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A Self-Plagiarism Intervention for Doctoral Students: A Qualitative Pilot Study

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Abstract This purpose of this qualitative study was to gather detailed information about student perceptions of self-plagiarism and the perceived effectiveness of a brief self-plagiarism video tutorial. Semi-structured interviews ($n = 7$) were conducted and health sciences doctoral students were queried regarding their knowledge and perceptions of self- plagiarism. The population for this study was new doctoral students, as well as students who had committed self-plagiarism during the semester. Overall, participants reported a specific self-plagiarism intervention was more helpful in preventing self- plagiarism than a traditional plagiarism intervention and that the intervention should be included in initial program orientation. Overwhelmingly, students did not believe self- plagiarism was a serious academic offense and think they own their intellectual property and unpublished works.

Introduction

There is a plethora of research about plagiarism; however, research on self-plagiarism and plagiarism educational interventions is very limited. The purpose of this pilot study was to have health science doctoral students critique an educational intervention with a dual purpose: to both prevent self-plagiarism when viewed during orientation, and to serve as the primary source of remediation for students who have committed self-plagiarism.

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Definition of Plagiarism

While there are multiple definitions for plagiarism, there are two common factors in these definitions: a) use of another's intellectual property without giving proper credit, and b) claiming someone else's work as one's own. Karposi and Dell (2012) described four discourses on plagiarism: a) plagiarism as moralism, b) plagiarism as proceduralism, c) plagiarism as development and d) plagiarism as writing/intextuality. An individual faculty member tends to view plagiarism through one of these lenses. Plagiarism as moralism is viewed as theft of someone else's intellectual property. It is thought to undermine the underpinnings of academia because a student has intent to commit wrongdoing. Consequently, his morals may be in question. This viewpoint has lost favor in recent years.

Plagiarism as proceduralism is viewed as act that may not be intentional because the environment in which it occurs is very complex. In this discourse, the focus and impetus is placed on university policy to prevent students from committing plagiarism. The concentration is on the process or procedure, not on the person as it is with plagiarism as moralism. However, since plagiarism is still considered as an honor or academic honesty offense, there still is an element of student responsibility considered in this discourse. Students should be aware of institutional policies (Karposi and Dell 2012).

Plagiarism can also be viewed as an educational opportunity and a way to identify needed areas of remediation. It is an opportunity to develop and improve a student's writing. This is a holistic view and includes information (in the form of orientation of some other way), as well as detection and consequences for violations. In this discourse, institutional policies and procedures play a large part in ensuring students do not commit plagiarism. However, if a violation occurs, there must be consequences to further their development and prevent the student from plagiarizing again. In this school of thought, the role of the academic is to develop the student to improve their writing (Karposi and Dell 2012). The reporting system must be robust and faculty have to be encouraged to report plagiarism. This is to ensure an environment of improvement occurs and students do not *game the system* with deliberate repeat offenses knowing academic guidelines are not stringently followed. Lax enforcement of policy is unfair to students who follow the rules and develop their skills.

Plagiarism as writing or intextuality acknowledges some acts of plagiarism are open to interpretation and therefore, are subjective. For example, there is no universal accepted "percentage of match" on a plagiarism detection report that indicates plagiarism has definitely occurred. These reports do count quotes, references, or common assignment phrasing as potential plagiarism matches unless the faculty member removes them and recalculates the percentage. These programs are not infallible. In addition, in this view, writing is not considered purely a technical function, "it is a social practice" (Karposi and Dell 2012, p. 13). This view also acknowledges faculty are unable to ascertain intent with complete certainty, so plagiarism can be intentional or unintentional.

Keung Ho (2014) also recommends a holistic approach to plagiarism based on the categorization of approaches to problem solving proposed by Acoff in 1981. Rather than resolving or solving a problem it should be *dissolved*. In the case of plagiarism, this includes considering the student mindset. Rather than being grade-oriented, students should be learning-oriented. A second consideration is management of the environment. This can include prevention, processes and procedures. Sudmale (2015) collated pedagogical approaches (cognitivism, behaviorism and constructivism) with psychology, aesthetics and management theories to create a holistic theoretical model to reduce plagiarism. The core of this model is the formation of a preventive system, to provide support to faculty in dealing with plagiarism issues and to leverage information and communication technologies. Sudmale's behaviorism approach to plagiarism is essentially the same as Karposi and Dell's (2012) plagiarism as moralism which considers plagiarism as laziness or theft. Sudmale's cognitive

approach is very similar to Karposi & Dell's plagiarism as development approach where students develop their skills over time in an academic program. The constructivist approach is similar to Karposi & Dell's writing/intextuality where plagiarism occurs due to a convergence of cultural, educational and social factors.

