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PLAGIARISM: WHAT'S A TEACHER-LIBRARIAN TO DO?

BY

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Introduction

We are growing up in a society where you watch TV and you tape it. You download a CD, you just record it. You see something you like, you just go Xerox it on a machine. It is really hard to get to understand that it belongs to someone else.

(Ma, Lu, Turner & Wan, 2007, p. 5)

Gloomy Grading Day

I was sitting at my desk grading reading journals. Sometime during hour three I read an entry that was so well written and insightful that it thrilled me. It made me pause. And then it made me do a quick Google check—and there was the journal entry, almost the entire thing almost word-for-word. I was completely disillusioned.

The student who had submitted the obviously plagiarized assignment was not a 'bad' kid. She was just a normal student. And she was just the first of many students. As a classroom teacher I have dealt with many issues, but nothing has left me feeling as betrayed as dealing with cheating and plagiarism. At first I took the matter personally— *did the student think I was stupid? Why did she do this to me?* When working through the disciplinary process the issue only became more fraught with tension and flared tempers--my own, the student's, the student's parents. I remember being absolutely stunned at the fact that what seemed to me to be a clear case of copy and paste was not viewed as such by students and parents. I was further stunned that many students and parents thought that the assignment of a zero to plagiarized work was incredibly unfair, that indeed we could not determine something was plagiarized (in spite of irrefutable "proof"). I felt betrayed by my students and betrayed by my administrators who sometimes acted with what I thought was extreme latitude when it came to disciplinary action. It was a dark time for me as a teacher.

At around the same time in my career, I saw this same scenario play out from a student's perspective. The student was a young girl who was enrolled in my colleague's English class. The teacher, not a particularly vigilant or invested teacher, had given a semester long assignment—one he graded in a cursory manner and one for which many

students (we found out eventually) submitted plagiarized work. During a meeting with the principal and the soon-to-be academic integrity committee, I was shown the notebook of a student from the class. The first entries, though not perfect, were carefully written, well-intended responses to the assignments. As the year progressed, the entries started to get messier and messier—clearly written without attention to detail, or even penmanship. The last entries were responses which were copied and pasted from the internet, printed to white paper and then affixed to the notebook. The message was clear: here was a student who had started the year diligently, but whose work deteriorated along with the academic integrity of the class. The notebook was a compelling testament to what happens to learning when plagiarism is left unchecked. Was it because the student realized that other students in her class were plagiarizing without repercussions that her work ethic fell into question too?

Erosion of the Learning Environment

The issue of plagiarism was so difficult for me because when I think about plagiarism and cheating I see them as factors that erode the integrity of the classroom. By this I mean that the teacher's job is to plan, manage, and assess learning. Teachers work hard at this—creating interesting assignments, providing meaningful feedback, working diligently with students. It is my belief that teachers teach because they want students to succeed. When a student cheats, not only does it circumvent the entire learning process for that student, it creates an unequal learning and assessment field for all the students, diluting the integrity and purpose of the entire class. And, perhaps worst of all, it demoralizes teachers, making them question why they endeavor to create dynamic learning environments. I think that is why, when I was faced with students who submitted

plagiarized assignments, I felt so betrayed. I felt like all my work was for nothing. And when the parents and administrators didn't immediately recognize the enormity of infraction, it felt like my work was not being validated.

These early career experiences made me hyper-vigilant about plagiarism and cheating. In fact, for me, an inquiry-focused writing teacher, the two words became synonymous and are used as such throughout this capping paper. I redesigned assignments so as to make them as plagiarism-proof as possible, I worked on educating students about citation and research. I created process-based assignments, with checks built into the assignments. The results were that I had less plagiarism in my classes and the quality of the work in general improved because of the purposeful design of learning tasks. I worked with colleagues to develop a common department vision about plagiarism. And I worked to educate myself about plagiarism, to make my own perceptions about cheating and plagiarism less personally biased and charged with emotion. In short, my focus moved from stopping plagiarism to improving teaching and learning. And the darkness faded.

What's a Teacher-Librarian to do?

