

A Appendix

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Theme	Quotation	Expert
Easing AI Engagement Through Flexible and Incremental Information Collection	“[The] first time [the] chatbot may need to know more about the instructor... their experiences, preferences, but the second time maybe [the] chatbot will ask a question, like some reflection questions [about] what’s going wrong. For a specific course, they can use the same chain or thread. Because... that chain includes all the relevant info about that course.”	1
Scaffolding AI Adoption Through Progressive Engagement	“That would be a great way for you to track it if they had a reflection piece within there to where they could go when they come back and then say, how did it go? And you’re like... this didn’t work out or whatever else like that.”	4
Building Trust Through Peer Validation and Social Transparency	“Maybe they... meet some challenges... when they teach their courses and they read an article about [how] their peers... solve this problem [using the chatbot]... I think it should be someone from the *** community that they feel relevant to... build a connection between the community then they will be more likely to try this tool.”	1
Encouraging Instructors’ Refinement with Conversational Design	“I certainly like the idea here of the tool, especially for the skeptic, although for what it’s worth, I actually think there’s value in this across the board, even for the kind of more novice or optimistic user of having the tool be transparent about where it’s drawing its information from or what its line of reasoning is... All of those... features of transparency that the instructor can follow along and interrogate and try to trace back sources of information that’s pulling from and then give them the ability to flag areas of concern or adjust the information that the tool has like I think those are good models for these AI tools in general”	5
Addressing Data Privacy Concerns through Proactive and Reactive Strategies	“Open the opportunity for them to challenge AI, [it] can be... a good way to ease their concern... Since you are using AI chat bot maybe give them an opportunity at the beginning and say, okay, do you have any ethical concern[s] feel free to ask me or have some guiding question for them to ask AI or follow-up”	3

Table 1. Storyboard Themes Quotations

Theme	Quotation	Expert
Considerations for AI-Conservatives	“When I’m reading this, I’m thinking what nudges the instructor to use the AI tool because he is very cautious. I’m thinking that he might be cautious about privacy and his course content... if the instructors are skeptical and very cautious they won’t try the tool and they won’t even upload the course content, course materials, even though they are told that this information will be removed.”	1
Step 1: Help Instructors Scope Teaching Questions/Goal	“Yeah, [the prompt is] just too broad, so [you need] to get a conversation: Are there specific aspects of your teaching you would want to be including? For example, in your assignments, classroom discussions, classroom community and you can say like inclusive teaching covers all these different things, is there a specific area that you would want to focus on?... Because otherwise, a whole list of things is sort of overwhelming.”	8
Step 2: Collect Additional Context	“We should also prompt them for... how much effort they’re hoping to spend... like how much time are you willing to invest ahead of time and how much of your class time are you able to spend on this?”	7
Step 3: Evaluation of Instructors’ Actual Teaching Ability	“I think the chatbot needs to understand what levels, not just what class topic. Is this a hundred level with first year students? Is it a four hundred level with seniors? Is it a major course? Is it an elective course? These are all major factors that will influence pedagogy. Also maybe asking how experienced they are [at] teaching. The chatbot needs to know, is this their first year teaching, are they a veteran, an older instructor that’s trying to modernize a traditional method... Is this a brand new course? Or is this a course [they have] taught many times before?”	10
Typical Errors: Suggestion Fusion and Lack of Discipline Specificity	“I’m just guessing that [the chatbot] shoved some activities together in a way that doesn’t actually play out super hopefully. [Mismatching teaching suggestion] can be [a good idea], but it needs vetting.”	7

