Harvard Business Publishing Education

Must Reads

A collection of popular articles from *Inspiring Minds*

Effective Course Design

Ideas to Enrich and Evolve Your Syllabus

Contents

Foreword

Designing a new syllabus or refreshing a course can be a complex undertaking. You want not only to ensure students learn the fundamental content, but also to heed their evolving expectations for course material that's engaging, relevant, and applicable to their futures.

To do that, educators are moving away from the status quo and rethinking their curriculum, balancing a need to activate students' core learning today and build their adaptability, resilience, and critical thinking skills for tomorrow.

These educators are bringing more creativity into their lesson plans and leveraging the power of generative AI to build richer, more effective courses. Best of all, they are finding new ways to streamline their workloads and improve the planning process overall.

In the *Inspiring Minds* articles that follow, we surface many of these ideas—from designing courses that promote application to turning to AI as an instructional design partner. The strategies and action steps shared here can help you reimagine curriculum development, take your courses to the next level, and ensure you're equipping students with lasting learning that will propel them into their careers.

Lucy Swedberg
Executive Editor
Harvard Business Publishing

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Push Beyond Your Usual Class Plans

How to Bring More Creativity to Your Curriculum

by Sophie Oberstein

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Back when I was in college, my sociology professor came to class one day with several metal pellets and two metal buckets. He dropped one pellet into the first bucket and said it represented the amount of nuclear weaponry that had been used to bomb the city of Nagasaki, Japan in 1945. As it landed, the pellet made a small *pling* sound.

He then poured a pile of pellets into the second bucket, telling us that each pellet still represented that same force of power, and what he was putting into the bucket now represented how much nuclear weaponry the United States currently held in its stockpile. I still remember the

sound those pellets made landing in that second bucket—it seemed to go on for an eternity, especially considering that any single one of them represented something that could wipe out a city.

Lessons like this stick with students for years—even decades—after we've learned them. Why? Because they engage us actively rather than passively. Our goal as instructors is to share learning that our students will remember and apply. Therefore, bringing creativity into our lesson plans can go a long way toward gaining learners' attention, engaging them with the content, and motivating them to use their new knowledge, skills, or attitudes. Even though my professor's bucket demonstration was part of a lecture, which isn't usually an active learning experience, it involved a powerful sensory and emotional response that was only possible because of the creative way he planned the lesson.

Coming up with these creative plans can be challenging for educators. Here, I'll suggest ways you can start thinking more creatively when designing your curriculum. I'll also offer some techniques you can use to help you flex your creative muscles. While it may seem counterintuitive, following a strict structure of brainstorming can help you plan memorable and lasting lessons.

Getting into the creative mindset

Creativity can be part of any academic setting—even when the topic isn't a creative one. But many instructors feel they lack creativity or that their ideas may detract from the instructional soundness of their curriculum. Further, it's often difficult to come up with ideas beyond those activities that have worked in the past.

Changing your mindset can address some of these concerns. Take the belief that you are not creative, for example. Because creativity is often associated with the arts, people may think, *I'm not a painter or a dancer or an artist, so I lack creativity*. But you don't need that experience to design curriculum that engages your students.

> **Our goal as instructors is to share learning that our students will remember and apply. Therefore, bringing creativity into our lesson plans can go a long way.**

It's also important to understand that adding creativity into your curriculum design isn't just to make the learning more fun or memorable; creative methodology aligns with cognitive strategies that are instructionally sound. This is evidenced by many examples, including this: We know that mnemonics can help us consolidate complex information so that it can be encoded into long-term memory—using a song or short rhyme to remember spelling rules, for instance. So letting participants work in small groups to create their own mnemonic devices around your subject area is both a creative hands-on activity *and* based on educational science.

Similarly, having students make inferences and predictions before introducing a new topic to them changes their role from passive listeners to active participants: Students engage more fully in your teaching to see whether their predictions play out. These techniques are creative—and rooted in the psychological processes of learning.

Three models to jumpstart your creative thinking

How do you come up with creative ideas of your own? Three models can help instructors push beyond those tried-and-true methods: Howard Gardner's theory of multiple intelligences; Jean Barbazette's suggested levels of participation; and my own 3-5-3 approach, conceived for the Association for Talent Development (ATD) in 1996. Let's consider how to use these models through a hypothetical class on leadership theory.

Howard Gardner's multiple intelligences

This model is rooted in the understanding that people learn using all sensory modalities, so instruction should tap into as many of them as

possible. Consider your topic through the lens of Gardner's multiple intelligences—visual, verbal, logical, musical, kinesthetic, naturalistic, interpersonal, and intrapersonal—to come up with multiple ways to explain a concept or bring it to life. This is precisely what my sociology professor did with his pellets and buckets.

In our example leadership theory class, we might introduce the difference between effective and ineffective leadership by presenting two caricatures of leaders (visual), by asking individuals to reflect (intrapersonal) in small groups (interpersonal) on the best leaders they've seen and what made them so effective, or by having students create a jingle (musical) that highlights the most important characteristic of an effective leader. When you can push yourself to engage as many of these intelligences in a lesson plan as possible, you have more opportunities to reach your learners.

Jean Barbazette's levels of participation

In *How to Write Terrific Training Materials*, Barbazette notes that participation levels span a spectrum of class activity from zero (being read to) to nine (practicing a new skill) and proposes that the level should vary every 15 minutes for classroom training, every two minutes for a webinar, and every five minutes for virtual instructor-led training. She also believes that you should have an activity that is rated above a five (such as small group discussion, role play, case study, or self-assessment) at least once an hour before midday and at least twice an hour after midday.

> **While it may seem counterintuitive, following a strict structure of brainstorming can help you plan memorable and lasting lessons.**

One way I advise educators to get more creative in their classrooms is to start with an audit of their syllabi: Does each session include one activity in which students have to stand up (with suitable alternatives

for those with limited mobility), at least one activity in which they work with a partner or small group, and at least one new activity that they haven't tried before?

In our leadership course example, following Barbazette's method may look like a 15-minute small group discussion of a case study, followed by a five-minute lecturette on the leadership model that was used in the case study, followed by some silent reflection on how students think they can apply the new model to their lives, and ending with a 30-minute role play using the new model.