In many ways my early experiences with plagiarism made me a better, more confident teacher. And when much later in my career when I assumed the position of teacher-librarian, they made me a better teacher-librarian. My first year as a teacher-librarian happened to coincide with a district-wide *Focus on Inquiry* initiative. As a teacher-librarian it would be part of my job to help teachers develop and implement meaningful research projects. After a few brief conversations with colleagues it was apparent that they were feeling to some extent what I had felt as a classroom teacher

when faced with research assignments. Teachers were wary to wade into full-scale inquiry assignments, largely due to their beliefs that the internet in particular made authentic student work scarce. I truly empathized with the classroom teachers—they were good people trying to do a good job. But many were instructing four classes a day with over 35 students in each class. The number of students coupled with the overwhelming pervasiveness of the internet and the ever-increasing copy-and-paste mentality in students were real obstacles to the *Focus on Inquiry* initiative. What was a teacher-librarian to do? How could I work to support teachers and their students with inquiry? How could I help reduce plagiarism so that teachers felt that research assignments were worth their time and effort and in doing so, help maintain the integrity of learning in the school?

Literature Review

For most teachers working in Canadian schools today it is difficult to remember what the world was like before computers and the internet. For students in those same schools it is *impossible* to remember what the world was like before computers and the internet: they are a generation born in the Digital Age. Layton (2005) describes the "digital child" as a child who "has never known a time when computers were not an ordinary part of day-to-day life" (p.7). Teachers are tapping into this trait and the use of technology in classes is flourishing. The professional literature in all disciplines of education is rife with how to integrate technology into classes and lessons. The literature in the area of teacher-librarianship is no exception. Murray (2000) writes about the necessity of teacher-librarians embracing this ever expanding technological world and transforming themselves from being librarians in libraries characterized as "static repositories of print and audiovisual materials" into *cybrarins* who are information

leaders in "dynamic and evolving information technology centers" (p.1).

A recently published document that is garnering much attention is *Standards for the 21ˢᵗ- Century Learner.* Authored by the American Association of School Librarians (2007), it delineates skills necessary for students to be successful in the 21ˢᵗ century, a century that is bound to be defined by technological innovation replacing technological innovation. The document introduces the standards by first identifying the *Common Beliefs* which form the foundation for the 21ˢᵗ Century Learner framework. The Common Beliefs are what one would expect to see: a value of reading, a focus on inquiry; an emphasis on technology skills; a belief in the equity of access to resources and technology; and, interestingly, an acknowledgement that "ethical behavior in the use of information must be taught" (p. 2).

It is this last common belief that is most pertinent to this capping paper. Although technology has been beneficial to teaching and learning, oftentimes making the learning process easier, it also presents opportunities for inappropriate behaviors. Research and statistics about plagiarism, particularly internet plagiarism, indicate that it is a widespread occurrence. McCabe (2001) reports the following statistics according to a survey of 2,294 American high school students : 16% admitted to turning in a paper retrieved from an online paper mill; while 52% admitted to copying a few sentences from a website without citation (¶ 13). McCabe (2001) writes that "there is evidence that cheating has increased in the last few decades, and the Internet is likely to intensify the problem" (¶ 1). Ma et al. (2007) present similar findings. In their qualitative study, they conducted a series of focus group discussions with middle school students in Ohio. The interviews revealed that students believed the Internet to be like "magic" because of the abundance of available

information, and claimed to prefer using the internet rather than the library for research. The study highlighted the fact that the Internet has "brought more convenience to digital plagiarism" (p. 5). According to Ma et al. (2007), 66% of the 51 participating students admitted to witnessing plagiarism, 33% have used the Internet to find answers without "digesting" the information, and 25% admitted to direct copying and pasting from the Internet (p. 4).