Causes of Plagiarism Dias and Bastos (2014) note the reasons students plagiarize can widely vary from intentional plagiarism and a lack of awareness of the rules (unintentional plagiarism), to poor time management. Cheating, including plagiarism, is more widely committed by poor academic performers, those with low self-efficacy or self-esteem, and students without robust learning goals (David 2014). Students are also more likely to plagiarize if they think they will not get caught because there are not effective reporting and remediation mechanisms and/or a lack of consequences. In addition, the internet and the ready information it provides has increased the plagiarism potential (Dias and Bastos 2014).

What Is Student Self-Plagiarism?

The concept of student self-plagiarism gained importance at beginning of the second decade of the twenty-first century as plagiarism detection programs such as TurnItIn and SafeAssign became more widely used by colleges and universities. However, although faculty self-plagiairism was identified in professional publications, student self-plagiarism was not really addressed in the literature. Jones et al. (2005) discussed the concept of replication where a student submits previously written work that is the same, or significantly similar for a new assignment.

Jones et al. considered this an "academic impropriety" (p. IV 8–2). However self-plagiarism was just one of many plagiarism practices examined in this research study and it did not warrant significant attention in this study or others (Hensley et al. 2013; Maxwell et al. 2008; Owunwanne et al. 2010; Sweet-Holp and James 2013). The first study on faculty perceptions of self-plagiarism was conducted on a small population of psychology professors by Bennett et al. (2011). In 2013 Halupa and Bolliger conducted a multi-university study of faculty perceptions; in 2014 they conducted a study assessing student perceptions of self-plagiarism at the same universities. Only 38 % of faculty and 37 % of students perceived self-plagiarism to be clearly defined. Over 70 % of students in the 2013 study agreed reuse of a complete paper was self-plagiarism, but results were significantly lower when students were asked if there should be required to cite unpublished work or ask permission. Of the 198 students who provided a definition of self-plagiarism when prompted to do so, 41 (21 %) disagreed self-plagiarism existed and 63.5 % of students did not perceive self-plagiarism to be an academic honesty offense. This is approximately the same percentage of faculty who *did* consider it to be an academic honesty offense in the faculty study (Halupa and Bolliger 2013). These two studies demonstrated the perceptions of faculty and students regarding self-plagiarism are vastly different. In addition, 40 % of students admitted to recycling parts of previous works (Halupa and Bolliger 2015).

These studies were conducted before any formal definition of self-plagiarism was published by any professional organizations. The Department of Health and Human Services through its Office of Research Integrity (ORI) published a definition in 2013 in their *Guide to Ethical Writing*. Their definition is as follows:

> Redundant publication has a direct counterpart in the work of academic dishonesty-it is referred to as "double-dipping." It occurs when a student submits a whole paper or a substantial portion of a paper to fulfill a course requirement even though that paper had

earlier been submitted to satisfy the requirements for another course taught by another professor. Many college undergraduates and even some graduate students are not aware that this type of practice is a serious offense and constitutes plagiarism. Of course, as in redundant publication, submitting the same paper, or a large portion of a paper, to two different courses is entirely acceptable if the instructors of both courses were informed by the student of the double submission and if both agreed to the arrangement. However, some institutions have specific policies prohibiting this practice (Section 2).

At this time, there is still no universally-accepted definition of student self-plagiarism in academia. The ORI definition has not yet gained wide use, even though more universities address self-plagiarism in formal policies.

Because of the paucity of literature, particularly on particularly student perceptions of self-plagiarism, additional study is warranted. This qualitative pilot study attempted to provide a more in-depth view of student perceptions of self-plagiarism than can be detected in a quantitative study to further explore student reasons, opinions, and motivations.