My 3-5-3 approach

While Gardner focuses on different modes of learning and Barbazette looks at different ways of participating, my approach takes a different tack. It is simply a structured brainstorming activity that urges learning designers to think past their first—and perhaps most usual—idea. It has you think of three different ways of presenting a concept and then set them aside to think of five more. From those eight, choose your favorite and think of three ways you can deliver that. Let's go into detail about how this might work when thinking of activities for our example leadership course:

The first three. First, brainstorm three different activities related to your topic—in our example, understanding a leader's role in creating accountability. Some starter ideas might be the following:

1. Have small groups discuss a leader's role in creating accountability.
2. Look at a case study in which a team failed at something and ask what the leader's accountability was in that situation.
3. Have participants in small groups create posters that define what accountability means.

The second five. Then, set aside those first three activities and come up with five more. This will be more challenging. Not every idea you come up with will be a good one. In the spirit of brainstorming, capture

anything that comes to mind, even if it is not yet fully fleshed out or if you're not sure you'd want to include it. Here are some examples:

1. Watch a clip from a movie in which a leader is not holding people accountable and analyze what they could have done better.
2. Invite a guest speaker who has an inspiring story about holding their team accountable.
3. Create a role play in which learners take on the role of a leader holding a team member accountable during a meeting.
4. Have participants think about real-life examples of leaders who have created a sense of accountability on their teams and share those experiences with their classmates.
5. Complete a self-assessment of their own ability to hold others accountable.

> **Creativity can be part of any academic setting—even when the topic isn't a creative one.**

The last three. Finally, look at your full list of eight ideas and decide which you are most intrigued by. For this example, let's say our favorite activity was the case study in our first set of three ideas. Now think of three different ways you could conduct that activity. For example:

1. Instead of looking at a case in which the leader failed to establish accountability, look at one in which the leader did it just right.
2. Look at a case study in which a team failed at something and have different student groups consider whether the failure was by an individual, the team, or the leader.
3. Look at a case in which the team leader held someone accountable when they probably shouldn't have; i.e., a situation in which generosity of interpretation should have been employed.

From this list of ideas, select one to pilot and add to your course. This may end up being the first idea you had at the start, and if it is, you can adapt it with the certainty that it is your best option.

Push yourself forward and the ideas will follow

Once you've set your mind to building your curriculum using creative activities that are more engaging—and instructionally sound—push yourself to appeal to varied intelligences and levels of participation, or ideas that go beyond your first one.

I promise you that once you do, the creative approaches will follow. Your teaching and your students will be better for it.

Explore more

COURSE DESIGN **PERSPECTIVES**

Sophie Oberstein is an adjunct professor for NYU's Certificate in Learning Design program. She has been a learning and organizational development professional for over 20 years at public and private organizations, including Weight Watchers (now WW), Columbia University Medical Center, Redwood City, and Citibank. Her latest book, *Troubleshooting for Trainers*, describes 45 challenges in instructional design and how to overcome them.

Harvard Business Publishing Education

5 Steps to Designing a Syllabus That Promotes Recall and Application

Make It Stick: One HBS Professor Shares His Take on Course Development—and His Syllabus

by Suraj Srinivasan

Editors' note: This article was first published in 2019, but we find its foundational advice and comprehensive steps just as relevant to today's educators.

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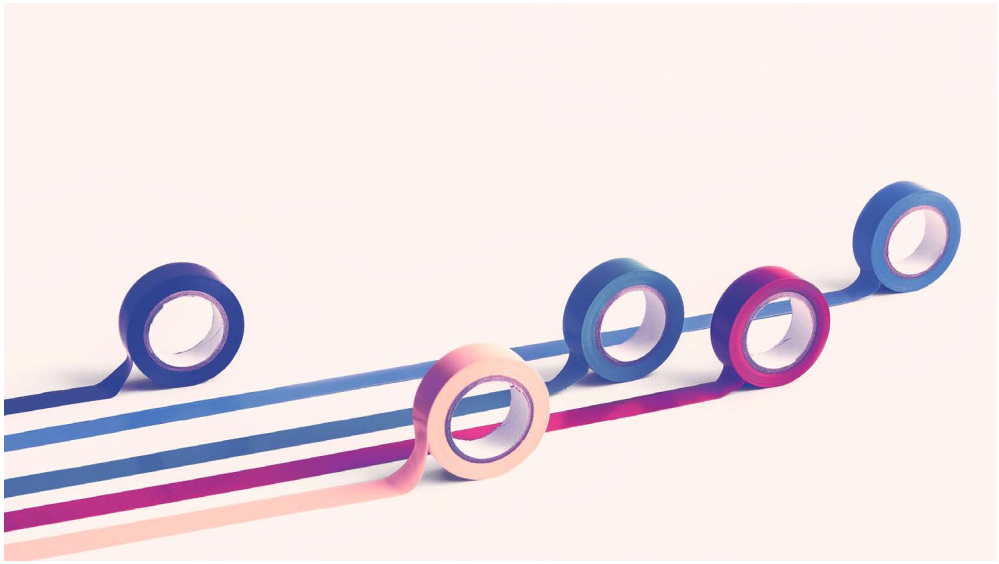

Daniel Grizelj / Getty Images

A successful syllabus comes together over time. It begins with an idea of what the course should deliver, and then an arc for the course forms through a series of modules. Then, module by module, a set of topics—a syllabus—is designed. Its primary purpose is to relay a course's pedagogy.

Designing a syllabus can be a complicated process, but one device that might help you focus is to imagine a student reading over your syllabus

and asking two important questions: *Why is this subject important?* and *Is this a good way to study this subject?* While most students will likely be beginners in the subjects covered, they still need to feel confident that there is a sensible arc to the course, that the sequence of topics makes sense, and that the transitions between the topics are logical.

My accounting and management colleagues at Harvard Business School have spent years iterating our course syllabi to best suit students' needs and support teaching goals. I like to summarize the methodology of creating a successful syllabus in five steps.