Why Students Cheat

Given the prevalence of technology available to students and their marked preference for it, teacher-librarians need to become more aware of the complex issue of plagiarism and cheating as it relates to the Internet and technology if they hope to be able to create school cultures where students are fluent in the ethical use of information. However, in order for teacher-librarians to address this idea, it is important for them to understand why students elect to cheat. Gomez (2001) presents several motives: they feel pressure to succeed; they felt disadvantaged because they see other students cheat and so feel 'forced' to cheat to maintain a level playing field, particularly when teachers or schools appear unconcerned with cheating; they observe society at-large behaving unethically; they believe cheating is "no big deal," calling it a "victimless crime"; they believe that cheating is a fair reaction to unfair tests or lack of opportunity; they are tempted by easy-to-use (and abuse) technology (p. 3). The motives Gomez (2001) articulates in her article are corroborated throughout much of the literature on cheating and plagiarism (Sterngold, 2004; Groark, Oblinger & Choa, 2001; McMurty, 2001; Selingo, 2004; Young, 2001; Lathrop & Foss, 2005). Young (2001), Taylor (2003) and Flannery (2004) identify a different motive for student cheating—a lack of knowledge about plagiarism and citation.

"First of all, kids need to understand what plagiarism is," writes Flannery (2004). "Just like they download hit songs and video clips without consequences, some may believe there's no foul in cutting and pasting without attribution. They think if they change a word, they've fixed it" (p. 4).

The issue of cheating and plagiarism is not a clear cut one. Leming (1980) writes, "cheating behavior is a complex psychological, social and situational phenomenon" (as cited in Buckley, Wiese, & Harvey, 1998, p. 1). While there is general agreement over "obvious" or "severe" instances of cheating, there is disagreement about other unethical academic behaviors, including plagiarism and bibliographical misrepresentation (Burrus, McGoldrick, & Schuhmann, 2007, p. 2). Adding to the blurry line that distinguishes ethical and unethical uses of information is the Internet itself. Ma et al. (2007) posit an interesting thought: "the Internet can be viewed as a constructivist learning environment where students engage in meaningful learning that is relevant to their own personal interests, which can in turn form a social community that encourages plagiarism" (p.3).

Do Students Know What Cheating is?

It is not surprising then that the Ma et al. (2007) study revealed that students had a "limited" understanding of plagiarism (p. 6). Students consider the internet "magic" after all, and cutting and pasting is seen so frequently, as noted above, that plagiarism seems an ordinary thing (p. 5). Burrus et al. (2007) found in their investigation that students were more likely to admit to cheating after they had been given a definition of it. In their study they had 300 economics student complete a survey that asked for the participants' frequency of cheating. They were asked a second time after a definition of cheating had been provided. Burrus et al. (2007) found that the frequency of cheating rose dramatically

in the results reported in the second survey, suggesting that students were unaware of what cheating is. Jensen-Campbell and Graziano (2005) report a related finding. Their study concluded that when teachers gave explicit directions not to cheat (presumably providing a definition of cheating along the way), student were more likely to resist the temptation to cheat.

Interestingly, when planning their study on ethical orientations and personality factors associated with attitudes about cheating and information technology, Etter, Cramer, and Finn (2006/2007), found that they needed to develop their own tools to measure unethical use of technology because of a large gap in the research literature on this topic. This, perhaps, indicates that even the research literature about cheating and plagiarism has not yet fully and completely defined the scope of unethical use of technology. After compiling a 24 item list of unethical behaviors using technology, Etter et al. (2006/2007), asked two groups of students (one group attended a religious college and one group attended a secular institution) to rank the seriousness of the academic infraction. Although the group from the religious college uniformly ranked all offenses as more serious than their secular counterparts, the ordinal ranking of the items was almost identical at both institutions. The students felt that the "most serious" infraction using technology was handing in a paper retrieved from an online paper mill. The offenses that were ranked as "quite" serious included using unauthorized assistance on an exam and using technology or excuses about technology as a delay tactic (improper email attachment on an email). Items ranked as "moderately serious" included copying one line from the Internet without citation and reading an online summary of novel. The least serious offense was using software to reformat a paper to increase length.