Causes of Self-Plagiarism Halupa and Bolliger (2015) found the major reason students commit self-plagiarism is that they do not view it as an academic honesty offense. Students overwhelmingly (87.8 %) thought their non-published writings are their own intellectual property which they can use as they see fit.

A second reason is lack of education about self-plagiarism. Halupa and Bolliger (2015) discovered over 77 % of students thought they should be instructed on avoiding self-plagiarism and over 72 % noted professors should not assume should not assume students are aware that self-plagiarism is academic misconduct. However, based on student perceptions of self-plagiarism, a lack of awareness is evident because almost 77 % of students noted instructors did not provide information on how to avoid self-plagiarism.

Another reason students self-plagiarize is they believe it can increase their level of knowledge in a particular subject area as well as being an effective use of their time (Halupa and Bolliger 2015. This is particularly true of doctoral students who are gaining in-depth knowledge when researching their dissertation topic.

Plagiarism Interventions

Several recent studies discuss plagiarism interventions; however, none were found that specifically addressed self-plagiarism. One author, Hall (2005) postulated, "When prevention fails, make the plagiarism intervention not only an occasion for punishment, but also an educational opportunity, a way to prevent the next plagiarism" (p. 1). He also noted materials should be provided to prevent plagiarism rather than just placing warnings in academic policy against committing the offense. Some of these studies concentrated on the way students were educated with plagiarism interventions, while others addressed the effect of an intervention on student writing and incidence of plagiarism.

Raihanah et al. (2011) addressed a workshop intervention for plagiarism that was one part of a three-part separate workshop for literature students in Malaysia. These students presented the same issues as American students which included difficulty in properly citing material, a lack of critical thinking in writing, and emphasizing the relevance of a topic. Divan et al. (2015) effectively used a plagiarism intervention for international students to prevent unintentional plagiarism that reduced plagiarism in this population.

Other researchers looked at plagiarism intervention as an institutional responsibility that should occur when students matriculate. Davis and Carroll (2009) note institutional responsibilities regarding plagiarism have become even more important in recent years. Universities in the United Kingdom recognize a responsibility to ensure students have proper skills to avoid plagiarism. It can no longer be assumed students have these skills as university student bodies become more and more diverse. Davis and Carroll (2009) outline a case study done at Oxford Brookes University that found after students received formal plagiarism instruction, there was a "reduction in the amount of plagiarism, reduction in over-reliance on one source, reduction in citation errors and reduction in insufficient paraphrasing" (p. 62) over 3 years. Elander et al. (2010), also in the UK, created an instructional intervention for a population of 364 psychology students to see if student beliefs about plagiarism changed. Eighty-six percent of the students reported the intervention helped them avoid plagiarism; 66 % reported it improved their writing.

The key to plagiarism intervention is to conduct it as early as possible, so as to not set students up for failure. Newton et al. (2014) found a plagiarism training intervention provided at orientation increased student knowledge of proper referencing in academic papers in a population of 137 undergraduates. Students who received this training performed better on a practical skills intervention than those students who did not receive instruction. The researchers found this intervention could help students avoid plagiarism. Kashian et al. (2015) created an instructional activity to increase student understanding of plagiarism. Students had a decreased incidence of offenses and increased understanding of plagiarism as measured by TurnItIn reports.

Much of the research in plagiarism interventions has been conducted in undergraduate populations. However, DeGeeter et al. (2014) created an educational session for first through third year doctor of pharmacy students. The sample included 252 students who evaluated 10 cases to determine if plagiarism occurred. DeGeeter et al. assessed the students prior to the intervention and again at the end of the semester. The intervention was most successful in the first and second year students. Marshall et al. (2011) evaluated a plagiarism intervention in postgraduate health science students using a quasi-experimental design. Student papers were checked for plagiarism using TurnItIn. The intervention was found to be very effective. Eventually, this intervention led to zero incidents of plagiarism over 2 years.

Other researchers have evaluated the effectiveness of plagiarism interventions that used technology. Henslee et al. (2015) found a pre-recorded tutorial for plagiarism prevention was just as effective as addressing issues in a pre-recorded lecture. Belter and du Pré (2009) found students exposed to an online academic integrity module had significantly fewer incidents of plagiarism compared to a control group. Dee and Jacob (2010) reported a 15-minute web-based tutorial reduced plagiarism by 65 %. Their sample of 28 classes (573 college students) was divided into control and experimental groups. The experimental group (14 classes) was required to do the tutorial and complete a quiz before submitting papers. Students were not aware their papers would be examined retroactively or that data was being collected for a research study.

