. Hence, the term "instructor" can be substituted by "integrity counselor" or any other appropriate term in several places in the article.

2. BACKGROUND

Reflection is an aspect of learning and self-understanding that we engage in frequently, sometimes almost automatically, when we ponder over daily life experiences. Imagine the power of reflection when performed consciously and intentionally. Evidence for the effectiveness of reflective learning and practices in learning and higher education comes from many sources such as the Transformative Learning Theory by Jack Mezirow of Columbia University (Mezirow, 1991), Brockbank and McGill (2007), Boud et al. (2013), and Hatcher and Bringle (1997), among others.

The transformative learning theory (Mezirow, 1991) suggests that individuals are capable of transforming their frames of reference by critically reflecting on their assumptions and beliefs. According to Mezirow, transformative learning may begin when the learner is confronted with a "disorienting dilemma" – a choice of two alternatives – which must be understood and resolved. In the context of this paper, the dilemma may relate to a student who is facing an embarrassing situation in which their plagiarism has been detected and now they have to decide whether to justify and condone the act or to reflect, deconstruct, learn, and transform to a different level of understanding. Mezirow found that that such a disorienting dilemma can lead to self-examination with accompanying feelings of shame or guilt, after which a learner may go through a series of stages involving self-knowledge acquisition, reflection, and exploration, to possibly end with a new perspective integrated into one's life. Can a student who has been caught plagiarizing be helped during this process of self-examination? The answer is yes, provided the student is able to get an opportunity to consciously reflect in a safe space. Reflection "involves implicitly testing assumptions, beliefs, and knowledge in the light of experiences, which may result in new learning as well as changed perspectives on life" (Dalal, 2015). Among many tools and practices available for reflection, we have chosen to use reflective essays and reflective dialogues. These are introduced next.

A personal reflective essay (Bolton, 2010) is a form of reflective writing which helps the writer to consciously think about themselves and to analyze, reflect, and contemplate on their personal experiences or beliefs, with the intent of self-inquiry, understanding, and change.

A reflective dialogue, in the sense in which the term is used in this paper, is an approach which draws upon the inquiry traditions of Socrates (Bohm, 1996; Kahn, 1998; Krishnamurti, 1996). It has been described by Isaacs (1999), the founder of the MIT Dialogue Project, as "thinking together" in a space where there is the possibility of listening without resistance, of suspending assumptions and biases, of readiness to explore underlying causes to get to deeper questions and issues, and to creatively envision new possibilities in a collective flow. Because there is an "in-the-moment" spontaneous quality in a reflective dialogue, no formulas or protocols should be strictly imposed for structuring or conducting this engagement.

A great deal of literature is available on the use and importance of reflective thinking in education and teaching. However, two observations can be made with regard to their use in IS teaching. First, research on the explicit use of reflective approaches in IS pedagogy is scarce. For example, Simkin (2015) has explored the use of self-grading by students and Van Slyke and Collins (1999) have discussed the use of reflection papers for continuous improvement. Second, in IS as well as in other disciplines, despite the demonstrated effectiveness and obvious intuitive appeal of reflection, there appears to have been little research on the effectiveness of reflective approaches as academic integrity tools. The next section describes a reflective approach used by the author for dealing with students who engaged in plagiarism.

3. REFLECTIVE APPROACH

The author has used a reflective approach with minor variations for five consecutive semesters starting in Spring 2013 to deal with cases of plagiarism in two graduate information systems courses: Systems Analysis and Design and Introduction to Enterprise Resource Planning (ERP). The former has been taught largely in a face-to-face manner and the latter has been an online course. Plagiarism cases were detected with the help of plagiarism detection software from Turnitin (http://turnitin.com) which was integrated with the Desire2learn learning platform of the university.

3.1 IS Courses

The ERP course is an online course that introduces students to enterprise systems and provides an overview of the managerial and technical issues in planning, designing, implementing, and extending enterprise systems and technologies. The focus of the course is managerial with technical content and hands-on exercises using ERP software from SAP. The course includes several homework assignments and an individual project.

