Magna 2⦿ Minute Mentor

How Can Course Design Help Prevent Online Cheating?

Presented by:
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Introduction

Instructors and administrators utilize many tactics to help ensure that the work their students perform is conducted under rigorous conditions, and is actually created by or performed by the students themselves. Especially with the rise of online learning, academic integrity has created a business model, with companies like Turnitin and SafeAssign (now part of Blackboard) offering to compare student submissions against large databases of previous student work.

This session first addresses the different concerns—and definitions—of "originality" across the units of the higher-education institution. For example, liberal-arts disciplines such as English and philosophy place a premium on originality of content, where learners incorporate research materials within an argument largely of their own devising. However, in the sciences, such as biology and chemistry, the goal is originality of design, with experimentation being the area where learners demonstrate originality. In disciplines like education and psychology, academic integrity is measured by originality of method, where learners rely on—and sometimes duplicate—previous inquiries in order to build on the body of knowledge in the discipline.

Next, this session provides a framework for identifying various types of academic-integrity strategies, and for matching those strategies to the needs of instructors, departments, and institutions. The "three paths" mentioned in the title of this session have to do with the three levels of academic-integrity approaches, which cascade into each other: Trust, Verification, and Observation.

Finally, this session offers examples of each "path," best practices for each, and practical implementation tips. For instance, at the level of Trust, an example is the academic-integrity statement. The statement is adopted by the institution, and may appear on syllabi, in the directions for assignments, and in the introductory materials for assessments. It is passive—learners are expected to read and abide by the code, but are not required to take any concrete action to acknowledge their acceptance. The best practices for Trust-based policies include publicizing the policy in several ways, asking students to respond to the policy, and "branding" the institution as one that fosters open and trusting dialog with its learners. To implement a Trust-based policy effectively, ensure that instructors, students, and administrators create the wording of the statement together, and that the statement features prominently in student-facing communications, such as the course schedule, institution web site, and learning management system.

Participants in this session should expect to learn to be able to differentiate among the three levels of academic-integrity approaches, create an implementation plan for

academic-integrity techniques, and select academic-integrity tools and techniques based on course, program, and institutional needs.

What is Originality?

In most institutions' academic-integrity policies, there are clear statements about what constitutes a violation of the policy. Copying directly from a source without attribution, getting someone else to take an exam or write a paper, or sharing answers to tests (McCabe et al, 2012)—all of these are definite violations.

We get into murkier water when we try to create a clear definition of what we mean when we say "the student's own original work," especially at institutions where the things we ask students to create in order to demonstrate skills are so varied. Blanket originality-reporting tools like TurnItIn are useful for only a part of the institution, because what we call "original work" varies from discipline to discipline.

Originality of Content

In the liberal arts, originality is usually defined most closely to match the model adopted by those of us who create strategies for combatting academic dishonesty: originality of content. Learners are expected to create arguments, essays, reports, and presentations that rely on research of what others have said or done. The learner's structure, logic, and ideas, however, are expected to be his or her own, and not simply a re-telling, re-ordering, or review of source materials. Originality-report tools are very good at catching learners who rely too heavily on source material, since the tools compare not just the exact words of submissions, but compare submissions against the logical structure of source materials.

Originality of Design

In the sciences, originality focuses more on the design of an experiment. Learners create experiments in order to test hypotheses or confirm results obtained by others. They work with existing data or interpret data that they have collected. The original part of the work is in analyzing outcomes and predicting next steps. Originality-report tools often over-report academic-integrity issues in design-based disciplines, since well-known experiments are often repeated, and learners are expected to work with content that is very similar to existing content.

Originality of Method

In the social sciences, methodological originality is most common: learners create new ways to test hypotheses. Rather than re-run existing experiments, learners experiment in new and original ways; they rely on, but seldom duplicate, previous inquiries in order to expand the existing body of knowledge in the field. They create logical ties to previous research, and point to potential future directions for the field. Originality-report tools often over-report academic-integrity issues in method-based disciplines, as well,

since most content created by learners in method-based areas contains a literature review or other foundational set of lengthy citations.