Methodology

This qualitative pilot study was conducted in a graduate health sciences university in a health sciences doctoral program. The original intent of the study was to have students who had self-plagiarized to assess the intervention to assess if the intervention might have prevented the offense. Six students were reported for self-plagiarism during this semester; however, only two students consented to do the interviews. The remaining four indicated they were too

embarrassed. To increase sample size, the study was expanded to include a group of 10 new doctoral students in the first semester of the program. The sample for this pilot study was a total of 16 students; 7 students (44 %) agreed to participate and were interviewed to reach saturation. Students were asked via two separate emails 4 weeks apart to evaluate a web-based tutorial for prevention of self-plagiarism, complete a short questionnaire and participate in a 10–15 minute semi-structured interview.

Students were contacted via email by the primary researcher and arrangements were made at the student's convenience to complete the questionnaire and interview via telephone. When the student agreed to participate, an informed consent was sent to the student who provided consent before the intervention was sent and an interview scheduled.

The self-plagiarism intervention that was used was a 5-minute voiceover PowerPoint video. It included links to the Rock Ethics Institute 1-minute vignette for self-plagiarism (https:// www.youtube.com/watch?v=d9oF8UmK4is&list=PL5D0FE90E1C6811D3&index= 5&feature=iv&src_vid=rrS-ATMRxJ4&annotation_id=annotation_607026655) and included the definition of student self-plagiarism published by the Office of Research Integrity in the Department of Health and Human Services. It also included a video from IAuthenticate outlining self-plagiarism in research as well. The video was scripted by one of the researchers and was created by the university instructional design department. The video intervention that was used can be viewed here https://www.youtube.com/watch?v=rrS-ATMRxJ4. The theoretical framework used for the creation of this intervention was the Ajzen's (1991) Theory of Planned Behavior which links beliefs and behavior.

Copies of the questionnaire and the semi-structured survey instrument are attached in Appendix A. The questionnaire consisted of six Likert type scale questions (1 *strongly disagree*, 2 *disagree*, 3 *neutral*, 4 *agree* and 5 *strongly agree*), one closed-end question (yes or no), and four open-ended questions. The interview instrument consisted of five items with one to two probes to gather additional information. Student identity was kept confidential and was only known by the researcher conducting the telephone interviews. In the associated interview field notes, participants were not identified by name, but were identified as Participant A, B, etc. to maintain confidentiality of responses.

Descriptive statistics were calculated for the questionnaire responses. Inferential statistics were not performed because of the small sample size and because the primary purpose of this study was to obtain qualitative data. In addition, demographic characteristics were not gathered except for gender to further ensure confidentiality.

Results

Questionnaire The means and standard deviations of the participants' responses for the five Likert **type** questions are presented in Table 1. The responses for the closed end question is presented in Table 2. The only demographic variable obtained was participant gender: six were female (85 %) and one was male (15 %); this is reflective of the demographic makeup of the particular doctoral program where the pilot study was conducted.

Open-ended comments on the survey were categorized into themes. When asked if the student's opinion of self-plagiarism was changed, one student (14 %) did not know it was an academic honesty violation. Only one student had a clear understanding of self-plagiarism prior to viewing the intervention (14 %) and she worked in academia. The remaining five students

(72 %) still felt self-plagiarism was not an academic honesty violation. One noted it was, "wrong in publication, but not in unpublished papers." Another noted her opinion, "had not inherently changed, but I will follow the rules now that I know they exist." There was a follow-up question to determine if the intervention increased the understanding of students who were already aware self-plagiarism was considered by some to be a breach of academic honesty.

Only one student had previously thought self-plagiarism was a breach of academic honesty; the student stated the intervention increased her understanding. Four of the seven students used this opportunity to stress they did not think even after viewing the intervention self-plagiarism was an ethical violation. When asked how the university should handle students who are found self-plagiarizing, two of the seven students noted they thought there should be no consequences. This was even though the university listed self-plagiarism as an ethical violation in the academic honesty policy in the student handbook. These students indicated they did not remember reading it in the handbook, even though all but two of the students had just entered the program and had recently completed orientation. Four of seven students thought the consequences for self-plagiarism should be significantly reduced when compared to plagiarism (the unauthorized use of another author's work). One student noted this was an opportunity to "teach rather than discipline." Students were asked to provide suggestions on how to improve the intervention. Only one participant had a suggestion and this is outlined in the interview responses below.