To help describe the thought process behind these steps, I will reference and provide the syllabus for a class I teach called Financial Reporting and Control, a required course for first-year MBA students. We teach this class using the case method; however, instructors can use these principles when crafting a syllabus for a variety of disciplines and for learners of all levels.

Step 1: Determine what you want the course to achieve overall

When creating a syllabus for a course, start by first determining what key learnings you want students to take with them at the end of the term. There are two different elements to this:

- Why are we learning what we are learning? Why is it important? In the case of MBA-level classes, why does this topic matter to leaders? Why is it important for a managerial audience? In accounting and financial reporting, for example, we know that the "why" for managers is to understand how to measure, analyze, and drive performance.
- What are the technical components? What techniques—tools, methods, and terminologies—do students need to learn? In accounting, technique is important. A financial accounting course, for example, must teach students the language of accounting: assets, liabilities, income, revenue, etc.

These elements detail the overarching theory for why your course is important. Once you know what you are trying to achieve—once you have an overall theme and objective for the course—these elements ultimately define what set of topics you need to incorporate into your syllabus.

SYLLABUS PRO TIP: LESS IS MORE

A common mistake professors make in course building is to skew more heavily toward quantity at the cost of quality. There is so much to cover in MBA courses, sometimes there is a tendency to pack the syllabus. I used to do that. Eventually, I realized that more is not more. Sometimes, less is much more effective.

Try taking a few things out of your syllabus and spending more time on fewer key learning objectives. Maybe conduct a case over two sessions instead of one.

Paring down your syllabus may also give you more time to review techniques or repeat concepts to better ensure learning. It's not about packing things in. Repetition, it turns out, helps.

Step 2: Map out the arc of the course

Once you have an overall objective for the class, how do you string a syllabus together in a way that clearly demonstrates the arc or theory of the course? The best process here is to start with the ideas—or key learnings—and then map out the course from beginning to end, module by module.

We've mapped the arc of the Financial Reporting and Control course into four modules:

- Define performance and how it is measured.
- Analyze the performance of products, divisions, customers, or the company as a whole using activity-based costing, profit variances, quality of earnings, and financial ratios.

- Use control and performance management systems to execute strategy and manage risks. How do you take data and use it to make decisions and drive change?
- Understand the communication and governance aspects of performance measurement.

Below is a portion of my FRC syllabus in which I detail the arc of my course:

COURSE STRUCTURE

The FRC course is divided into four modules closely reflecting the content of the themes noted above: (I) Measuring Corporate Performance, (II) Analyzing Corporate Performance, (III) Driving Corporate Performance, and (IV) Governing and Communicating Corporate Performance.

Module I: Measuring Corporate Performance

Module I surfaces and addresses the myriad challenges inherent in measuring the financial position and performance of organizations as a whole, particularly in the context of their interactions with external capital markets. In this module, we will focus on: the role of accrual accounting in overcoming the challenges of measuring performance for a single period when transactions have economic consequences over multiple periods; exploring accounting concepts and rules that provide a uniform financial reporting framework; learning the meaning of key accounting terms (asset, liability, equity, revenue, expense) and their importance in financial reporting; identifying the potential for managerial bias to impact financial reports; and understanding the role and responsibilities of management in the financial reporting process.

Module II: Analyzing Corporate Performance

After exploring financial measurement and reporting concepts in the first module, Module II focuses on developing tools and frameworks for analyzing the performance of the organization and its sub-units—including business units, products, and customers. We focus in particular on developing tools to analyze the link between corporate strategy execution and financial results (ratio analysis); the cost and profitability of products and customers (activity-based costing); and drivers of differences between actual and expected performance (budgets and variance analysis). We also draw on knowledge of the financial reporting process gained in the first module to develop a framework for determining when and how to adjust

reported accounting information when analyzing the performance of an organization as a whole.

Module III: Driving Corporate Performance

In the third module, we turn our attention to the design and use of internal performance measurement and control systems to implement strategies, align incentives, manage risks, and shape culture in decentralized organizations. We focus in particular on identifying different "levers" of management control, understanding the design and consequences of formal incentive systems, and exploring the role of strategic measurement systems such as the balanced scorecard in communicating and implementing organizational strategies.

Module IV: Governing and Communicating Corporate Performance

In Module IV we focus on developing a deeper understanding of the roles and priorities of various institutions and governance mechanisms that support the external financial reporting process and enhance the quality of financial reporting information.

Click here to review Srinivasan's full syllabus: Financial Reporting and Control.

Step 3: Create links between classes, modules, and cases

Critical in this process—and this is true for any syllabus—is how you create links between one class and the next, between one module and the next, and between each case or course assignment. Then, at the end, to know that everything ties together and has a purpose.

It may help to ask yourself these questions: What are students going to get out of this particular case or assignment? Why were these cases or assignments all put together? Why in this sequence? What are students going to get out of this module as a whole? Why were these modules all put together?

Students really benefit from seeing the connections between one case or module and the next. In fact, they get frustrated when they don't see the connections. They're also frustrated if they have to wait until the end of the course to start seeing how it all ties together.

You want to create a sense of knowing where they are going, along with a sense of anticipation and excitement around what they will learn going forward. This is conveyed through the syllabus first and then through the first few cases or assignments, which should present the key challenges of the course overall.

Then, each consecutive case should dive deeper into the topics and also link back to the key issues you're teaching. Each case and module then builds on the one before with the idea that only toward the end of the course will everything really click for students and reveal that they will be able to develop some mastery around the key challenges.

Step 4: Balance technique with overall takeaways

As you move through the syllabus, two things are happening—you're developing the technical content while keeping pace with the overall takeaways for each case, each module, and the course as a whole.

It's a balancing act between focusing on technique and building up students' ability to make judgments and develop a conceptual understanding. There is tension in terms of the technique versus the overall takeaways because some of the techniques are fairly involved. You can spend a lot of time diving deep into the methods, and at the end of it, sure, students can do a couple of problems. But they may have lost the connection to the overarching reasons they're learning those methods.

Especially in the discussion format promoted by the case method, it's important to give students an opportunity to use the tools and techniques while simultaneously developing a point of view, so that they are able to discuss, present, and articulate an argument. This is exactly what they'll be doing sitting in a business meeting. In most cases, you're not just solving problem sets on paper.

