

Methods to Help Students Create Original Work

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Abstract

This chapter defines what original work means to a student from a faculty perspective. Faculty must be diligent in exemplifying original work and promoting the value of original work. We address both proactive and reactive strategies to plagiarism, including methods to educate students and design assignments. Recommendations on mechanisms to identify plagiarism, gather evidence and possible penalties are also included. Finally, we outline several methods that faculty teaching large, high-demand courses could use to promote students' critical thinking and original work.

Introduction

Many students find it difficult to create original work (Kazerounian & Foley, 2007). With the advent of the Internet and easy access to electronic sources, plagiarism has become a vast problem at many universities and colleges (Selwyn 2008). Plagiarism can be exacerbated when assignments only require students to demonstrate content knowledge and not conceptual understanding (McKillup & McKillup, 2007). Here, we outline several methods that faculty teaching large, high-demand courses could use to promote students' critical thinking, creativity, and original work.

Defining Original Work

As students move from secondary education to college, we as faculty must carefully consider this transition. Depending on their background, students often have had few opportunities to engage in generating original work as our traditional educational system often focuses on memorization. Current technologies may further push students away from creativity and promote the idea that with the click of a button they can find out any information. This process happens so fast and easily that students expect that producing a term paper should also happen in an instant. Cutting and pasting ideas into a paper without synthesis of the material serves only to earn a grade. Original work examples will vary depending on the discipline, but research papers or portfolios are some examples of a project a student can generate. No matter what the medium, original work must be clearly defined in the context of the course and subject matter. Why is original work important for learning, and how can we promote this?

Helping Students Understand the Value of Original Work

The value of original work extends beyond the classroom and the student's academic career. This skill is essential for success in life and work. Developing respect for others' work and intellectual property is imperative for successful transition out of the academic world. As instructors, we must help students understand this importance by requiring original work generated and by placing value on this type of work.

Using Original Work to Facilitate Learning

First, we have a responsibility to model behaviors that are important in generating original work. This might involve demonstrating quality writing, citation methodology, and referencing of material and providing access to examples of original work. Clear expectations and instructions must be provided for the students from the first day forward. We also must be cognizant of the issues surrounding why students may be challenged to produce original work. Lack of experience, time constraints, ease of information availability, and many other factors all lead to students submitting work that may not be original. By setting boundaries and deadlines and by being creative in the development of the assignment, some of the major issues that favor plagiarism and misconduct can be minimized.

Original Work Resources for Instructors and Students

1. <http://artsedge.kennedy-center.org/educators/how-to/tipsheets/student-critique.aspx>
2. <http://www.teachingcopyright.org>
3. http://turnitin.com/en_us/features/originalitycheck
4. <http://teaching.uncc.edu/learning-resources/articles-books/best-practice/critical-thinking>
5. <http://isites.harvard.edu/icb/icb.do?keyword=k70847&pageid=icb.page342048>

Original Work and Plagiarism

Anytime students are tasked with creating original work, there is the chance that some of them will plagiarize portions of their final product (or perhaps even the entire product!). As such, we should think about how they will approach and deal with plagiarism in their classes. We can adopt two approaches to dealing with plagiarism in their classes. The first is a proactive approach that utilizes a number of steps designed to prevent plagiarism from happening. These strategies mainly fall under the umbrellas of educating students about plagiarism and designing assignments to discourage plagiarism. The second approach is reactive and involves policing students work for instances of plagiarism. While this approach is less desirable than being proactive, it is sometimes necessary. An effective strategy for dealing with plagiarism will probably use a combination of both approaches.

Educating Students about Plagiarism

One of the most important things we can do to prevent plagiarism is to initiate an open dialog about plagiarism with our students. All too often, we assume that students have already learned about plagiarism. However, this may not always be the case. In addition, while some students may have discussed plagiarism in previous courses, they may have forgotten the details. Also, students' experiences with different classes or instructors may send mixed messages about plagiarism. Consequently, it is worth spending some time, either in or outside of class, talking about plagiarism to ensure that everyone is on the same page. Finally, even if students have been taught about plagiarism, constantly and consistently learning about it throughout their college career reinforces a climate where plagiarism is clearly not tolerated.