The systems analysis and design course is similar to such courses offered in most IS curricula. It focuses on learning objectives which include systems thinking; modeling organizational scenarios using data, process, and object modeling; awareness of new developments in systems development; and group work. Toward meeting these course objectives, the systems course includes several assignments and a group project involving the development of a real-world information system.

3.2 Approach

The reflective approach had the following components (Dalal, 2015).

3.2.1 Inform students about the importance of academic integrity from the outset: Inform students via the syllabus about what constitutes integrity violations and what sanctions can result from this behavior. Reinforce this communication online and in the classroom. Inform them about the use of plagiarism detection software.

3.2.2 Provide learning and self-assessment materials on academic integrity: Point students to various sources of materials on academic honesty. Expect that they understand different shades of plagiarism. Test their understanding with an open-book miniquiz, administered online at the end of the first week. Have them sign an integrity pledge.

3.2.3 Identify suspected cases of plagiarism. Use special plagiarism detection software: The software compares the text of a student's submission with submissions from other students in the past and present as well as with a large database of articles and websites on the Internet. Based on the comparison, the software highlights and color-codes unoriginal content with a link to the original source and displays the extent (percent) of content originating from that source along with an overall originality score. Intelligent use of such a tool leaves little doubt in confirming plagiarism. Sometimes however, a high unoriginality score may appear due to causes other than plagiarism.

3.2.4 Initiate a reflective dialogue to deal with each suspected case of plagiarism: Meet with the student on a case-by-case basis. After ascertaining that the student has indeed plagiarized, create a non-threatening space for dialogue. Explore critical questions with the student: Why did you do what you did? What are the implications of taking someone's work and presenting it as one's own? How would you do it differently and why? Why are sanctions necessary and why they should be viewed as learning experiences? What is the importance of authenticity and originality in learning? How do such actions spill over into daily life?

At the end of the dialogue, inform students about the sanction they will receive. Provide a choice on how to deal with their integrity violation: attend an integrity violation session facilitated by an integrity counselor or write a reflective essay. The next step applies to students who opt for the reflective essay.

3.2.5 Provide directions to write a reflective essay: The reflective essay is meant to encourage honesty and awareness of thought and action. The following is a sample wording:

You have chosen to take up this reflective assignment, which has the potential to be life-changing if done with care, mindfulness, and attention.

Nobody is perfect and we all make mistakes. But can we truly learn from our mistakes? Write a short personalized essay (generally about a page but there is no maximum length restriction) on what led you to plagiarize and what you learned from this experience about being an authentic and original learner in academics and in life going forward. You may also include your observations about your thinking processes while writing the essay. Be honest in your reflections and attempt to think and feel with a fresh mind. Do not worry about what this instructor will think or how he might respond because you will not be judged or evaluated even though your submission will be read attentively. I do not judge "you," I look only at individual actions. We are all capable of right actions when we act from right understanding.

(Upload your submission to the special submissions box calling it "Reflective Essay" anytime from now on but before the last day of classes and send me an email when you have done so. After submitting the essay, you can modify it as many times as you wish until semester-end and upload multiple versions. I will read your final version at semester-end.)

3.2.6 Read the reflective essays and reflect on the process: Read the reflective essays to get a sense of the spirit of learning they embody. Reflect on this entire process. Make changes as needed for the future.

4. KEY FINDINGS AND LEARNINGS

4.1 Reflective Approaches
Reflective approaches for dealing with plagiarism are feasible, promising, and potentially capable of creating transformative change.

Given that there has been very little work on the use of reflective methods for dealing with cases of plagiarism, the author's goal was to explore the feasibility and promise of such approaches. A limitation of this work is that given the exploratory nature of this study, the small sample sizes involved (the number of students detected to have deliberately plagiarized relative to the total number of students enrolled were 16 in 149, 4 in 133, 3 in 140, and 3 in 92 in Spring 2013, Fall 2013, Spring 2014, and Fall 2014, respectively, for a total of 26 in 514), and the experimental tweaks we made in the dialogue process and reflective essay specifications each semester from new learning each trial, it would have been premature to conduct studies looking for hard effectiveness data without first experientially understanding operative processes. Nevertheless, several observations can be made from student reports and the instructor's experiences (Dalal, 2015).