Interviews Participants were asked if they believe student self-plagiarism is a viable construct and a real academic honesty offense. Four of the seven participants noted self-plagiarism truly is not possible. The reasons students listed were: a) it only applies to published words and not to student assignments (3 of 7), b) students own their own works (4 of 7), c) students should be able to use their own works at will, and d) it is not a copyright violation (1/7). Overwhelmingly, students did not think they should have to ask permission of a professor to use a few sentences from a previous assignment (6 of 7). When asked for a definition of self-plagiarism, again four respondents said there really was not such a thing in regards to student assignments; two were unsure and one said recycling of work as defined in the intervention she had viewed. Eighty-six percent of the respondents perceived that self-plagiarism was not a clearly defined concept while one said recycling of work as defined in the intervention she had viewed. Eighty-six percent of respondents perceived self-plagiarism as not clearly defined, while one participant thought it was.

Table 1 Participant responses likert scale questions

Question	Mean	SD
The self-plagiarism intervention increased my understanding of why faculty and universities consider this an academic integrity offense. The self-plagiarism intervention has changed my perception of self-plagiarism.	3.71	0.71
The self-plagiarism intervention has changed my perception of self-plagiarism.	3.71	1.41
The self-plagiarism intervention is an effective tool to educate students who have committed self-plagiarism.	3.71	0.00
I think an intervention for "cut and paste" or improper citation plagiarism would be effective that a self-plagiarism intervention in reducing self-plagiarism in students	1.85	0.71
I think self-plagiarism should ne incorporated into the regular misuse of sources intervention rather than being treated as a separate issue.	3.29	1.41
The self-plagiarism intervention will assist me in not committing this violation again in the future.	4.43	0.71

Table 2 Student ethics

Question	Yes	No
Do you think students in the health sciences are fundamentally more ethical that students in other academic disciplines?	17 % ($n = 1$)	83 % ($n = 1$)

Next, respondents were queried on if they thought it was acceptable to reuse part of a paper written for a previous assignment. Six of seven respondents thought it was acceptable and students should not have to ask permission from a faculty member to reuse previous work. The reasons cited were identical to what was mentioned when students were asked to define plagiarism; since students own their work, they should be able to use it at will. Students perceived self-plagiarism applied only to published works almost exclusively as noted in the American Psychological Association (APA) manual with one exception. Three of seven participants noted to gain greater knowledge and understanding of a topic (particularly in regards to preparing for the dissertation process), it is necessary to build upon previous work. If this is done, it likely specific phrases and sentences will be detected by plagiarism detection programs; however, participants thought this should not be considered an offense since it is part of the educational process. One participant noted she had planned to do as many papers as possible throughout the program on her dissertation topic so she could obtain a breadth of knowledge and information. She views this as "working smarter—not harder." She is sure "she would have self-plagiarized" had she not participated in this research project and discovered she had to ask permission. She stated everyone inherently has a particular writing style in regards to preferred sentence structure and wording. For this reason alone, she reported she was bound to recycle some sentences, particularly as she worked on her dissertation over time. Another participant who had been referred for self-plagiarism noted, "there are only so many ways you can rephrase the same information."

Students were also queried on how much they thought was acceptable to recycle (if they felt it was acceptable). All but one participant said it was acceptable to recycle a few sentences to a paragraph; all participants (100 %) felt it was unethical to recycle an entire paper.

Next, participants were asked who owns student assignments; 100 % of respondents felt students did; most students had very strong opinions about this. One participant thought students still could not use their works, while the other six students did. Six of seven respondents thought use of a few sentences or up to a paragraph was ethical reuse. Only one student felt it was unethical, but she did note artists build on their own work and it is done in the workplace as well. Another student noted in the workplace "it is common to produce documents that are reused all of the time; academia is different from what happens in real life." Two respondents thought it was ethical because this was not significant enough to deter from the educational process and in fact could enhance the process, particularly in doctoral work.