Situational and Context Variables That Encourage Cheating

Several situational variables have been linked to cheating and unethical behaviors. Not surprisingly, student perceptions of the teacher and the class impact how likely a student is to cheat in that class. Murdock, Miller, and Kohlhardt (2004) presented high school students with a four different scenarios which described Ms. Jones, a teacher, as having either good or bad pedagogy (teacher is prepared, clear, able to explain in a variety of manners, is generally effective) and a classroom that was either goal or mastery orientated. The participants were then asked to judge the acceptability and likelihood of cheating in Ms Jones' class, as well as who was responsible for the cheating--Ms. Jones or the student. Predictably, the poor pedagogy was rated by students as having the highest acceptability and likelihood of cheating, with the blame attributed to Ms. Jones. Mastery learning lowered the acceptability and likelihood of cheating. It also lowered the attribution of guilt to Ms. Jones, but only when she had demonstrated good pedagogy. Similarly, Ma et al. (2007) found that the students felt justified in cheating on assignments that they perceived as "boring and meaningless," especially if they only cheated this *once* (p. 7).

Jensen-Campbell and Graziano (2005) highlighted another aspect of classroom management that could reduce the frequency of cheating. They studied the impact of an instructor's verbal admonitions to resist the temptation to cheat. In the study 371 middle school participants were presented with a computerized 'general knowledge' test. Prior to taking the test, students were told they would be entered into a draw if they received greater than 80% on the test. The students were divided into three groups. The first group was used as a control group. The second group took the test, but was told that the computer program was broken, allowing students to use the F1 key to see the answers.

This group was admonished not to use the F1 button. The third condition presented the participants with the same scenario, but they were given a mixed message with regard to using the F1 key. The research assistant said that students should not use the F1 key because it would ruin the professor's study, but that the research assistant himself did not really care. In this study using the F1 key and then changing answers on the test was equated to 'cheating'. The findings indicated that students who received a clear verbal warning against cheating cheated less. Interestingly, students who received a mixed – message about cheating from their instructors, were reported as having higher frequency of cheating than students who received no verbal admonition at all.

Finally, the probability of getting caught and punished is a strong deterrent. In a study conducted by Buckley et al. (1998), 75.6% of survey participants believed that the average person would cheat if there was a 0% chance that he or she would get caught. These numbers reduced to 29.7% and 4% when the likelihood of getting caught was increased to 50% and 100% respectively. Burrus et al. (2007) report that the "uncertainty about the likelihood of detection significantly reduced the probability that a student was a cheater" (p.7). Participants in the Ma et al. (2007) focus groups reported that even though they knew cheating was wrong, they found that it was easy to cut and paste from the Internet and that there were no consequences for doing so. McCabe, Trevino, and Butterfield (2001) conducted a study that compared cheating on several different university campuses. Some of the campuses had academic honor codes—codes which included a written pledge which is affirmed a public and signed by students; and/or a student judiciary committee to hear cases of alleged academic dishonesty violations; and/or unproctored examinations; and/or expects or obliges students to report all

incidents of cheating which they witness. Schools with academic honor codes reported less cheating than schools without such codes, a finding McCabe et al. (2001) attribute to the fact that students at code schools believed that their chances of getting caught were higher (especially at schools which utilized the required reporting of cheating as part of their academic codes) or "perhaps because honor codes reduce the perception that other students are cheating" (McCabe & Tevino (1993) as cited in Burrus et al. (2007).

Academic honor codes which required all students to report any honor code infractions that they are aware of do "seem to be an important part of the campus culture of integrity" (p. 9). However, the effectiveness of the reporting requirement is suspect because although 43.4% of participants claimed that they would report cheating, in actuality only 7.9% of participants who had witnessed cheating had reported it. McCabe et al. (2001) write that the strength of the reporting requirements "may simply be the fact that they require students to wrestle with the dilemma of community vs. individual values and their responsibilities as a member of a community" (p.9).

The research in this area seems to suggest that there are certain situational variables that can either encourage or discourage student cheating. Scott E. Siddall, assistant provost for instructional resources at Denison University presents an argument that is especially noteworthy when considering the digital child. He believes that "the era of cut-and-paste requires our vigilance . . .we must be more vigilant than we were in an era when all we had was photocopy machines" (as cited in Young, 2001, p. 1).