First, many students would deny that they had plagiarized at the beginning of the dialogue. The focus of the reflective dialogue was to get them to acknowledge their "wrong" actions without being accusatory and judgmental of the whole person. This type of dialogue called for mindfulness, skillful empathy, and good listening skills on the part of the instructor. The benefit of the dialogue interaction is suggested in the following comment made by a student.

I felt very ashamed and at the same time scared while standing outside your room, waiting for my turn to speak with you. But you made that horrible experience very pleasant by speaking in a very positive way and patiently listening to my explanation. That interaction with you has completely changed a part of me in a positive way and made me look at things in a new perspective. (Student 4, SAD, Spring 2013)

Second, many students showed regret and learning from their experience. The following comment is suggestive of this sense.

I felt guilty and had (sic) decided never to get into any such situation where my integrity comes into question. (Student 8, SAD, Spring 2013)

Third, several international students suggested that cultural differences were at the root of their behaviors. For example, the following comment was made by a student.

Now considering that, I am from (another country) and since my childhood I have being seeing lots of people who are corrupt and now everyone thinks like it is a part and parcel of life. And this very thing has a deep effect on me. (Student 17, ERP, Fall 2013)

Fourth, some students indicated learning that went beyond academic integrity. The following comment is an example.

All of this has made me a better person now and has made me put in thought in the smallest of activities I perform. (Student 15, SAD, Spring 2013)

4.2 Existing Methods
Existing methods of dealing with rampant plagiarism may not be adequate. Existing institutional methods based on procedures, policies, appeals, penalties, and sanctions do not seem to be working well to reduce plagiarism, one major reason being the existence of varied and contradictory policies due to lack of agreement on what exactly constitutes plagiarism (McGrail and McGrail, 2015). Based on our experience, existing methods are often viewed as punitive or disciplinary (Devlin, 2006) from the application of unclear rules, and even if they result in some change, it is not clear whether the behavioral changes are based on superficial fear of punishment or they arise from a genuine inner learning. Changes that arises in an individual from transformative inner learning are intrinsically motivated and likely to impact other dimensions of integrity whereas if the changes are borne of fear of detection and fear of punishment, they are likely to depend on the environment; that is, a person may cheat again in situations where they perceive they are unlikely to be caught or punished.

4.3 Planning for Plagiarism
It is important to plan for plagiarism. It is necessary to emphasize that the individual educator must have clear consistent plans in place to prevent, deter, reduce, detect, and handle plagiarism (Carroll, 2002). It is important to have an active awareness of the extent of plagiarism, its methods, its consequences, the context and reasons for its occurrence, as well as a willingness to approach this issue with an eye for innovative solutions.

4.4 Understanding Plagiarism's Context and Causes
The context and causes of plagiarism must be understood. The context of plagiarism has several dimensions – technological, cultural, ethical, and generational, among others – and the causes are many (Carroll, 2002; Comas-Forgas and Sureda-Negre, 2010). The theory of planned behavior (Ajzen, 1991) suggests that attitude toward behavior, subjective norms, and perceived behavioral control shape an individual's behavioral intentions and behaviors. In the digital age, it is extremely easy to copy and paste. But there is more to it than ease. Digital natives who have come of age in a sharing economy with open-source code, Wikipedia, Airbnb, freely borrowed and remixed music and videos, Uber, fan tributes, and so on, understand originality, authorship, intellectual property, and copyright very differently. There may be misconceptions of what constitutes plagiarism. In some cultures, the notion of ownership of a bunch of words may seem ludicrous. In some cultures, plagiarism is not considered wrong and may even be seen as acceptable or flattering to copy the works of well-known authorities (Introna et al., 2003). Other common factors in plagiarism include time and family pressures, poor organizational and note-taking skills, and perception of online information as public knowledge. The point of understanding the context in which plagiarism occurs is not to justify or condone the act but to be able to find creative strategies to deter and handle plagiarism.

4.5 Preventing Plagiarism
Preventing plagiarism is better than having to deal with it later. Plagiarism education and prevention efforts are considerably more effective and efficient than having to deal with the consequences of plagiarism. In our experience, as part of a holistic approach, it is important to build student awareness at the start of each semester regarding: what constitutes plagiarism (and other integrity violations), plagiarism detection methods in use, and applicable sanctions. We have created awareness by means of explicit directives in the course syllabus, oral communication to the class, and by providing online learning materials on plagiarism to students followed by quiz questions to test their understanding, and asking students to sign an integrity pledge early in the semester. Further, plagiarism can be deterred by the intelligent design of assignments and projects, as described in the next section.