Three Paths

Because originality-report tools are the most widely used academic-integrity methods in higher education, and because they serve non-humanities disciplines less effectively (Lancaster & Culwin, 2007), it is useful to think about the various ways that professors can approach academic-integrity issues in the various disciplines (cf. McNabb & Anderson, 2009). There are three main ways that we ask students to demonstrate academic integrity—trust, verification, and observation—and each of these three paths is best suited to specific kinds of learner activities.

Trust

The least intrusive method of ensuring academic integrity is trust. The professor trusts that the student will act honestly in creating content or taking assessments. There are three levels of trust, on a continuum from least to most interactive:

Honor codes are statements of expected behavior, and are typically housed in a non-course-specific location, such as the institution's general web site (cf. Georgia Tech University, 2013). Honor codes, by themselves, are passive: learners need only read them, and professors do not have a way to tell who has and has not read (or, more importantly, agreed to) the honor code.

More interactive are sanction statements (cf. DeVry University, 2009), which outline not only the behaviors expected of learners, but the penalties for transgression. Sanction statements are most often placed at the point of need, such as in the directions for a test, where learners are most likely to be tempted toward dishonesty.

The most interactive trust method is a signed honor code (cf. Meyer, 2010). Whether the learner signs the code on paper or e-signs, the act of signing one's name in order to agree to the tenets of the honor code provides psychological weight to the honor code's provisions, and having a signature helps faculty members to hold to a stricter zero-tolerance stance when dishonesty is detected.

The best practices for trust-based methods include

- placing the honor/sanction statement in both a generally-accessible location and at the "point of temptation" within the learning environment;
- crafting honor/sanction statements that are clear, easy to understand, and brief; and
- matching the level of trust to the relative importance of the assignment (e.g., ask for signatures only for mid-term and final exams).

In order best to implement trust methods, publicize them to learners early and often (cf. Sutherland-Smith, 2010). Remind learners that they are held to the standards outlined in the honor/sanction statements, and provide the statements to learners via multiple channels, such as in-course announcements, e-mail messages, and in the directions for assignments and assessments.

Verification

More intrusive than trust is verification. Verifications methods actively check learners' work against some measurable criterion, such as a collection of existing work, an identity database, or the amount of time spent on a given task. The professor uses verification tools in order to get a sense of which learners are statistical outliers, and then uses the outputs from the tools in order to make decisions about how to respond to those learners. Verification methods are among the most common ways to ensure academic integrity today. Here are five, in descending order from most to least commonly used.

The big subscription databases, such as TurnItIn and SafeAssign (cf TurnItIn, 2013 and SafeAssign, 2013), compare learner submissions against large databases of previously submitted content, Internet sources, and library-database sources. These tools produce "originality" reports, whose score indicates the amount of content in the submission that matches or is similar to existing content. Professors use the reports to verify the degree to which learners are creating original content (which is problematic outside of the humanities, as discussed above).

Often called the "poor man's TurnItIn" is the practice of "Google fishing," in which a professor copies a suspect passage from a learners's work and pastes it in to a search engine to check for an exact match. This method relies on the professor's ability to detect shifts in tone or linguistic ability in order to spot material copied from sources dissimilar to the writing style and complexity of the learner.

The most intrusive verification method, restriction, prevents learners from using outside resources when taking an assessment. In face-to-face classes, restriction is accomplished by asking learners to remove potential aids from the assessment area. For online assessments, tools such as the LockDown browser from Respondus (cf. Respondus, 2013) prevent learners from opening other programs, creating new Internet windows, or copying text from the screen. Professors also restrict online assessments by setting date/time parameters, passwords, and even IP-address restrictions.

Less common verification methods are statistical verification (measuring time on task or activity duration) and identity validation (granting access via fingerprint scanner [cf. Digital Persona, 2012] or only after answering identify-confirmation challenge questions).

For all verification methods, the best practice is to tell learners ahead of time that the methods will be employed. For some methods, such as fingerprint scanning, this is a

must, but for others, such as the large database services, it is possible to use verification methods surreptitiously. Doing so undermines learner confidence and trust. In fact, many of the most common verification methods allow learners to take part in the verification. For example, students can submit their work to TurnItIn themselves, and see their originality reports ahead of the professor, allowing them to review and revise.

To implement verification methods, follow the setup process outlined by the tool vendor; in the case of search-engine verification and statistical verification, include a statement in the syllabus or another frequently-visited document about how and when the professor will use the verification method. Also, be consistent in using the verification method; avoid being a "hammer" early and then not checking learner submissions afterward.