According to Gomez (2001), a nationwide American study conducted by the American School Board Journal and the Education Writers Association revealed that nine out of ten high school teachers "acknowledged cheating as a problem" (p. 2). McCabe

(2005) writes that students are disheartened by "faculty who look the other way in the face of obvious cheating" as revealed by the results of a web-based survey of over forty thousand undergraduate students at 68 university campuses across the United States and Canada (p. 3). Similar views are expressed by Taylor (2003) and McCabe (2004). In her article *Why Professors Don't do More to Stop Students Who Cheat*, Schneider (1999) writes that most professors prefer to handle cheating "quietly and quickly" (p.1). Donald McCabe, the founding president of the Center for Academic Integrity, found in a survey of 1,800 students on nine university campuses that 70% of students admitted to cheating at least once, while in another survey of 800 professors at 16 universities 40% indicated that they "never" reported cheating, 54% "seldom" reported cheating and 6% "often" reported cheating. McCabe states that "in the majority of cases of trivial cheating, I think most professors turn a blind eye. . . the number who do nothing is very small, but the number who do very little is large" (as cited in Schneider, 1999, p. 1).

Why Might Teachers Allow Students to Cheat

So why might teachers and professors look the other way when it comes to cheating and plagiarism? It is not because teachers and professors are unconcerned about academic honesty. In fact, Young (2001) writes that with regard to cheating and plagiarism "there is a lot of pent up frustration among faculty" (p.2). There seem to be multiple factors that impede teachers and professors from acting decisively against plagiarism and cheating. Not the least of which is the fact that they "feel under siege" from what they perceive as significant increases in Internet-related cheating" (McCabe, 2004, p. 4). Sterngold (2004) also reports anecdotally that some professors don't feel that teaching students how to write research reports is their responsibility. They believe

students should already know how to do this. Many feel that the demands of executing a research assignment in class are onerous enough, "having to worry about plagiarism only adds to the burden" (Sterngold, 2004, p. 3).

Time, or rather the lack of time, is also reported as an important factor in teachers' and professors' reluctance to act on academic fraud. The Director of Student Judicial Affairs at the University of California at Davis states that "some professors complained that they were spending more and more of their time searching the Web to detect plagiarism (as cited in Young, 2001, p. 3). Sterngold (2004) reports that her colleagues feel strongly that that there is not enough class time to work on research projects in class and that modifying research assignments to avoid or reduce student plagiarism would "require instructors to devote more class time to the assignments—and to become more involved with students as they work on the assignments than many instructors are willing or able to tolerate" (Sterngold, 2004, p. 3). Perhaps Gardiner (2001) writes about one of the most frustrating aspects of academic fraud when he relates his own story of dealing with student research and plagiarism. After becoming aware of the occurrence of plagiarism in his high school English class, he looked at the stack of papers on his desk waited to be graded and thought to himself, "hours of work. How many more downloaded papers would [he] grade" (p.2)?

A result of these teacher frustrations can be, as Flannery (2004) points out, either having teachers ignore academic integrity infractions or removing research assignments from class curricula. In her article *Cyber-Cheating,* Flannery (2004) also refers to Gardiner's high school experience with plagiarism. She writes: "Gardiner knows some teachers who'd rather not assign research papers anymore—they've thrown up their

hands in frustration" (p.3). This seems a bit extreme and maybe even reactionary.