4.6 Reflective Approaches
Instructors can learn from the application of reflective approaches. The use of reflective practices may help not only the student but may also benefit the instructor (Hickson, 2011). To apply reflective approaches effectively, instructors may need to examine their own preconceived assumptions,

beliefs, and standards and work to develop sensitivity, compassion, mindfulness, and the ability for skillful dialogue. As they reflect on their approaches to deal with plagiarism, they learn something about themselves in the process. The reflective approach places greater demands of time, attention, and effort on the part on the instructor.

4.7 The Larger Context
Approaches for dealing with plagiarism should be viewed in a larger holistic context. Just as plagiarism is a complex, multi-faceted phenomenon (Macdonald and Carroll, 2006), approaches to deal with it also call for a multi-faceted holistic approach, beyond just a policy of information, deterrence, and sanctions. Approaches that integrate policies, practices, information providing, and learning strategies are needed to address the gamut and complexity of academic integrity issues (Bretag et al., 2011). This aspect is discussed in an IS context in the next section.

5. IMPLICATIONS FOR IS EDUCATION

While all the key findings and learnings in the preceding section have relevance for IS education, in this section, I present some specific implications for IS educators. Additional proactive strategies to reduce plagiarism that can be useful in an IS context have been outlined in Born (2003).

Given the technical content in the IS field, experienced students and faculty are likely to be technologically sophisticated, perhaps more so than their counterparts in many other disciplines. This means that tech-savvy IS students can easily learn to use digital tools and techniques and hence have more means if they choose to use them: to plagiarize, detect plagiarism, evade plagiarism, and conduct other breaches of academic integrity with the help of clever technologies. For example, an IS student is likely to be aware that some file formats and graphic objects are less amenable to detection by plagiarism-checking software. Hence, the IS educator must stay current with new technologies to build greater safeguards in their assessment systems in order to thwart such efforts.

The IS educator has the expertise to become rapidly familiar with the strengths and limitations of plagiarism detection tools in order that they can use them rightly. Caution should be exercised to ensure that false positives are weeded out as well as false negatives are accurately screened. For example, we have found that students with an unoriginality score as low as 40% may still have plagiarized large sections of text. Conversely but rarely, on some types of modeling assignments, students might have copied the original text of the questions and if their responses were largely graphic models (which are not checked for originality), the unoriginality score would show up as very high although there was no evidence of plagiarism on the part of the student. An arbitrary cut-off percentage will not serve the purpose of plagiarism detection well.

While detecting plagiarism is important, a judicious design of assignments can make it difficult to copy blatantly from somewhere. Where possible, IS educators should look to include open-ended, interesting, and relevant questions that call for original thinking, discussion, and reflection by the student, where unoriginal answers would be easily detected by the plagiarism detection software. For example,

in an ERP course, a discussion topic we have found effective is:

Discuss a specific example of a data/information integration issue, symptom, or problem that YOU have faced or experienced at school/university or any other organization you have worked in. Was the issue a result of people, technology, or process?

The following is a response made by a student to such a question, which suggests reflective thinking.

For two years I worked as a software engineer at a medical malpractice insurance company, updating large portions of the user interface from a terminal based system (green screen/text) to a graphical user interface. The idea started out simple: keep the underlying data schema the same so that existing business processes would not be interrupted, and simply integrate new user interfaces on top of it. This, in theory, would allow us to carve off portions of existing apps and replace them with updated versions. Unfortunately, the database technology and the existing applications were severely outdated and were developed long before by developers who no longer worked with the company. This meant that large portions of the existing system had to be reverse engineered in order to duplicate undocumented business logic. In addition, the database had evolved over many years and had become very unorganized. For instance a table named "cities" may have other entities in it, such as businesses. Finally, as the users became more familiar with the new UI they started making requests that introduced new functionality. Trying to accomplish this new functionality by integrating the application into the existing, unorganized database stressed the system and created enormous application integration issues. I believe this project is a good example of how difficult integration can be, even for fairly straight-forward projects.

