

Online and Blended Learning Best Practices – Abbreviated Version¹

Mission

To synthesize online and blended learning teaching best practices to improve the continued use of technology in the classroom.

Executive Summary

This past spring, the University rapidly adapted to online learning amidst a global crisis. While the scale and speed of this transition were unprecedented, students and professors alike navigated new uses of technology in the classroom.

In order to build upon lessons learned from this past semester and offer suggestions for continuing to enhance the quality of a Wharton education in the future, the Wharton Dean's Undergraduate Advisory Board (WAB) consolidated research on online and blended learning. Blended learning is defined as a combination of face-to-face instruction with distance education delivery systems. WAB also gathered student feedback on the online learning experience this past semester. This paper aims to provide resources and research to support the implementation of effective elements of blended and remote learning.

This paper contains the following sections, which can be read independently or holistically:

- A. [Class Structure](#)
- B. [Classroom Community and Communication](#)
- C. [Assessments](#)
- D. [Technology](#)
- E. [School-Wide Policies](#)

Key Recommendations

The following recommendations summarize best practices for online and blended learning, categorized by theme. While nearly all recommendations apply to both online learning and blended learning, recommendations that mainly apply to blended learning are marked with an asterisk (*). It is critical that a course is designed with its online or blended components in mind. Below are best practices to consider in the design and implementation process. For more information on both learning structures and their implementation, refer to their respective sections of the longer paper.

¹ This paper consolidates best practices found through extensive research, benchmarking, and analysis of survey data. For further information on these topics and the paper's sources, refer to the complete white paper. The extended version begins with summarized recommendations. Next, the paper includes an online learning section complete with peer benchmarking, best practices and recommendations, and a world bank report on online learning in the context of COVID-19. A blended learning section details blended learning best practices, active learning best practices, and university guides to blended learning by peer institutions. The paper concludes with an analysis of a WAB survey with N=53 responses.

A. Class Structure

Key Recommendations	Explanation / Rationale	Suggested Implementation(s)
Big Ideas and Learning Objectives	Bucketing different content into big ideas then breaking those into smaller learning objectives communicates clear expectations from the professor while allowing professors to more directly tailor material.	<ul style="list-style-type: none"> ● Organize lectures content according to “chunks” of key ideas ● Review key ideas and learning objectives at the beginning of class ● Use Criterion-Based Grading
Live Discussions	Live discussion in the classroom, especially structured discussion, enriches student learning by encouraging engagement with the material through conversations with peers.	<ul style="list-style-type: none"> ● Allot time for structured small breakout sections ● Require students to use name tents ● Create a virtual queue to structure the order of comments
Asynchronous Discussions	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.	<ul style="list-style-type: none"> ● Use platforms such as Piazza to facilitate regular student engagement in the course ● Consider different activities such as discussions, debates, role-playing, and peer-learning / teaching ● Ask open-ended and follow up questions that allow students to explore and apply concepts ● Provide guidelines and instructions
Active Learning: Online	Online active learning is learning where students engage with content during a lecture. This section differs from blended active learning, as these implementation models can be used in an online setting.	<ul style="list-style-type: none"> ● Use worksheets that follow lectures ● Pause during instruction to ask reflective, conceptual questions ● Utilize low-stakes, non-graded quizzes to allow students to reflect on information retention
Active Learning: Blended*	Blended active learning is any type of learning where students engage with content and participate in lectures. All implementations from online active learning are applicable to blended active learning, and this section suggests further, blended-specific recommendations.	<ul style="list-style-type: none"> ● Practice Flipped Learning ● Grade with Criterion-Based Structure ● Use in-class interactive activities <ul style="list-style-type: none"> ○ Problem sets ○ Case studies ○ Projects ○ Group work
Flipped Learning*	Flipped learning switches lecture-style content typically covered	<ul style="list-style-type: none"> ● Practice active learning during class time

	in class to the students' own time. Class time is then devoted to building upon and reinforcing the material.	<ul style="list-style-type: none"> • Cover shorter learning objectives outside of class while building on bigger ideas in class • Review material briefly in class
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B. Classroom Community and Communication

Key Recommendations	Explanation / Rationale	Suggested Implementation(s)
Design Course with Community and Collaboration in Mind	Educator behaviors and course design can influence the social presence of a course, which is defined as the degree to which students feel socially and emotionally connected with others.	<ul style="list-style-type: none"> • Include collaborative assignments • Offer office hours • Encourage students to form study groups • Facilitate small group discussions • Make all resources accessible
Office Hours	In digital spaces, students benefit when professors are as accessible as possible.	<ul style="list-style-type: none"> • Offer additional office hours or office hours by appointment to reach a wider audience of students across time zones
Study Groups	Study groups will be helpful for identifying resources or clarifying course concepts and class assignments.	<ul style="list-style-type: none"> • Help form study groups of four to six students by splitting the entire class into groups or sharing a form for students to opt-in
Facilitate Small Group Discussions	Discussions build relationships and encourage students to clarify concepts and talk through misunderstandings.	<ul style="list-style-type: none"> • Host small group discussions
Resource Accessibility	Many courses use required materials that students must obtain to complete assignments.	<ul style="list-style-type: none"> • Ensure that all students have access to resources and provide contingency plans for students who may need help obtaining them.
Communicate Regularly with Students	Effective communication is crucial to the success of an online or blended course. The following practices can help professors communicate with clarity.	<ul style="list-style-type: none"> • Make assignment instructions as clear and concise as possible • Outline expectations with rubrics • Communicate deadlines multiple times • Distribute discussion summaries • Preview upcoming assignments • Remind students of office hours • Respond to students in a timely manner