An important starting point is to discuss what constitutes plagiarism. Students often have no problem recognizing that cutting and pasting large portions of work from other sources or purchasing papers from a paper mill constitute plagiarism. However, their understanding of other issues (e.g. how to paraphrase, when to use quotes, how much material they can use from other sources, what constitutes common knowledge, whether they can recycle portions of work from other classes) may not be as clear. Indeed Power (2009:650) notes that while most students are able to define plagiarism, “they have only a superficial understanding of what that means and a therefore a (sic) difficult time applying that definition in real situations.” If students are going to avoid plagiarism, the first step is that they are able to recognize its myriad of forms.

We should also discuss why plagiarism is so problematic in higher education. This is especially important given that millennials may not share faculty views about the importance of authorship. Students raised in the digital age, where information is a click away and authorship is not always obvious, have different views about the creation of knowledge (Calvert Evering and Moorman 2012). Assuming they view plagiarism as problematic, students may view it as a victimless crime (Power 2009). We can help students understand that knowledge, ideas, and information are the coin of the realm in academia. As such, it is paramount to give people credit for their intellectual work. Students need to understand that plagiarizing is like theft, even when done unintentionally.

We should also make sure they are clear about what the penalties are for engaging in plagiarism. This is especially important given that there may be wide variations from class to class. We should have clear and consistent policies and these should be spelled out in the

syllabus. We may also want to refer or link to these policies in assignments where students might plagiarize. This helps send a clear message that plagiarism is unacceptable and will not be tolerated. When students understand the price they pay if they are caught plagiarizing, they are less likely to engage in it.

Some of us may find that they simply do not have time in class to devote to discussions of plagiarism. Fortunately, there are a number of resources online that we can use to develop students' understanding of what constitutes plagiarism. These resources can be assigned to students to review outside of class. If we do pursue this route, it is good ideas to have students complete an exercise that is linked to the online tutorial. Many widely used plagiarism tutorials have quizzes embedded in them.

Having students complete plagiarism quizzes can be a useful part of any discussion of plagiarism, even ones that happen during class time. Quizzes can be used for both formative and summative assessment of students' understanding of plagiarism. The quizzes can be used as a teaching tool to reinforce information. Requiring students to know the correct answers (e.g. they have to keep answering until they get it right; you go over answers in class and have them correct theirs; provide feedback for each question), serves to reinforce information about plagiarism. This practice can also provide us with real time feedback about how well students grasp the concepts and strategies that are being covered. Finally, if we keep the corrected quizzes (where all of the correct answers are recorded), then we can use quizzes in the discussions to portray actual instances of plagiarism. It is difficult for a student to claim that they never knew that X was an instance of plagiarism when the instructor can hold up a quiz,

with correct answers, indicating that the student answered a question correctly that stated that X clearly constitutes plagiarism.

One of the first steps in being proactive about preventing plagiarism is talking about with students. If students understand the myriad forms plagiarism can take (why it is problematic in higher education) and the consequences for doing it, they may be less likely to engage in the practice. Educating students about plagiarism can be accomplished in and out of class using a low stakes assignment that culminates in a quiz. After helping students understand what plagiarism is and why it matters, faculty then need to provide students with strategies to help them avoid engaging in it.

Strategies for Avoiding Plagiarism

We can also take a proactive approach towards plagiarism by being strategic about the design of these assignments. These steps fall largely into two categories. The first centers on instructional design. There are things we can do when designing and discussing assignments that will lessen the temptation to plagiarize and make it more difficult to do so. We should also work with students on strategies that will help them avoid plagiarizing unintentionally.

Perhaps the most heavily plagiarized type of assignment is the large research project (e.g. a 15 page paper) that is discussed mid-semester and then not mentioned again in class until it is due the last week of class. In this model, the project involves a lot of work and the stakes are high. There is also very little class time spent discussing and/or working on the project. This creates a situation where students' poor time management, procrastination, and feelings of inadequacy may contribute to plagiarism. The further we can move away from this model, the less likely students will be able to plagiarize.