The most interesting managerial questions require you to use judgment, which involves applying your technical knowledge, your decision-making ability, and your leadership skills. When instructors

create enough tension within these cases, students will remember the technique long after leaving the classroom because it was helpful in solving and managing a problem. This is where a clear syllabus is a useful tool for showing students how they will learn the techniques—and then actually use the information they gain and understand why it's important.

Students come from different experiences, have taken different past courses, and have different learning styles. You're trying to give everybody—both those with a lot of experience with the material as well as those with no prior knowledge—something to learn. How do you do that simultaneously? Provide more leadership and managerial lessons to the students who are more experienced in the technique. The less experienced students can get those lessons too, but they may also choose to focus on the tools and methods.

SYLLABUS GOALS: CONTEXT, PRACTICE, AND RECALL

A common question I get is how I teach accounting using the case method since accounting is learned by doing, writing things out, and lots of practice. What we get by using the case method is a deep understanding of context. Students can learn by tons of practice, but they can also get to the same place—and remember it a lot better—by understanding the context in which accounting tools are used to make managerial judgments and decisions.

We bring in practice through assignments and periodic, ungraded quizzes that students take home. Those mandatory quizzes go a long way in helping students catch up. Recall is a very important learning technique; the idea is to "make it stick."

It's one thing to study and then go on to the next lesson. But students will remember concepts and techniques more effectively when instructors create opportunities for them to recall. This could be through quizzes or by creating opportunities to recall prior topics in a later class.

For example, when we're teaching the last module, we will recall what happened in earlier parts of the course. That is a powerful way of making it stick. When building syllabi, pay attention to building in these recall moments.

Step 5: Pick materials that best represent course objectives

Understanding this tension between technique and context is also important when selecting course materials. In business, decision-making and managerial roles are only called into question and challenged when the answer is not obvious—when it's not clear what you should do in a particular situation. A chosen case or course material should reflect this complexity. When the answer is not obvious, an exercise is then elevated beyond just the mechanical, when all students have to do is find a right or wrong answer.

This is true even when a problem or concept is seemingly obvious. For example, identifying what an asset is may seem simple. However, a case about Boeing shows the complexity behind the question, "What is an asset?"

When Boeing builds a new aircraft model, it has to invest billions in prototyping, machining, and other types of development costs. There is a steep learning curve for Boeing engineers and manufacturing employees as the first few planes of a particular model roll off the production line. Are these early expenditures to be considered as expenses of manufacturing the first few aircrafts? Or are they an investment in an asset that will provide benefits as more aircrafts of that model are manufactured? Boeing considers these expenditures as assets. In 2016, for example, Boeing had about $30 billion in such deferred costs capitalized as an asset for the Boeing 787 Dreamliner aircraft.

In our Boeing case, students have to answer this expense versus asset question, assess how to determine the value of the asset, and debate what the source of future benefits might be. The interesting challenge for students to grapple with is the uncertainty of estimating future benefits from an aircraft model over the next decade or so. The inherent tension in the case leads to a vigorous debate and excellent learning of the fundamentals.

Whether a case is time-tested or brand new, it's important to ask yourself: Will the issue it raises resonate with students? Will it achieve the technical teaching purpose you've chosen it for? And, most importantly, is it in an interesting setting? For instance, my case on Netflix grapples with how Netflix accounts for its content. Viewers predominantly watch movies and shows more when those movies and shows are first released, meaning the depreciation and amortization of the content should be accelerated—so the company uses a straight-line amortization method. An otherwise technical discussion of deprecation accounting becomes a fascinating discussion of Netflix's business model and how its accounting policy allows us to assess the company's profitability and success in strategy execution.

It's also important to pick cases—or other course materials—that represent different contextual variables: a mixture of different industries, geographies, and cultures; small versus large businesses, or start-ups versus larger corporations; and cases that showcase protagonists of different genders and races. A variety of leaders should be featured, too: young leaders as well as more experienced, divisional managers and CEOs, or even product managers.

Students will be going into different businesses across many geographies and into varied roles once they graduate. Whether I'm teaching revenue recognition or depreciation, I want my students to be able to take that particular tool or method and apply it in various contexts they will encounter in their careers.

A syllabus is just the first step in creating a memorable learning experience for students—one that not only underpins your key objectives but is also interesting and creates the tension necessary for retention. Download my syllabus to further explore these principles and see how this all comes together.

Explore more

COURSE DESIGN

Suraj Srinivasan is the Philip J. Stomberg Professor in the accounting and management area at Harvard Business School. He is currently the course head for the HBS required course Financial Reporting and Control. He also teaches executives in leadership and corporate governance programs. He has published widely in accounting, finance, and management journals, and is an editor at leading accounting and management journals. He has written over 60 case studies. His teaching and service contributions have been recognized by teaching innovation and service awards at HBS.

Harvard Business Publishing Education

A 3-Question Checklist for Better Course Design

by Holly Gould

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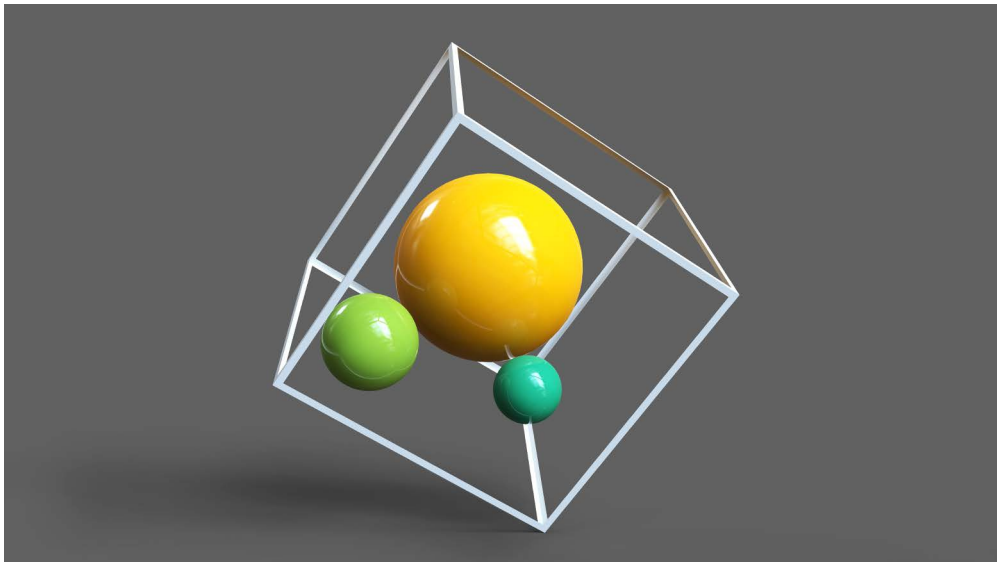