More recently, we have experimented with a flipped-classroom format in a systems analysis and design course. The flipped class is a teaching approach in which the typical lecture and homework elements of a course are reversed. Video lectures are viewed by students at home and quizzes are completed before the class session, while during class, rather than lecturing, all or a significant portion of the time is used for practice, application exercises, discussion-based activities, collaborative learning, paired problem-solving, question and answers, and other active learning techniques. Such a format deters or prevents plagiarism by taking away the time or space to engage in it. In-class exercises included, among others: critiquing a GUI design, modeling a given scenario, and determining and specifying information requirements for a specific case.

We have indicated that beyond just a policy of information, deterrence, and sanctions, approaches to deal with plagiarism must be viewed in a wider, holistic context. One important aspect of the larger context needs to look into developing ethical IS professionals and creating the right content for ethics courses in the IS field (Khazanchi, 1994). And, ultimately, we need to go beyond ethics to emphasize wisdom in our teaching. There are several issues where practical wisdom is relevant in a technology-dominated age, which may be introduced in various IS classes, as for example, the effects of technology-induced stresses or developing empathy in UX design (Dalal et al., 2016.) Discussions of ethics and wisdom encourage a mindset that naturally wants to avoid acts that breach academic integrity.

6. FUTURE DIRECTIONS

The author's experiments in using reflective means for handling plagiarism are exploratory and among the early works of their kind. While the findings are promising, the observations summarized here should be seen as preliminary. Future experiments with a variety of reflective means as well as rigorous empirically-grounded studies of specific reflective means and longitudinal studies assessing attitudes long after the student has graduated are needed to validate the observations and to measure the effectiveness of such approaches. In terms of practices, IS educators may benefit from the development of a question bank of "intelligent" reflection questions and exercises for various IS courses.

Transformative learning theory (Mezirow, 2000) suggests that the process of perspective transformation has three dimensions: psychological (changes in understanding of the self), convictional (revision of belief systems), and behavioral (changes in lifestyle). It may be useful to subsequently survey students who have plagiarized for psychological, convictional, and behavioral changes. In the institutional context, IS educators might ask: Is there institutional clarity about what constitutes plagiarism? Should dealing with plagiarism be the role of a course instructor or an academic integrity counselor? Should reflective approaches be used as a replacement for or in conjunction with standard institutional approaches for dealing with academic integrity violations? How can instructors or counselors be trained in holding dialogues with a student to encourage reflection?

In addition, we have to ask questions examining plagiarism in the wider context of academic integrity. Such questions include: Can ethical skills be inculcated by teaching or by preaching (Pfatteicher, 2001)? Should there be a focus on character (inner) development of students or (outer) behavior modification strategies (Roberts-Cady, 2008)? Should educators dealing with academic integrity issues focus on creative experimentation and innovation or the simple application of institutionalized policies and procedures (Dalal, 2015)? Clearly, the choices are not to be seen as "either-or" but an intelligent "both" may have to be discovered.

7. CONCLUSIONS

This article has presented practical wisdom from several years of experience handling plagiarism with the exploratory use of reflective means in IS courses. Existing methods of dealing with plagiarism may not be adequate, especially for tech-savvy IS students. A reflective approach based on dialogue, essay, and learning is not only feasible and promising, it also offers the potential for creating

transformative change. For this approach to be helpful, it is important to understand the context and causes of plagiarism and to plan ahead so that it can be deterred or prevented if possible. Instructors must exercise their own reflective capacities and develop sensitivity and mindfulness to have a skillful dialogue. The reflective approach places greater demands of time, attention, and effort on the part on the instructor.

Future directions for research and practice have been suggested. Implications for IS education have been discussed. Approaches to prevent, deter, reduce, detect, and handle plagiarism will benefit from the inclusion of reflection and self-understanding in the standard institutional approach based on policies, procedures, and punitive sanctions. It is necessary to have a holistic institutional framework of academic integrity (Bretag et al., 2011) with a place for policies, practices, and pedagogies that emphasize reflection, ethics, practical wisdom, mindfulness, and transformative learning.

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