<p>Collect Feedback Regarding Course Content Early and Regularly</p>	<p>Collecting and responding to feedback from students can assist professors in virtual classroom management.</p>	<ul style="list-style-type: none"> • Use ongoing feedback such as online surveys linked to the Canvas homepage. Regularly remind students to submit feedback. • Ask open-ended questions such as, “What’s working so far? How could your learning experience be improved? What do you want or need help with?”
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C. Assessments

Key Recommendations	Explanation / Rationale	Suggested Implementation(s)
<p>Encourage Academic Integrity During Tests</p>	<p>Academic integrity is a fundamental value of the University. The following are ways to encourage academic integrity during exams.</p>	<ul style="list-style-type: none"> • Consider making exams open-book • Impose strict time limits • Utilize test banks to enable randomized, yet equitable, exams • Use lockdown browser software • Conduct video proctoring • Outline clear expectations for material tested and format
<p>Exam Accessibility</p>	<p>Given different time zones and technological access, it is important to take measures to alleviate concerns the university’s diverse student body may face.</p>	<ul style="list-style-type: none"> • Create flexible deadlines that accommodate technical difficulties, time zones, and other factors • For timed assessments, create a time range during which students can complete the exam. For example, provide a 12-hour exam window through Canvas, which once started, students have only 80 minutes to complete the exam.
<p>Team-Based Learning</p>	<p>Projects allow students to demonstrate and apply their knowledge. Group projects can increase accountability, especially when students are responsible for reporting on or maintaining the integrity of the project as a whole.</p>	<ul style="list-style-type: none"> • Utilize peer evaluation • Consider two-person papers, where students are randomly assigned partners and are responsible for verifying the work is original
<p>Low-Stake Testing Structures</p>	<p>Removing the focus on the final exam can reduce the effect of cheating and accommodate students who have had trouble adapting to the virtual learning environment and may be disadvantaged when taking exams.</p>	<ul style="list-style-type: none"> • Offer multiple, lower-stake exams or projects to replace final exams • Change the grade weights of midterm exams to mitigate stress around the final exam

Criterion-Based Grading	Criterion-Based Grading is the most effective grading structure for active learning, but it can be used for all class structures. It is more difficult to collaborate with classmates when students are competing for grades.	<ul style="list-style-type: none"> Grade students based on their ability to meet learning objectives, independent of their performance relative to their peers Group learning objectives can be used to incentivize group work
Consider Equity Concerns	The transition to online learning raises equity concerns for many students, including students with different levels of access to resources and learning disabilities.	<ul style="list-style-type: none"> Design courses with equity concerns in mind Offer a way for students to raise concerns with professors to develop solutions and utilize existing campus resources

D. Technology

Key Recommendations	Explanation / Rationale	Suggested Implementation(s)
Collect Feedback on Students' Technological Problems	Feedback provides an avenue for professors and teaching assistants to understand the roadblocks and challenges students are facing.	<ul style="list-style-type: none"> Create a separate forum for students to ask questions about technological problems Publish a Frequently Asked Questions page on Canvas with common technological problems
Ensure Materials are Accessible	Some students may not have the same access to online materials outside of the classroom.	<ul style="list-style-type: none"> Consider resources such as university computers or desktops Publish files that can be accessed with limited internet access
Provide Both Digital and Print Texts*	Academic achievement can be lower when students are provided only digital text readings.	<ul style="list-style-type: none"> If possible, allow print copies to be available

E. School-Wide Policies

Key Recommendations	Explanation / Rationale	Suggested Implementation(s)
Offer Program-Wide Benchmarks or Standards	Program-wide standards lead to less confusion, especially for students in more than one blended or online course.	<ul style="list-style-type: none"> Communicate and centralize program-wide standards for course design

Record Synchronous Classes	Peer institutions prioritized synchronous classes but encouraged or mandated that classes be recorded.	<ul style="list-style-type: none"> • Offer synchronous classes, but record these classes for students who are unable to attend
Information Distribution	This spring, the most prevalent options for distributing advice and information around a transition to online learning were a webpage, consistent emailing, or a combination of the two.	<ul style="list-style-type: none"> • Provide infographics, Frequently Asked Questions (FAQ)s pages, and list valuable resources • Consider two distinct websites for COVID-19 and Transitions to Virtual Learning

Survey Takeaways

- Both live and pre-recorded lectures had high levels of satisfaction online. Lectures can be transferred to an online setting successfully.
- Students overall were dissatisfied with their ability to connect with other students. Using breakout rooms or team projects can encourage interaction and community.
- Students are concerned about cheating and mentioned examples of their classmates collaborating during exams, using notes and resources on exams, and lying about circumstances. Professors should consider steps to mitigate these concerns (i.e. making exams open-book or allowing collaboration in some capacity)
- Students overall found value in recorded lectures and recitations as well as interactive, live communication. In particular, live polls and Q&A were effective. Furthermore, live discussions outperformed discussion forums.
- 73% of students in different time zones found it somewhat difficult to learn online. Time zones should be taken into account when designing courses and assigning group work online.