matdesign24 / Getty Images

When Jay McTighe and Grant Wiggins came out with their seminal book on backward design in the late 1990s, everything changed. Teachers started course planning with the end goals in mind: Before planning anything else, they first established what skills and knowledge they wanted their students to gain by the end of the term. Only after these objectives were clearly established did educators determine what assessments they would use to prove students were heading in the right direction. Then, learning experiences and instructional strategies were developed around these goals and objectives.

I've been on search committees for years and I'm often surprised by how many educators today miss these basic principles in their syllabi. Whether you're a veteran educator or new faculty, I'm offering

the following syllabus checklist to ensure you set clear, measurable course objectives that align with your graded assignments and instruction topics.

Answer yes to the three questions below and you'll have a well-designed course that will more effectively teach students what you want them to learn.

1. Are my course objectives clearly defined and relevant?

What worked in the past won't necessarily work for today's learners. If you have the freedom to write your own course objectives, it's important to approach them with a fresh perspective every semester.

To do so, consider the following:

- **Your course level.** Find out what related courses your students took last semester and what courses they need to take next semester. Then you'll know where they are coming from and what they need to learn to get to the next level.
- **What your students want.** Before the first day of class, get to know your students. This may involve just finding out their major or sending out a survey. I usually ask, "Where do you want to work? What do you want to do? What are your goals and aspirations for your career?" I try to tailor my instruction around what I learn. For example, if a student wants to work for an educational nonprofit, I'll try to integrate case studies related to those specific career goals.
- **What businesses want.** Know the market and what companies and graduate schools (if you're teaching undergrads) are expecting of their employees and students. Try connecting with people in the field and asking, "What do you wish you'd learned when you were an undergraduate or graduate student?" Or talk to alumni and ask what they wish they had learned while in school to prepare them for their careers.

When you plan with the end in mind, you're thinking, *Where do my students want to go, and how can I help get them there?* Your goals should be based around what you discover and then stated clearly at the top of your syllabus—the simpler, the better.

2. Do my assessments adequately measure student progress?

Once you figure out what outcomes you want for your students, you then need to find a way to measure whether students are on their way to grasping the material and meeting those goals.

If you want to know who's "getting it" and who's not—before it's too late—try leaning more heavily on formative assessments (such as games or informal writing prompts) that act as barometers for student learning rather than more formal summative assessments (such as papers and final exams). Then you can adjust your instruction to get everyone on the path to success.

I like to give quick, ungraded assessments consisting of a few short questions. Sometimes I'll do entry tickets before my students sit down or exit tickets at the end of class, depending on whether I want to assess how well they grasped the reading assignment or what they just learned in class. I may jot down a few questions for students to answer on a notecard or post questions on Kahoot!, Poll Everywhere, Socrative, or Jamboard. These informal assessments are a quick way to gauge how my students are doing.

3. Do my instructional experiences align with the objectives?

Students don't like busy work. So when you're planning out assignments, discussion topics, lectures, and guest speakers, make sure you're clear about how they all align with the course objectives.

For example, if you're teaching a marketing course and you've assigned a group project for a market segment analysis, you need to explain to your

students how this will help them learn. They may feel the group aspect of the assignment is unnecessary, so let them know this exercise is teaching them to collaborate, work in teams, and be a leader—skills they will need in their future marketing careers. If you don't help make that connection, they may not get on board with the exercise.

> **If you have the freedom to write your own course objectives, it's important to approach them with a fresh perspective every semester.**

My mentor once told me, "We need to make explicit that which we think is implicit." If your students don't see the relevance of an assignment or a test question, that hurts engagement and learning. There's something generational about it; the whys are important to Gen-Zers.

Use end goals to drive purpose, structure, and transparency

A big complaint I hear from students is that teachers can go off on tangents with topics that don't end up on tests or graded assignments. This occurs when there's a lack of alignment between your course objectives and your instruction, assignments, and assessments.

If you use your end goals as drivers for planning, your syllabus will have purpose, structure, and transparency—and your students may be more willing and active participants in your class.

Explore more

COURSE DESIGN **PERSPECTIVES**

Holly Gould is a professor and program director of curriculum and instruction and educational studies at University of Lynchburg, Virginia.

Harvard Business Publishing Education

If Your Syllabus Needs a Refresh, Generative AI Can Help

4 Simple Ways ChatGPT Can Help You Build Richer Courses

featuring Mitchell Weiss

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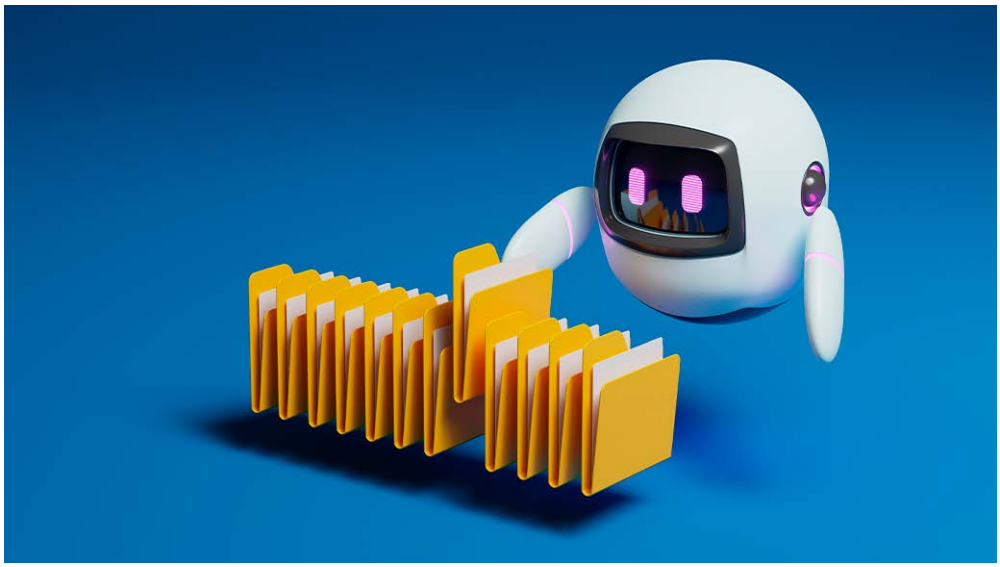