One widely cited reason students give when asked why they plagiarize is that they did not have enough time to complete the project. We often scoff at this reason, noting that there was enough time at start of the large assignment, unless the student started it at the last minute when there is not enough time. One way to reduce the chances that students procrastinate (and then see their only way out is plagiarism) is to walk students through the research process step by step. If they have to turn in shorter products along the way (e.g. a paragraph stating their research topic, a bibliography of potential sources, summaries the sources, a revised research question, portions of rough drafts, etc.) then this will reduce the temptation to plagiarize because students will not be working on project at the last minute. This also has the added benefit of actually modeling that research is a process, not simply a product (e.g. final paper), a reality that many students do not understand. Finally, because students have been turning in short drafts and summaries that will eventually become part of their final product (and may have received feedback on some of these) they will have more confidence that they have the skills to complete a large-scale project. An excellent resource that discusses some of the things we can do when designing assignments can be found at http://academics.adelphi.edu/academicintegrity/pdfs/prevent_plagiarism.pdf.

We should equip students with these strategies as they are conducting research. An easy, yet highly effective strategy is to encourage students to take notes during the research process. As students take notes, they should do three things. First, after reading a text, students should close it and then write their notes without referring to it. After they have completed writing their notes, they should then check what they have written against the text to make sure they have re-written the ideas in their own words. If their writing is too close to the

original, they should rewrite it. Second, if a student is using a passage verbatim, their notes should clearly indicate that this is a direct quote. Third, they should include complete citations for all sources. Using well written notes as students are writing up their research will decrease the chances they will unintentionally plagiarize by paraphrasing too closely, forgetting that something is a direct quote, or not being able to cite where information came from.

Finally, we can use TurnItIn.com as a teaching tool to help students detect unintentional plagiarism in their drafts. We can require students to submit drafts of their work to TurnItIn.com (available on Moodle). Students should then view the originality report that TurnItIn.com generates. This can help students detect where citations are missing, see if they rely too heavily on direct quotes, and see if their paraphrasing is too close to the original. For technical advice about how to do this visit the TurnItIn.com webpage at http://turnitin.com/en_us/training/instructor-training#quickstart3.

Detecting Plagiarism

It is an unfortunate reality of higher education that if you teach long enough, even if you follow best practices to avoid plagiarism, you will have instance of students plagiarizing some, if not all of their work. As such, we should be mindful that plagiarism is an ever-present reality in higher education and keep an eye open for it. Some clues that students have plagiarized portions of their work are:

- Writing style and/or quality shifts abruptly.
- The student is using an uncharacteristic writing style and/or vocabulary.
- The content of the assignment is slightly off topic.

- The text changes formatting/font in the middle of a paper (clues it was cut and pasted from the internet).
- Paper contains information that is not common knowledge but lacks a citation (often an example of unintentional plagiarism).

Once you suspect a student has plagiarized, how do you actually prove it without spending an inordinate amount of time?

Before you accuse a student of plagiarism, it is a good idea to have proof that their work is plagiarized. If you cannot immediately identify the source of the material, there are two strategies that may help. One is to simply Google a phrase or sentence to see if it pops up. Students who cut and paste liberally from the internet rarely dig deep. Instead, they cut and paste from the first few pages. The second option is to use TurnItIn.com to identify passages that are not original and detect where they may have come from. The final step in dealing with plagiarism is to impose the consequences outlined in your syllabus.

It is important to acknowledge that there are different degrees of plagiarism done for different reasons (not changing original wording enough but including a citation is very different from copying and pasting entire sections from the internet with the intent of passing it off as your own writing). As such, one punishment does not fit all instances of plagiarism. Because plagiarism can encompass a myriad of practices, some intentional some not, some large scale some small, you should use your judgment about how and when to impose the penalties outlined in your syllabus.

