wharton dean's undergraduate advisory board

The Wharton School of the University of Pennsylvania
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Online Learning: Best Practices

Mission

Our mission is to combine resources and research into a best practices document which professors can draw on to ensure a world class learning environment even in a digital state.

Introduction

Amidst an unprecedented global situation, all University of Pennsylvania courses are moving to online instruction for the remainder of the Spring 2020 semester. The learning experience online has substantial differences from that of traditional instruction. For online courses, students place greater emphasis on assignments and organization when evaluating satisfaction, compared to instructor relationships and enthusiasm for traditional classes. [1] To help promote a world class learning environment, even in a digital state, the following white paper combines resources and research to outline best practices for professors to take into consideration when transitioning courses to be entirely digital. This white paper is divided into two sections: the first listing research-based teaching best practices and the second highlighting student concerns.

Section I: Teaching Best Practices

A. Content Retention

Restructuring the way that lessons are delivered online can improve content retention.

- ***Shorter Lessons***
  - In order to maintain student focus and effectively convey all course content online, we recommend that, rather than running full lectures, instructors break their lessons into smaller, seven to ten minute concept-based intervals. [2] This can be done by identifying natural breaks in lecture material, then simply organizing the lecture into smaller "chunks."
- ***Active Learning***
  - To ensure that online instruction reinforces course concepts, we recommend that professors create guided or embedded questions in their lessons. Examples of active learning techniques include worksheets to be completed alongside an online lesson, pauses during video instruction to ask students to answer a question, and low-stakes/non-graded quizzes to allow for students to reflect on how well they retained information. [3]
- ***Visual Stimulation***
  - Because online learning relies much more heavily on visual communication, we recommend that instructors incorporate visuals, images, and animations into their online lessons. While there is great value in allowing students to

see their instructor through video, changing visuals that explain the concepts being discussed help maintain student focus throughout a lecture. [2]

B. Discussions

Discussions have been found to increase student participation and build a greater sense of community. Live discussions in the classroom enrich student learning by encouraging engagement with the material through conversations with peers. Discussions held through asynchronous mediums can allow students the opportunity to be more thoughtful, reflective, and consistent in preparation, which contributes to stronger understanding of course concepts and lecture material. [4]

- ***Live Discussions***

Imposing a structure on live discussions allows for a more fruitful learning opportunity. In the virtual learning setting, several tools can be used to guide discussions with the goal of increasing student engagement and maximizing learning. [5]

- Live Discussion Structures: [6]
  - Allot time for structured small group breakout sessions within whole class meetings.
  - Require students to use nametents to facilitate collaboration and communication amongst peers.
  - Create a virtual queue to structure the order of comments and allow all students an equal opportunity to participate in discussion.

- ***Asynchronous Discussions***

For asynchronous discussions, we recommend using platforms such as Piazza to facilitate regular student engagement in the course, as Piazza allows students to ask questions and receive feedback in a timely manner. Online discussion forums give students more opportunities to interact with one another and the course content, building community virtually.

Virtual discussions can take on many forms such as traditional discussions, debates, role-playing, and peer-learning / teaching. [5] These can also be done through video or text uploads on a course site.

- Asynchronous Discussion Forum Best Practices: [7]
  - Ask open-ended questions that allow learners to explore and apply class concepts.
  - Model Socratic-type probing and follow-up questions: "Why do you think that?" "What is your reasoning?" "Is there an alternative strategy?"
  - Ask clarifying questions that encourage students to think about what they know and don't know.
  - Stagger due dates of responses, ask students to write a midpoint summary, and encourage discourse amongst students.

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- Provide guidelines and instructions when asking a student to respond to another student. For example, (1) "Say what you liked or agreed with or what resonated with you," and (2) "Conclude with a follow-up question such as what you are wondering about or curious about."
- Provide multiple response options to allow students to personalize their learning experience to align with their interests.
- Avoid questions with an obvious yes-or-no response. Specific fact-based questions usually are more effective in automated quizzes or student blogs rather than public discussion forums.

C. Feedback

Collecting and responding to feedback from students can assist professors in virtual classroom management. Professors can easily implement multiple feedback mechanisms through ongoing feedback online surveys (ex: Google Forms, Qualtrics) linked to the Canvas homepage.

- ***Course Content Feedback*** [7]

We recommend that professors collect feedback regarding the course content as early as possible. To help ensure clarity in communication of coursework, professors should consider:

- Making assignment instructions as concise and clear as possible
- Distributing rubrics which outline expectations
- Communicating deadlines multiple times
- Distributing discussion summaries
- Providing previews of upcoming assignments
- Reminding students of available office hours

The open-ended questions listed below can help professors gather feedback:

- What's working so far?
- How could your learning experience be improved?
- What do you want or need help with?

It may be effective to remind students of these feedback forms regularly, such as after each lecture or at the end of each week. Such rolling feedback mechanisms can function as virtual suggestion boxes.

- ***Technological Feedback***
  - Students can also benefit from professors collecting feedback regarding technological problems. This feedback provides an avenue for professors and teaching assistants to understand the roadblocks and challenges students are facing. Professors and teaching assistants can also reactively modify technological components of a course or ideate solutions in response to feedback (ex: switching from Blue Jeans to Zoom). Creating a separate forum for students to ask questions and receive answers to their technological problems, possibly via Piazza, can further promote class engagement. It also may be helpful to publish a Frequently Asked Questions page on Canvas dedicated to solving common technological problems faced by students.