lerbank / Getty Images

Figuring out how best to structure or restructure a course can be challenging. Educators must make decisions on organizing learning objectives, topics, assignments, and deadlines into a specific number of sessions—and in a way that's clear and digestible for students.

Generative AI has made it possible for tools like ChatGPT to help educators with many aspects of their job, including course planning. These tools can generate session topics, suggest materials

or teaching objectives, and even draft a syllabus you can use as a jumping-off point.

In a recent Harvard Business Publishing webinar, Harvard Business School professor Mitchell Weiss shared some simple ways you can use AI to create or refine your syllabus. He reminds educators that we should never rely solely on AI to do this work—that we need to be the ones driving course creation and thoroughly vetting AI output.

"You are ultimately the one driving your course's creation," he says. "So make sure to be thoughtful and creative as you query the AI and to thoroughly vet AI's output."

Here, we share four of his ideas to help elevate your courses.

WATCH THE WEBINAR

In the webinar "How ChatGPT and Other AI Tools Can Maximize the Learning Potential of Your Case-Based Classes," Harvard Business School professor Mitchell Weiss details how educators can use AI tools to both prepare for and teach case-based courses. Watch the webinar recording.

1. Draft a new syllabus or revamp an existing one

Whether you're teaching a new course or filling holes in an existing syllabus, you likely aren't starting with a blank slate—you may have one or two readings, lessons, or cases you know you want to include. If you use these foundational materials to prompt ChatGPT, you'll receive an output that's more likely to align with your goals, recommends Weiss.

He starts by making his prompt as detailed as possible. In addition to referencing the materials he plans to use (e.g., certain cases or readings), he also mentions relevant background information (what level and subject he teaches), the topics he wants to cover, and how many sessions his course will have.

Here's an example prompt for building a syllabus using ChatGPT:

I am a business school professor. I'd like your help creating a syllabus that would feature a case called *TraceTogether*, which is about an app developed in Singapore during COVID-19 to do digital contact tracing. The case protagonist is Jason Bay, a leader at GovTech Singapore, the digital transformation agency of Singapore's government. Key passages in the case cover the debate over apps like TraceTogether and whether they should keep government officials 'in the loop' or 'out of the loop' to further protect user privacy. Please suggest a 10-session syllabus for a course on public entrepreneurship that includes this as one of the sessions.

WATCH MITCHELL WEISS DEMONSTRATE HOW TO FORMULATE SYLLABUS-CREATION PROMPTS

Video Available Online To access this video, please visit hbsp.harvard.edu.

If you want to revamp an existing syllabus or are stuck on a certain section, Weiss suggests feeding the AI what you have so far (by copying and pasting your syllabus into ChatGPT) and asking it to suggest additional sessions or topics. Even if you don't end up using any of ChatGPT's suggestions, the exercise may be enough to spark inspiration for the topics you do want to cover, he says.

2. Add pedagogical variety and avoid "hallucinations"

Courses may typically contain a mix of lectures, texts, cases, and other forms of instruction. If one of your current syllabi is too lecture heavy, however, Weiss suggests asking the AI to generate suggestions for other types of materials to use, such as cases or simulations.

"I am looking to add some hands-on sessions to my fall course on public entrepreneurship, which is otherwise entirely case based," he says. In this case, he asks ChatGPT the following:

I teach a course on public entrepreneurship at a business school. The course covers invention inside government and by private (mostly technology) startups inventing for

government. I want to add two sessions on generative AI. I teach almost exclusively by the case method, but I want to add at least one applied, hands-on session. Can you suggest 10 possible sessions please.

The AI's output suggested requiring students to use the AI tools and climate data to predict the impact of new environmental policies, as one example, or to use an AI tool to automate a simple government service.

"I'm likely to follow up on the second suggestion, adapting and fleshing it out, of course," he says.

> **AI can be a helpful idea generator and a productive "teaching groupmate," but it's not a replacement for your own insights.**

If ChatGPT suggests specific simulations or cases, Weiss warns to be on the lookout for "hallucinations"—convincing content that's not real or accurate. This sometimes occurs. Carefully review output and use your expertise to make final decisions on the content, says Weiss.

"On top of that," he adds, "if ChatGPT seems limited in what existing material it can suggest, ask it to suggest new material you might produce. I asked it to suggest 10 HBS cases on AI and government for my course, and it reported that as of its 'knowledge cutoff in September 2021, there aren't 10 specific Harvard Business School cases focused on AI and government.' It did suggest a few I'd written already that were related and some that other authors had as well, but none that were perfect to add to my course."

Instead of quitting, Weiss prompted ChatGPT further:

What if I wanted to go write some cases about government and AI. Can you suggest some cases I might write? Can you suggest one from each continent?

The output did note that, "While Antarctica isn't governed by a single nation, a case could examine how international research teams use AI to analyze climate data from Antarctica." Weiss explains that he doesn't

plan to head out and write that particular case, but the overall list it suggested did get his mind turning on some related ideas.

3. Develop categorized learning objectives

Strong syllabi need concrete learning objectives, says Weiss. In their 2015 note on *Key Elements for Excellence in Classroom Cases and Teaching Notes*, James Austin, James Heskett, and Christopher Bartlett point out that excellent learning objectives should cover knowledge enhancement, skill building, and attitudinal development. Today, ChatGPT can help you deliver on these.