However, Sterngold (2004) writes of something even more disturbing:

> Most undergraduates have weak research and writing skills, and if truth
>
> be told, so do many college professors, graduate students, and other
>
> well-educated adults. Most college students do not know how to formulate
>
> workable hypotheses or research questions, evaluate the quality and
>
> appropriateness of source materials, or integrate data and ideas from multiple
>
> sources. Many students cannot write in a clear and logical manner,
>
> support their ideas with evidence and arguments, or edit their own prose.
>
> For these reasons, many graduate programs no longer require students
>
> to write masters theses, and most undergraduate programs have abolished
>
> thesis requirements for all but departmental honors students. (p. 2)

A final frustration is that sometimes even if an educator does follow up on academic fraud, they are met with little support from administrators , or are burdened once more with dealing with judicial processes that are "laborious, even labyrinthine" (Schneider, 1999, p. 1). Schneider (1999) relates the comments of a professor at North Carolina State University who did officially accuse a student of plagiarism. The professor said of his experience: "prior to filing these charges I discussed the case with colleagues and everyone I talked to suggested that it was futile and that I would ultimately be humiliated" (p. 3). Pursuing the matter is simply "not worth the trouble "(p.1). Another educator, Piper High School biology teacher Christine Pelton, determined that 28 students plagiarized on an assignment worth 50% of the final grade for her class. After

consulting the school administrators and following the academic honesty procedure

established at her school, she notified the students and their parents that the students

would not receive credit for the assignment. Pelton faced outrage on behalf of many

parents and students. Ultimately the school board ordered that Pelton give the 28 students

partial credit for the assignment and reduce the weight of the assignment to 30% (Taylor,

2003).

Implications for Teacher-Librarians

A nuanced understanding of cheating and plagiarism is needed in order for

teacher-librarians to make informed decisions and actions about unethical use of

information at their schools. It is important that teacher-librarians understand how

students perceive cheating, as well as the situational variables that may be associated with

cheating and unethical academic behavior. If one thing is clear about the issue of cheating

and plagiarism, it is that the issue is complex. Do students cheat because teachers

passively condone it, or do teachers passively condone plagiarism because student

cheating is so prevalent or administrative support so scarce? It is a chicken-and-egg

enigma. Taylor (2003) suggests that not only have "most of us plagiarized material,"

most likely inadvertently, but also that "intellectual property is not obviously

extraordinary" (p.2). Perhaps it is because the issue can *only* be characterized as a shade

of gray, that controversial decisions—like the one made with regard to Christine Pelton's

biology class—are made when cases are referred to school boards or academic judicial

committees.

Case Studies: Teacher-Librarians in the Digital Era

Though the issue of plagiarism is complex and global, teacher-librarians are

ideally placed to help ameliorate the situation. Teacher-librarians "have access to teachers in all departments and grade levels" (Lathrop & Foss, 2005, p. 119). Rohrbach and Valenza (2005), write in their article *Changing School Culture at Springfield Township High School: A Research Integrity Policy That Works* that concern about plagiarism "prompted [their] school-wide determination to make a systematic change in the way [they] approached research" (p. 122). At Springfield Township High School the teacher-librarian, working as part of a team, worked to change school culture and improve research instruction. She provided professional development to aid teachers in their understanding of plagiarism and helped them to develop "plagiarism-resistant" projects. The teacher-librarian actively involved the staff in the planning and development of the school's Research Integrity policy, and the accompanying Academic Integrity Committee (AIC). The AIC then handled all issues of plagiarism, thereby eliminating the pressure on any one teacher. It is important to note that the principal was a sitting member of the Academic Integrity committee, as well as an active supporter of the systematic school-wide change. All classes were expected to be responsible for teaching good research skills and all research projects were expected to be documented. Additionally, the Academic Integrity policy was communicated to all students, parents and teachers (Rohrbach & Valenza, 2005, p. 125). Lakeview High School in Battle Creek, Michigan also instituted a school-wide program (Lincoln, 2005). Both programs shared a similar vision: "in a culture of inquiry, in a culture of academic integrity, all of the stakeholders need to understand the process of research, why process assessment is important, how collegiality makes the difference, and why ethics matter" (p. 128). Developing school library web pages that help students navigate their way through information as well as

provide student resources to help them avoid plagiarism "can make a dramatic impact on learners" observes teacher-librarian Joyce Valenza, who runs an award-winning high school virtual library (Valenza, 2005, P. 133). The programs briefly outlined here have been successful. Teacher-librarians can use the experiences of Springfield and Lakeview as a foundation upon which to build strategies to help support students and teachers in their own schools. These strategies are important because as the S*tandards for the 21st-Century Learner* indicate, "ethical behavior in the use of the information must be taught" and "school libraries are essential to the development of learning skills" (American Association of School Librarians, 2007, p. 2, 3).