D. Building Class Community

Wharton prides itself in collaborative learning and classroom communities. With online learning, instructors can take steps to maintain a collaborative environment. Our research has found that for online courses, student satisfaction and the amount students learn are tied to the amount of peer interaction. [8]

- ***Office Hours***
  - In digital spaces, students benefit when professors are as accessible as possible. Offering additional office hours or office hours by appointment can help reach a wider audience of students in different time zones. Additional accessibility and timely responsiveness from professors leads to higher student course satisfaction ratings. [7]
- ***Study Groups***
  - While many students may have formed study groups on campus, many may not have access to those support networks working remotely. To ensure that all students are able to collaborate, we encourage instructors to help students form study groups of four to six students. This can be done by splitting the entire class into groups, or creating online forms for students who want to opt into the support network. These groups will be helpful for identifying resources or clarifying key points of course concepts and class assignments. [7]
- ***Facilitated Small Group Discussions***
  - In order to maintain student-professor relationships, it may be effective for instructors to host small group discussions so that students have the opportunity to clarify concepts and talk through misunderstandings.
- ***Resource Accessibility***
  - Many courses use required materials that students must obtain to complete assignments. We recommend that instructors ensure that all students have access to these resources and provide contingency plans for students who may need help obtaining them at this time.

E. Assessments

In an online learning environment, how students will be assessed and how students ought to be assessed are top of mind for students and professors alike. Reaffirming the university's commitment to creating a learning environment that places an unwavering emphasis on academic integrity will alleviate undue student stress. This commitment should also explain the role all students play in ensuring a fair learning environment for all. This section outlines best practices for upholding academic integrity in virtual assessments (exams and projects) and details responses of peer institutions regarding assessment in an online-learning setting.

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- ***Testing***

To show a good faith effort to students, professors can take a number of steps to promote online academic integrity.

- Exam Integrity Best Practices:
  - Impose strict time limits
  - Utilize well populated test banks to enable randomized, yet equitable, exams
  - Use lockdown browser software
  - Conduct video proctoring
  - Outline clear expectations for what material students will be tested on and in what format they will be tested
- Exam Accessibility
  - Best practices for establishing deadlines for an online learning setting include creating a flexible deadline that accommodates technical difficulties, time zones, and other factors that may affect students' ability to learn. For timed assessments administered in an online setting, creating a time range during which students can complete the exam in a set amount of time alleviates concerns the university's diverse student body may face. For example, an exam may be available for 12 hours through Canvas however once a student begins the exam, they have only 80 minutes to complete it.

- ***Team-Based Learning***

Team-based learning increases student accountability and can discourage cheating. Projects can be used as an alternative form of evaluation, allowing students to demonstrate and apply their knowledge. Group projects can increase student accountability, especially when students are responsible for reporting on or maintaining the integrity of the project as a whole.

- Practices to increase accountability in group projects:
  - Utilize peer evaluation, as it encourages students to take responsibility for their preparation and contributions. [9]
  - Consider two-person papers, which can be effective when students are randomly assigned partners and responsible for verifying the work is original. This method encourages students to check each other's work and avoid plagiarism. [10] While we believe this method and the use of random pairings could decrease student satisfaction, it increases accountability.

For long term assessments, including but not limited to projects, presentations, and papers, best practices include maintaining open communication with the class in regards to the deadline to motivate and remind students, despite the irregular classroom setting. [11]

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- ***Peer-Institution Benchmarking***

While not a comment on best practices, the following peer benchmarking seeks to provide professors with a clear picture of how select peer institutions are handling assessments in an online learning environment. With the Covid-19 situation still in flux and many more peer institutions grappling with the move to online learning, more policies are likely to be announced shortly. The three listed below are simply the most formalized grading policies at this time.

- Northwestern University*:*
  - Northwestern is asking all instructors to make undergraduate final examinations and assessments optional. This means that if you take the final examination (or submit final assessments/papers) you will receive grades according to the principles set out on the course syllabus; if you opt not to (or cannot) take the offered final nor submit the final paper or assessment, you will be assigned a grade based on the coursework you have completed to date.
- Massachusetts Institute of Technology:
  - MIT is deploying a PE, NE, IE mandatory grading structure. Where a PE reflects performance at any of the levels A, B, or C, NE indicates a performance at the level of D or F, for which no record will appear on the external transcript, and IE indicates that a portion of the subject requirements has not been fulfilled, due to a major disruption of the Institute's academic activities. A letter grade may be assigned if the work is subsequently completed.
- Carnegie Mellon University:
  - Carnegie Mellon is permitting all undergraduate and graduate students to convert any of their courses to pass/no-pass grading for this semester. All courses for which students receive passing (P) grades will count toward degree requirements, which overrides some departmental or college policies. At the end of the semester, all faculty will submit their course grades (A-R) to the registrar's office. Students will have 7 days after the date on which final grades are posted to choose to move courses to pass/no-pass grading if they elect to do so. In recognition that each course's learning experience will be different, there is no limit on the number of courses you can convert to pass/no-pass grading. Students can make the decision on a course-by-course basis. At the undergraduate level, all grades of D or better in a course for which they elect the pass/no-pass grade will convert to P.

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Section II: Student Concerns

In this section we list some common student concerns that currently exist among Wharton undergraduate students. As instructors formulate their online courses, it may be helpful for them to take into consideration these concerns in order to maintain student satisfaction.

- ***Common Student Concerns:***
  - Students who have relocated to various time zones are concerned about attending classes held in EST.
  - Students are concerned about the logistics of participating in live online discussions and the resulting impact on participation grades.
  - Students are unsure about how to coordinate and deliver group presentations in an online forum.
  - Students do not know how academic integrity will be ensured with exams.
  - Students are worried that curved classes will incentivize cheating and penalize students who follow exam guidelines.
  - Students are concerned about a lack of office hours / access to academic support.
  - Students are worried about their ability to focus and learn effectively in an online format.
  - Students do not all have access to required course materials due to being away from campus.

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