Observation

The most intrusive academic-integrity method is observation. Being able to see the learner as her or she completes the assignment or assessment is the best guarantee of academic integrity, going back to the days of proctored face-to-face tests. If the professor can see the learners, this minimizes the chance for academic dishonesty. In this category fall such things as face-to-face assessments, proctored tests (both in one place, and "distributed proctoring" at libraries and cooperating educational institutions), and online monitoring. Online monitoring is an emerging area of observation; companies now offer video-camera monitoring services for online assessments (Kryterion Online Services, 2013), as well as keystroke recording. Because of the synchronous nature of observation, long-term assignments are not typically suited to this method.

The best practices for observation are to be the least intrusive and the most flexible, especially for assessments where the learner is not located in the same place as the observer. Flexibility of scheduling allows learners to set up observations where and when they are best able to take assessments under the specified conditions; many schools, public libraries, and universities will proctor individual assessments as a courtesy. Observation methods often cause anxiety among assessment-takers, so methods that are the least obtrusive are deemed the most effective. For example, video-camera observations work best when the learner does not know when the camera is on or off, and when there is no indicator or video link showing the observer during the assessment.

To implement observation methods, prior notification is key, and, depending on stage guidelines, permission to observe learners remotely may be required. The range of implementation possibilities includes requiring learners to come to one location, to obtain trustworthy proctoring services, or to use e-monitoring tools.

Conclusion

In addition to the trust, verification, and observation methods outlined above, institutions can undertake several specific actions in order to foster academic integrity across campus. First, create campus-wide definitions and decision processes, including an academic-integrity policy and consistent definitions and penalties for infractions. Such documents should contain input from all campus stakeholders (e.g., faculty, students, and support areas). Set up regular communication among faculty who teach the same students, and consider creating an academic-integrity reporting/review board for handling cases in a formal way.

There are also several course-level best practices. First, know your students, either via personal contact or "introduce yourself" ice-breaker exercises. Next, model correct and incorrect processes as part of the course. The professor should provide examples of well and poorly done content. Adopt Universal Design for Learning (UDL), which allows for multiple means of representing content and multiple methods for students to demonstrate skills. Use the assessment randomization, pooling, and rotation tools in the learning management system. Well-pooled and –randomized assessments ensure that no two students receive the same assessment questions in the same order. Finally, build a library of good examples from former students—ask for their permission to use their work as examples for future learners, and share the good and bad examples.

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I Know It When I See It!

Clear Examples of Academic Dishonesty

- Pay for a paper ([Essays R Easy](), [Write Work](), [Writing to Serve]()).
- Find a free paper ([Term Paper Warehouse](), [123 Help Me](), [Study Mode]()).
- Get answers to a test from a friend.
- Pay someone else to take your test ([Boost My Grades]()).
- Have your book and notes open during a closed-resource test.

Borderline Examples

- Collaborate on a non-group assignment.
- Use the topics and structure from a source.
- Create a "[paste up]()" amalgam.
- Cite sources, but create little original content.

Do They Know it's Cheating?

- Mashups: Rick Astley vs. Nirvana, "[Never Gonna Give Up Your Teen Spirit]()"
- "[No Copyright Infringement Intended...]()"
- "[It's not cheating if]()..."
- [How do you stop online students cheating]()?

Originality

Content Originality

- Learners incorporate research materials.
- Create arguments largely of your own devising
- Logical structure and linkages

Design Originality

- Experimentation focus
- Work with existing data or interpret created data
- Logical analysis and outcomes

Method Originality

- Rely on and duplicate previous inquiries
- Build the body of knowledge in the discipline
- Logical ties to past research and future directions

Academic Integrity General Responses

Trust

- [Honor code]() (read only)
- [Sanction statements]() *in situ*
- [Honor code]() (e-signed)

Verification

- The big databases ([TurnItIn](), [SafeAssign]())
- Google fishing (cut and paste)
- Statistical verification (time on task, duration)
- Restriction ([LockDown browser](), date/time limits)
- Identity validation ([fingerprint](), security questions)

Observation

- Face-to-face assessment
- Proctored assessment
- Monitoring ([video camera](), keystroke recording)

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