In egregious cases of intentional plagiarism (e.g. papers from paper mills, multiple lengthy passages cut and pasted from the internet), we should consider filing a grievance with

UNC Charlotte's academic integrity board. The procedures for doing this are specific in University policy 407, Code of Student Academic Integrity. This policy requires faculty to follow a formal settlement procedure when they detect instances of intentional plagiarism (<http://legal.uncc.edu/policies/up-407>). The first step in this settlement procedure is to contact the Dean of Students Office to see whether this is the student's first offense. If it is the student's first offense, then you can decide whether to use the settlement form or whether to take the case to the Academic Integrity Board (AIB). If the student already has at least one academic integrity violation on file, you must bring the offense to the AIB. A detailed description of these settlement procedures can be found <http://legal.uncc.edu/sites/legal.uncc.edu/files/media/aicsettlementform.pdf>.

Creating Original Work: Research Methods

Method 1: Using Published Materials as a Catalyst for Original Ideas

Library research can help promote critical understanding of course material, but instructors may not be familiar with how to incorporate library research into their instruction to promote critical thinking and foster original ideas. Here, we outline the basic approach to using library research to enhance learning in the classroom.

Before committing students to a library research assignment, it is important that students have the content knowledge necessary to make the assignment a productive learning exercise. First, clearly define the purpose and utility of the assignment to the students. Second, define the questions that students should address. Also encourage students to pursue their own relevant questions. And third, clearly outline the approach that students should take to answer

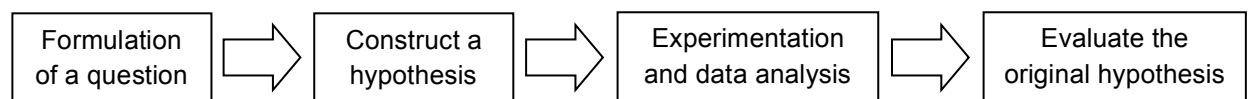
the proposed questions. Utilizing the helpful resources provided by the UNC Charlotte's library, this is the general approach for completing a library research assignment:

1. Define the subject area of the questions to be addressed.
2. Select the subject area from the list of library research guides:
<http://guides.library.uncc.edu/>
3. Follow the area specific research guide to complete the literature review.
4. Follow the citation and style guide: <http://guides.library.uncc.edu/CitationGuides> to avoid plagiarism and correctly cite literary sources,

Keep in mind that students can access books, articles, and numerous databases directly from the library's homepage: <http://library.uncc.edu/>. After using keywords to search, students can access scientific articles by using their UNC Charlotte login. Students also can access subscribed databases and journals from off campus using this approach.

Method 2: Using the Scientific Method to Stimulate Original Thinking

The scientific method is a standardized approach used in many academic disciplines to promote original work. The following flow chart shows the basic steps of the scientific method:



The scientific method starts with a critical observation and/or background research in an area of study, which leads to a specific research question. Next, a testable hypothesis is formulated. Keep in mind that a hypothesis is *not* an “educated guess.” A hypothesis should be based on background research and current information and data. It should never be a guess. Moreover, a

hypothesis should be a concise, explanatory statement about causality (e.g., study time affects exam scores). Usually, explicit predictions are made based on the hypothesis to guide the experimental approach and data analysis (e.g., students who spend more time studying will receive higher exam scores). After the experiments are conducted, collected data are used to evaluate the predictions and original hypothesis.

The scientific method could be used in any classroom to help foster critical thinking and encourage students to create original work. For more on how to use the scientific method in your classroom, please review the following useful web pages:

- Overview of the scientific method, Wiley.com:
http://www.wiley.com/college/test/0471787159/biology_basics/animations/scientificMethod.swf
- Understanding science (How science really works), University of California, Berkeley: <http://undsci.berkeley.edu/>
- Teaching the scientific method, Arizona State University:
<http://askabiologist.asu.edu/teaching-scientific-method>