You can do this at a course level from scratch, says Weiss. For example, your prompt could be as follows:

I teach a course on public entrepreneurship at a business school. Please suggest a 28-session syllabus. Indicate teaching objectives for each of the class sessions. And please include objectives across three categories: 1. Things students should know (knowledge); 2. Things students should know how to do (skills); 3. Ways students should know how to be (attitudes and behaviors).

The draft will be a useful starting point.

You can also use generative AI to help elevate your existing syllabus. Feed the outline of your course into ChatGPT—so long as it is not confidential or proprietary—and ask it to help you define teaching objectives for each session, he suggests.

You might prompt the AI in this way:

Please indicate teaching objectives for each of the class sessions. And please include them across three categories: 1. Things students should know (knowledge); 2. Things students should know how to do (skills); 3. Ways students should know how to be (attitudes and behaviors).

A similar prompt can be created for an individual session. For example:

Here is a topic of one of the sessions in my course: open data and government. Can you please suggest more specific teaching objectives along three lines: things students should know (knowledge); things students should know how to do (skills); and ways students should know how to be (attitudes and behaviors).

WATCH MITCHELL WEISS DEMONSTRATE HOW TO DEVELOP COURSE LEARNING OBJECTIVE PROMPTS

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Weiss says he has found that the AI output helps him think about teaching and learning objectives in very concrete ways. "Though I most certainly wouldn't accept these objectives without question or turn over my whole course design to ChatGPT, if I had a case or topic in mind and was unsure of takeaways, this would be a helpful approach to begin to enrich and refine those sessions," he says.

4. Change difficulty levels or develop more impactful sessions

Perhaps you're preparing a course you've taught before but now you're tailoring it to a more advanced group of students, or you want to be able to tweak a session on the fly to better match your students' more basic level of understanding. Weiss suggests asking the AI for suggestions on making a session harder or easier. "Or ask it to help you adapt a session designed for graduate students for executives instead," he adds.

"For several years I have used a case on Waze that I wrote to introduce the idea of platforms for public services into the course," he says. This year, he prompted ChatGPT with this:

I teach a case on the company Waze. I teach it as a session to introduce the idea of platforms for public services. Can you suggest a way to make that session more challenging.

ChatGPT suggested several ideas, including focusing on a "multi-sided platform analysis," he notes. This was a topic Weiss says he traditionally waited two more sessions for.

He prompted ChatGPT again:

I like the multi-sided platform analysis. Can you stick in that direction but make it more difficult.

ChatGPT suggested Weiss ask the students to delve into cross-side network effects, same-side network effects, and platform envelopment. "It also suggested I require students to develop an economic model of Waze's multi-sided platform and include such factors as the pricing structure for different sides of the platform (including subsidies) and the effect of positive and negative network externalities," he says.

If you're concerned that a specific session may not be as impactful as it could be, Weiss notes that you can use AI to get ideas for building it out. To do this, he would describe the topic of the session in a prompt and ask for academic concepts related to it.

"I teach a session on engaging users, broadly. I use a case I wrote on a pilot program that the Seoul Metropolitan Government ran in the early days of their metaverse efforts," he says.

He prompted ChatGPT:

> I teach a case on Metaverse Seoul. I teach it about gathering public feedback. What are some concepts I can draw on to make this session richer and deeper.

Among other ideas, the AI suggested covering sample size determination and representativeness, he notes. "These ideas will be of zero surprise to anyone who has ever taught statistics, data analytics, or any related topics, and were not a surprise to me," he says. "However, I just hadn't architected the first part of this session around the topic, and these suggestions really encouraged me to take the session in that direction and thus enriched my syllabus."

Before jumping in, know what a good syllabus looks like

AI can be a helpful idea generator and a productive "teaching groupmate," but it's not a replacement for your own insights. Weiss notes that it's important to have a plan for assessing and building on what the AI produces. Make sure you have criteria for a good syllabus beforehand and evaluate AI's output against those criteria, he says.

"One of the biggest benefits I have found in all of this? Insisting the AI pushes toward deeper and richer sessions keeps reminding me to push there, too," he says.

Explore more

ARTIFICIAL INTELLIGENCE **COURSE DESIGN**
COURSE MATERIALS **TECHNOLOGY**

Mitchell Weiss is the Richard L. Menschel Professor of Management Practice and chair of the MBA Required Curriculum at Harvard Business School.

Harvard Business Publishing Education

Simple AI Tips for Designing Courses

ChatGPT Strategies Educators Can Use Today: Part 1

by Dan Levy and Angela Pérez Albertos

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Teaching is a human activity, and generative AI can't fully replace us as educators. But that doesn't mean it can't augment our work. In fact, we've discovered countless ways we can use gen AI to help us be more productive and effective teachers.

These strategies aren't complex techniques that require deep technology expertise; rather, they're approaches anyone can start using the moment you finish reading this article. All you need is an internet connection and access to ChatGPT or another free gen AI tool.

Here, after offering some foundational AI guidance, we'll share some simple gen AI techniques you can use to prepare to teach a new class. In other articles in this series (see sidebar below), we'll explore ways you can use gen AI to improve an existing course, conduct a class, and design assessments. This series is based on our work in writing our recent book, *Teaching Effectively with ChatGPT*.

These articles will barely scratch the surface of everything you can do with generative AI, but our hope is that they will provide a good jumping-off point to help you feel confident enough to start using it today.

SIMPLE GEN AI STRATEGIES EDUCATORS CAN USE TODAY: A 4-PART SERIES

In this series, Dan Levy and Angela Pérez Albertos share gen AI techniques educators can use to make their teaching more effective and their work easier.

Part 1: AI Tips for Designing Courses

Part 2: AI Tips for Revising Courses

Part 3: AI Tips for Enhancing Class Time

Part 4: AI Tips for Creating Assessments

4 key principles for generative AI use

There are four foundational principles that anchor how we use gen AI:

- **Use AI to assist you—not replace you.** Gen AI makes mistakes and has limitations. It will not be better than you at most tasks. But it *can* help you complete tasks faster or at a higher quality than you'd be able to without it, making you a more efficient, effective educator. So, while it can't do your teaching for you, it can serve as your copilot.