Reflections from the Stacks

As I read through the research on cheating in general and plagiarism specifically, I felt an overwhelming sense of relief. I was not alone. Other teachers in other places had had similar experiences. Others had felt frustrated by plagiarism, disillusioned at the discipline processes that had ensued, and, finally, inspired to find ways to deal with the issue. In so many ways the literature reviewed for this capping paper echoes my own internal journey as a teacher dealing with plagiarism. The universality of the issue was a huge comfort. An equally compelling realization was that cheating and plagiarism are complex issues, with so many possible root causes. There are no easy villains and rarely are there intentional victims. Plagiarism can happen for any number of reasons, almost none of which are personal attacks on teachers. This, too, was a huge comfort. Finally, being aware of what other teacher-librarians are doing to create ethical research cultures has helped me become a better teacher-librarian. Realizing that the solution to plagiarism is a school-wide one has helped me frame my own library program initiatives.

Understanding why students cheat and plagiarize is an important first step in designing programs that foster ethical use of information and authentic research. From the research it was evident to me that in order for any program to be effective, it would have to address as many of the situational and contextual variables which affect cheating as possible. To this end, and in consultation with other faculty members, I purchased a school subscription to a plagiarism deterrent service called Turnitin, a service provided by iParadigms (www.turnitin.com). The service checks student papers against the internet, several journals and references sources, and against its own database of previously submitted assignments. The reason I advocated for the subscription, however, was not based on the services that Turnitin provided per se. I did not believe that a Turnitin subscription would be a magic silver bullet. I was more interested in addressing some of the variables that influence cheating. The adoption of the service allowed the library to provide inservicing on how to use the features of Turnitin and at the same time about issues surrounding plagiarism in general. In this way it was possible to dialogue with teachers about simple ways to reduce the incidence of cheating on class assignments, such as giving clear, unambiguous directions that plagiarism is not acceptable.

In conjunction with our subscription to Turnitin, I also purchased a school subscription to an online bibliography maker called Noodletools. This service helps students create properly formatted bibliographies. Again, the true impact of this subscription was not so much the service itself (though it is a wonderful tool), but in the dialogues and partnerships it created. Both of these programs created opportunities for me, the teacher-librarian, to collaborate with classroom teachers. The result was real

collaboration. I worked with classroom teacher in the development of plagiarism-resistant research assignments as well as the assessment of student work. I believe that such collaborations have made classroom teachers feel like they are not alone in teaching the research process, and have given them an opportunity to share the task of instructing research.

The new subscriptions also opened up dialogue opportunities about plagiarism with students. It demonstrated to students that copying and pasting material, particularly from the internet, would likely be caught, that plagiarism is indeed a big deal, and that there would be consequences for plagiarizing—even if they were namely that the student would have to redo the assignments without plagiarizing. In many of my classroom conversations with students about Turnitin it quickly became evident that many student felt reassured by the fact that the service would 'level the playing field'. Most importantly, the online subscriptions provided a venue for authentic, timely and relevant instruction on how to use and document resources ethically because, as *The Standards for the 21st Century Learner* advise us, "ethical behavior in the use of information must be taught" (p. 2).

Reflecting on how my personal experiences with plagiarism relate to the research on the same topic has helped me immensely in my role as teacher-librarian. At the most basic level my reflections have allowed me to communicate with individual classroom teachers in an informed and empathetic way about the difficulties of research assignments. On a broader level it has helped me connect my experiences to those of educators world-wide and has helped me develop a library program initiative that fosters a culture of ethical inquiry and authentic research. Although this initiative has met with

success, I know that there is still room for refinement and improvement. I know, too, that the 21st century which has been unparalleled in technological innovation and information production will require that educators continue to be just as innovative in their strategies to promote effective use of this rapidly evolving technology and information.

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