Method 3: Debate, Discuss, and Present Original Work and Ideas

In this section, we outline three activities that could be used in the classroom to encourage students to share and discuss original work. These activities should be used in conjunction with the methods discussed above. Students are often reluctant to present their work in front of peers, and it could be helpful to allow students to collaborate in small groups. Additionally, group-based activities can significantly decrease the amount of time needed in class to complete student-centered activities. For more information on how to develop group-

based activities in the college classroom, please see the information presented in this excellent website, Center for Teaching Excellence, Cornell University

<http://www.cte.cornell.edu/teaching-ideas/engaging-students/collaborative-learning.html>. We

will now briefly discuss the three activities that can help students to share original work and ideas:

- Student debates.
- Student academic talks.
- Student poster sessions.

Student debates. This allows students to collaborate in conducting background research, learn how to critically use and evaluate information, and promote discussion that can enhance student participation and learning. Though conducting a dynamic debate is difficult, with planning and practice any instructor can lead an engaging debate. Here is useful information on how to prepare and lead a student debate (Northern Illinois University):

http://www.niu.edu/facdev/resources/guide/strategies/classroom_debates.pdf. It is important that students perform the necessary background research prior to the debate. Students should only use scientific facts, data, and graphs to support their position. Students should not appeal to emotion. Encourage audience members to take notes during the debate and ask focused questions at the end of the debate. Student engagement is essential to enhance the learning potential of the activity.

Student Academic Talks. Another activity to encourage the sharing of original work is providing students with an opportunity to give a formal academic talk. Unlike a typical class presentation, an academic talk forces students to learn the methods for conveying information

in the most efficient and effective manner. Students also learn how to create concise, information rich, and uncluttered presentation slides. This very useful publication will help students to prepare and give an academic talk:

<http://pne.people.si.umich.edu/PDF/howtotalk.pdf>.

Student Poster Sessions. Lastly, an excellent activity to allow students to present original work is by organizing a poster session. Allow students to work in small groups to create conference posters using the information they obtained through experimental or library research. On the day of the poster session, have half of the students set up their posters and the remaining half to visit and evaluate the presentations. After the first round, switch the groups. This comprehensive resource will help students to create and give an excellent poster presentation: <http://www.ncsu.edu/project/posters/>.

Conclusion

Helping students to become independent thinkers and to create original work is a difficult task in any class. We instructors of large, high-demand courses too often rely on lecture-based presentation to teach students. Studies have shown that lecture based presentation is not the most effective way to help students learn (Freeman et al., 2014). We should engage students intellectually and encourage students to actively use and synthesize information to create original ideas. In this chapter, we outlined three active learning activities to help students create and present original work: (a) using published materials as a catalyst for original ideas; (b) using the scientific method to stimulate original thinking; and (c) debate, discuss, and present original work and ideas. We provided the most relevant and essential web-based resources to help instructors incorporate the recommended activities into their

classroom. We encourage instructors to modify and tweak the activities to make them more appropriate and applicable for their students.

References

- Evering, L. C., & Moorman, G. (2012). Rethinking Plagiarism in the Digital Age. *Journal Of Adolescent & Adult Literacy*, 56(1), 35-44.
- Freeman, S., Eddy, S. L., McDonough, M., Smith, M. K., Okoroafor, N., Jordt, H., & Wenderoth, M. P. (2014). Active learning increases student performance in science, engineering, and mathematics. *Proceedings of the National Academy of Sciences, USA*, 111, 8410-8415.
- Kazerounian, K., & Foley, S. (2007). Barriers to creativity in engineering education: A study of instructors and students perceptions. *Journal of Mechanical Design*, 129, 761-768.
- McKillup, S., & McKillup, R. (2007). An assessment strategy that pre-empts plagiarism. *Internal Journal for Educational integrity*, 3, 18-26.
- Power, L. (2009). University Students' Perceptions of Plagiarism. *The Journal of Higher Education*, 80(6), 643-662.
- Selwyn, N. (2008). "Not Necessarily a Bad Thing ...": A study of online plagiarism amongst undergraduate students. *Assessment and Evaluation in Higher Education*, 33, 465-479.