- **Treat AI as a conversation partner.** Often, people will be disappointed with the first response gen AI produces and abandon it altogether. But you can and should have conversations with AI. You can give it additional information or instructions to improve its output, just as you might if you were collaborating with a person.
- **Remember that you are the expert.** You are the expert not only on the subject you teach, but on your students and what will work for them. So don't feel like you should use what gen AI produces unquestioningly. Evaluate its outputs and refine them according to your knowledge.
- **Practice often.** The more you use gen AI, the more you'll understand its strengths and limitations. Practice will naturally make you better at prompting while also helping you discover new ways you can use AI tools to teach.

4 guidelines for great prompting

A clear, thorough prompt is key to getting useful results. Before we give a few examples of effective prompts, we want to first highlight some guidelines you can use to more effectively prompt gen AI tools.

Through a combination of our research, personal experience, and conversations with colleagues, we've developed these four guidelines:

- **Use the TIC formula.** To create more effective, actionable prompts, we use a prompting formula developed by our colleague, Ted Svoronos, called "TIC," or "task, instructions, context." This formula ensures that every AI prompt mentions what you want the AI to do (the task), how you want the AI to do it (the instructions), and what the AI needs to know to do it properly (the context). The three elements do not necessarily need to be given to the AI in that order. You'll find an example of TIC in action below.
- **When in doubt, ask the AI what information it needs.** You don't have to read gen AI's "mind" and try to guess what will make a prompt

most helpful. You can ask it what information it needs, just as you would when developing new class activities.

- **When you believe gen AI made a mistake, tell it so.** Just as you can ask gen AI questions, you can also give it feedback. There's nothing wrong with pushing back at it, telling it that it didn't deliver what you wanted, and asking it to try again.
- **When asking for a complex task, break it down into smaller components.** Providing gen AI with step-by-step instructions can help when asking it to complete complex tasks—just as it does for humans.

Prompting to prepare a new class plan

Dan teaches a course at the Harvard Kennedy School called Thinking Analytically in an Uncertain World. When planning this course, he wanted to build the first class session around the Cuban Missile Crisis as a real-life example of analytical decision-making in action.

To start, he gave ChatGPT a simple prompt for a lesson plan:

Write a class plan for the first session of a course on decision-making under uncertainty. The session should be based on President Kennedy's decisions arounds the Cuban Missile Crisis.

The result it generated was a reasonable lesson plan with some interesting elements, but it didn't meet all his goals for the class. The tool needed more specific prompting to produce a result closer to what he wanted, so he created a more sophisticated prompt using TIC formula (see Figure 1 on page 35).

WATCH DAN LEVY BREAK DOWN THE PROMPT HE USED TO PRODUCE A CLASS PLAN THAT BETTER MATCHED HIS GOALS

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This prompt began with context, or telling the AI the goal of the course. Then, Dan gave it instructions on how he wanted it to do the job, specifying what decision-making concepts from the course he wanted it to cover and what example he wanted it to use to illustrate them (President Kennedy's decisions). He ended with the specific task request of creating an outline for a 60-minute class plan and suggesting additional resources.

The end result was much more applicable to the specifics of his course.

Component	Description
Task	**What** you want AI to do
Instructions	**How** you want AI to do it
Context	What you want AI to **know**

Source: Svoronos (2024)

"ChatGPT Strategies You Can Implement Today to Enhance Your Class Sessions." Harvard Business Publishing, 2024.

Figure 1: The task, instruction, context formula for prompting generative AI.

WATCH DAN LEVY DEMONSTRATE HOW BETTER PROMPTING PRODUCES MORE USEFUL RESULTS

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Following up on AI's output

Dan still wanted a little more from his new lesson plan, so he acted on our third principle and treated the AI as a conversation partner. He asked ChatGPT some follow-up questions that helped him refine the

class, such as the specific options Kennedy considered and what some relevant behavioral biases are.

WATCH DAN LEVY USE CHATGPT AS A CONVERSATION PARTNER TO ADD NUANCE TO HIS PLANNING

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Dan reviewed many of the background resources ChatGPT suggested. Not all of these resources were relevant, but some provided excellent materials to better prepare for class.

Finally, Dan finished his class preparation by asking ChatGPT to format a table for a student handout. You can offload a lot of menial tasks like this to gen AI to save you time.

WATCH DAN LEVY USE CHATGPT TO PRODUCE A FIRST DRAFT OF A TABLE FOR STUDENT HANDOUTS

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At the end of this work, Dan had a class plan and materials he was pleased with. He may have come up with something similar on his own, but he would have spent much longer doing it.

A streamlined class-planning process

These simple techniques can be used by any educator, regardless of technical knowledge, to improve the class planning process.

When Dan showed his draft class plan to a colleague knowledgeable about the Cuban Missile Crisis, he said that it was the kind of work he would expect from a top research assistant. That, essentially, is the ultimate potential of ChatGPT for educators: a top-quality assistant that can augment your work and collaborate with you. With the

strategies we've shown here, you can tap into the strengths of that assistant today.

If you also need to refine a course you've already taught, read the second article in this series to learn how to apply similar techniques in that scenario.

Note: One of the authors, Dan Levy, presented this article's ideas in an HBP Education webinar entitled "ChatGPT Strategies You Can Implement Today to Enhance Your Class Sessions." You can view a recording of the webinar here.

Explore more

ARTIFICIAL INTELLIGENCE **COURSE DESIGN**

Dan Levy has been a faculty member at Harvard University for over 15 years and currently serves as the faculty director of the Public Leadership Credential, the Harvard Kennedy School's flagship online learning initiative. He co-founded Teachly, a web application aimed at helping faculty members to teach more effectively and more inclusively. He has also published the book *Teaching Effectively with Zoom*.

Angela Pérez Albertos is an MPA in International Development graduate from the Harvard Kennedy School. She works at Innovamat, an education organization that focuses on improving math pedagogy across public and private schools, and serves as a teaching fellow at Harvard University.

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