All participants, even those who did not think self-plagiarism was an academic offense, noted if a university has a policy stating it is an academic honesty violation that awareness needs to start early, preferably before or at the beginning of a program. Four respondents indicated the policy needs to be included in orientation. One student, who had committed self-plagiarism, suggested a link to academic honesty policies should be included in every syllabus. Three of the seven students reported they did not think the university stressed enough that self-plagiarism was viewed as an academic honesty offense during their orientation. However, four suggested covering it in orientation is not enough; because of the length of a doctoral program,

students may need additional reminders throughout. When queried about the efficacy of signing an honor code document, 71 % of the students thought this would be helpful. Two thought an honor code was not appropriate at the doctoral level and it primarily applied to undergraduate students.

The consequences for self-plagiarism were mentioned during interviews by all respondents. Overwhelmingly, 100 % of participants thought consequences for self-plagiarism or recycling a few words or a paragraph should not be as severe as for plagiarism or recycling an entire assignment. Two of the students who received a 20 % reduction on an assignment because they committed self-plagiarism thought this was too punitive. Overall, students thought consequences should be more educational and less punitive, because there is a great deal of confusion about this self-plagiarism, even if it is included in university policy.

Students were asked if they had ever self-plagiarized academic work; 85 % (6 of 7) admitted they had self-plagiarized in the past. All who had self-plagiarized noted they had done it because they were not aware it was an academic honesty violation; in addition, two noted they had done it in building on previous work. Two participants also noted it was effective use of time if it met the intent of the new assignment.

Last, students were asked if they had any suggestions to improve the self-plagiarism intervention. All of the interviewees overall were happy with the intervention and thought it increased their understanding of the concept of self-plagiarism and the university rules. Students were neutral on whether self-plagiarism should be treated as a separate topic or included with plagiarism training; however, one student suggested if it is included with plagiarism training, the post-test contain a question on self-plagiarism to reinforce its importance. One student noted the intervention was "good for graduate students," while another noted the intervention was "concise and kept her attention because it was brief and to the point." One participant noted she liked the intervention, but would have liked to see more examples included.

Discussion

The purpose of this qualitative study was to gather in-depth perceptions of student views of self-plagiarism after a video intervention specifically designed to inform students on self-plagiarism. In this qualitative study, students overwhelmingly echoed the perceptions noted in Halupa and Bolliger (2015) exploratory quantitative study which examined student perceptions of self-plagiarism at three different university campuses. Students do not view self-plagiarism as an academic honesty offense; they believe they own their intellectual property. In this study, some participants vehemently discounted that self-plagiarism existed. Others pointed out in real life, scholars constantly build on ideas and the ideas of others and wondered why academia should be different, particularly at the doctoral level where students are required to acquire in-depth knowledge of dissertation topics. So in essence, although this intervention was effective for stressing the rules to students, inherently it did not change their beliefs about self-plagiarism. Rather, it shows them how to prevent self-plagiarism and changes their behavior due to potential consequences.

The two students who were interviewed who did commit self-plagiarism confirmed Dias and Bastos (2014) assertion that students lack an awareness of academic honesty

policies and rules. Even students who had just completed orientation, including the academic honesty policy outlining self-plagiarism as an academic honesty offense at the university, noted they were still not aware of self-plagiarism before they participated in this study. Students are also unaware of the ORI definition of self-plagiarism and this definition has not taken root in mainstream. This framework of this pilot study was based on Karposi's and Dell's (2012) plagiarism as development discourse as well as Sudmale's (2014) cognitive pedagogical approach to plagiarism. In addition, its use at the beginning of a program reinforces Keung-Ho's (2014) recommendation that plagiarism be dissolved rather than resolved. The intention of this intervention was to highlight the fact students appear to have difficulty with the concept of self-plagiarism and that a short intervention can alleviate this confusion. Universities should educate students up-front before violations occur and provide remedial instruction for students who violate university self-plagiarism policy. To truly determine the effectiveness of an intervention, student feedback is crucial. In addition, this intervention reflected the view of Hall (2005) who noted if preventive practices (such as including self-plagiarism in university policy) fail, educational interventions can be effective, instead of just punitive action.

This qualitative study supported the findings of Elander et al. (2010); Raihanah et al. (2011), DeGeeter et al. (2014), Marshall et al. (2011), Newton et al. (2014); Divan et al. (2015) and Kashian et al. (2015) even though this qualitative research specifically examined self-plagiarism only. These authors all found educational intervention, both at the beginning of a program of study and upon committing an academic honesty offense, can be an effective tool against plagiarism. This study supports it can be effective for self-plagiarism as well. Students noted that a more in-depth view of self-plagiarism made them understand why the university had such a policy in place, even if they disagreed with the concept. The video tutorial used for the self-plagiarism intervention was found to be effective by students consistent with the findings of Belter and du Pré (2009); Dee and Jacob (2010) and Henslee et al. (2015).

A four-pronged approach is recommended for using a self-plagiarism tool. The first is to have students evaluate and provide feedback on any self-plagiarism intervention to ensure students find it effective and issues critical to student understanding are included. The second step is to add a student-validated intervention to student orientation at all academic levels. This will bring attention to self-plagiarism beyond academic honesty policies or a brief mention when addressing plagiarism as a whole. The second use of this tool can be as an educational intervention to develop and remediate students who have committed self-plagiarism. The third use of this tool is to educate faculty, particularly new faculty, because there still is significant faculty confusion about self-plagiarism as well. If faculty are educated about self-plagiarism, they can proactively decide how to handle it in their classrooms in accordance with university policy. This is particularly important because most students also think they should not have to ask permission to use previously submitted work (Fig. 1).

Limitations of the Study

This sample for this pilot study was a small group of doctoral students in a health sciences program who volunteered to participate in this research project. The responses of this group cannot be specifically generalized to other populations because of both the sample size and the group composition. Although the sample approximated the gender breakdown of students in

this program, different perceptions may be found in different samples in different programs. In order to schedule interviews, the researcher who conducted the interviews did know the names of the students being interviewed; this could have resulted in the Hawthorne effect even though student responses seemed earnest and honest. In addition, because this was a pilot study no other demographic data other than gender was collected to maintain confidentiality. In future studies, additional demographic data should be collected to better describe the research sample.

Recommendations for Further Research

Since self-plagiarism is not clearly understood, yet is a topic both students and faculty feel passionate about, this field is ripe for additional study. More qualitative and quantitative data is needed in various populations and programs of study to provide a broad body of research in self-plagiarism.

Conclusion

Students have definitive opinions about self-plagiarism and many students are unaware it is an academic honesty violation at many universities. They key to addressing plagiarism and self-plagiarism is prevention, instruction, and remediation. Because of the confusing nature of self-plagiarism, a brief mention of it in concert with overall plagiarism may not be enough for students to truly understand this issue because it conflicts with the deeply held beliefs that students own their own work and can use it in any way they wish. Students believe their assignments are their intellectual property and they own their own unpublished works. A brief video recording that defines self-plagiarism and why it is considered an academic honesty violation can be an effective tool for universities to reinforce policy, prevent self-plagiarism, and provide a brief effective educational intervention for students who commit self-plagiarism.
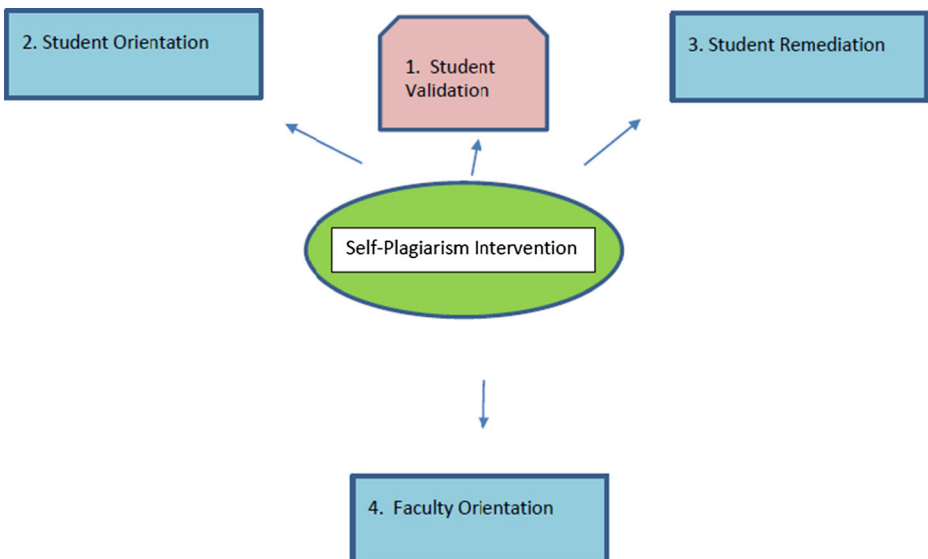

Fig. 1 Four-Pronged Approach to Self-Plagiarism Prevention

APPENDIX

Self-Plagiarism Intervention Effectiveness Survey

Please answer the following questions using this scale:

1. Strongly agree, 2) Agree, 3) Neutral, 4) Disagree, 5) Strongly Disagree
    ****
    ****

Perceptions of Self-Plagiarism Intervention

1. The self-plagiarism intervention increased my understanding of why faculty and universities consider this an academic integrity offense.
2. The self-plagiarism intervention has changed my perception of self-plagiarism.
3. The self-plagiarism intervention is an effective tool to educate students who have committed self-plagiarism.
4. I think an intervention for "cut and paste" or improper citation plagiarism would be more effective than a self-plagiarism intervention in reducing self-plagiarism in students. (reverse code)
5. I think self-plagiarism should be incorporated into the regular misuse of sources intervention rather than being treated as a separate issue. (reverse code)
6. The self-plagiarism intervention will assist me in not committing this violation again in the future.
7. Do you think students in the health sciences are fundamentally more ethical than students in other academic disciplines?
    Yes/No

Open-Ended Questions

8. If you thought self-plagiarism was not a breach of academic integrity initially, has your opinion changed after viewing the self-plagiarism intervention? if so, why? If not, why?
    If you believed self-plagiarism was a breach of academic integrity initially, please skip question #1 and answer question 2 below.
9. If you previously believed self-plagiarism was a breach of academic integrity before you completed the intervention has the self-plagiarism intervention increased your understanding of the issue? Why or why not?
10. How do you think a university ought to handle cases of self-plagiarism? Should there be any consequences for students who self-plagiarize? Should those consequences be any different from cases of "cut and paste" plagiarism?
11. How do you think the self-plagiarism intervention could be improved?

Interview Questions

1. Is there such a thing as self-plagiarism? what is your definition of self-plagiarism or how would you describe it? (Bird 2002; Jones et al. 2005; Lang, 2010; Bennett et al. 2011; Halupa and Bolliger 2013; Halupa and Bolliger 2015)

    Probe

    a. Do you believe self-plagiarism is a clearly defined concept? Why or why not? (Maxwell et al. 2008; Halupa 2014; Halupa and Bolliger 2015).
2. Do you believe it acceptable to reuse part of a paper you wrote previously in a new assignment? why or why not? (Syed-Brown, 2010; Owunwanne et al. 2010; Sweet-Holp and James 2013; ORI, 2013; Halupa 2014; Halupa and Bolliger 2015

    Probes

    a. If you think it is acceptable, how much do you believe you should be able to reuse? What about a few sentences? Why or why not? (Bird 2002; Jones et al. 2005; Syed-Brown 2010)
    b. Do you think it is acceptable to reuse an entire paper verbatim? Why or why not?
3. What is your opinion about student ownership of papers they have written which have not been copyrighted or published? Jones et al. 2005; (Lang 2010; ORI 2013; Halupa and Bolliger 2013; Halupa 2014; Halupa and Bolliger 2015)

    Probe

a. Who owns student assignments? How do you believe they can and/or should be used?(Lang 2010; Syed-Brown 2010)

4. why do you think you need to obtain anyone's permission if you plan to use part of previous writings? if so, who? (Halupa and Bolliger 2013; Halupa 2014; Halupa and Bolliger 2015)

    Probe

    a. Do you view this as ethical or non-ethical? Why?
5. When and how do you feel you should be educated about academic honesty including self-plagiarism? (Novotney 2011; Dinagsao et al. 2014)

    Probes

a) At the start of a program, should you have to sign a document indicating you are aware, a formal course, review of a policy, etc.? (Novotney 2011; Dinagsao et al. 2014)
b) Have you ever self-plagiarized? When and why?

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