Table 2. LLM-Generated Suggestions Themes Quotations

Set	Question
5	<p>Please give me some ideas of activities to do in class that reinforce the key concepts from a homework assignment but in a way that engages students and has them learning actively.</p> <p>What are some scenarios I could present to students in order to have them apply their learning of key course concepts?</p> <p>What are some ways I could involve students more in the creation of course materials like the syllabus and course readings so that they have a greater sense of investment in the course?</p> <p>What are some ways I could get the class to create community guidelines for the course so that students have a greater sense of investment in and responsibility toward one another?</p> <p>What are some ways I can shape or phrase course policies so that students understand I am invested in their learning and not interested in policing them?</p>
20	<p>What are some writing assignment prompts that encourage students to invest themselves authentically in the process of writing?</p> <p>What are some multimodal assignments I could assign students that would allow them to use generative AI to assist in their work but wouldn't circumvent the necessary cognitive and intellectual work they need to do?</p> <p>What are some assignments I could develop that have real-world stakes and impacts for students, so that they feel more palpably that they are writing for a purpose?</p> <p>What are some of the ways I might scaffold an assignment across several weeks so that students engage their work over time and develop a process?</p> <p>What are some ways I might design an assignment so that students feel comfortable taking risks and aren't concerned about being penalized for failure, even though they eventually have to get a grade on the assignment?</p> <p>What are some in-class activities I could do in the classroom to create a greater sense of belonging for everyone in the room?</p> <p>How might I use Canvas/my LMS to create a greater sense of belonging and community in my course?</p> <p>What are some design strategies and techniques I could implement to make my course materials (like my syllabus and assignment prompts) more welcoming and inclusive?</p> <p>I am looking for some potential assessment methods that will capture the learning growth of each student and that meet the student where they're coming from rather than assess them against a shared evaluative standard.</p> <p>What are some assessment practices that would allow me to better capture the learning students undergo during the process of creating their work rather than evaluating the outcome of that process?</p> <p>What are some assignments or assessment practices that encourage greater metacognitive reflection in my students toward their learning?</p> <p>I'm teaching a large introductory course and finding it challenging to ensure all my learning activities, both in-class and out-of-class, effectively support the course's learning objectives. Could you suggest ways to better align my learning content with course goals?</p> <p>I feel overwhelmed by the time it takes to design engaging and rigorous lessons while managing grading, research, and meetings. How can I balance my workload and maintain intellectual rigor when designing lessons?</p> <p>I'm exploring new ways to use technology to enhance student engagement inside and outside the classroom. Could you provide suggestions for leveraging technology to create active learning experiences and promote student interaction?</p> <p>I teach a course with a diverse student population. Some students have extensive background knowledge, while others are new to the subject. How can I pace my instruction and design activities to ensure all students are both challenged and supported in achieving the learning outcomes?</p> <p>Should I share rubrics with students before assessments are due?</p> <p>What is the best method for exam assistance in STEM courses: a provided equation sheet, let the students write a "cheat sheet" or open book?</p> <p>How do I encourage attendance without requiring it as part of the grade? Are there different ways of "convincing" students to come to class?</p> <p>What are some good activities/tricks for learning and remembering student names in large classrooms?</p> <p>I need students to memorize a list of plants' scientific names. Can you suggest classroom techniques to help them do this?</p>

Table 3. Questions provided by experts for evaluating generated suggestions.

Question	What are some scenarios I could present to students in order to have them apply their learning of key course concepts?
Suggestions	<ol style="list-style-type: none"> 1. Case Studies: Present real-world scenarios related to the course content. Ask students to analyze the situation, identify key concepts, and propose solutions or outcomes based on their learning. 2. Role-Playing: Create scenarios where students must assume roles relevant to the course material. This encourages them to apply concepts in a dynamic and interactive way, fostering deeper understanding. 3. Problem-Based Learning: Design complex, open-ended problems that require students to apply multiple course concepts to find a solution. This approach encourages critical thinking and collaboration. 4. Simulations: Use simulations to mimic real-life processes or systems. This allows students to experiment with course concepts in a controlled environment, observing outcomes and refining their understanding. 5. Debates: Organize debates on topics related to the course. This requires students to research, apply their knowledge, and articulate their understanding of key concepts while considering opposing viewpoints. 6. Project-Based Learning: Assign projects that require students to apply course concepts to create something tangible, such as a report, presentation, or model. This approach integrates learning with practical application. 7. Scenario-Based Discussions: Present hypothetical scenarios and facilitate discussions where students must apply their knowledge to predict outcomes or solve problems, encouraging them to think critically and collaboratively. 8. Interactive Quizzes: Use technology to create interactive quizzes that present scenarios requiring application of course concepts. This can be a fun and engaging way to reinforce learning. 9. Peer Teaching: Have students create and present scenarios to their peers, explaining how they would apply course concepts. This reinforces their understanding and builds communication skills. 10. Reflective Journals: Ask students to write about how they would apply course concepts to hypothetical or real-life scenarios in a journal. This encourages reflection and deeper understanding of the material.

Table 4. An example of generated suggestions from ChatGPT.

Question	What are some scenarios I could present to students in order to have them apply their learning of key course concepts?
Suggestions	<p>**Scenario-Based Learning Suggestions**</p> <p>**Purpose:** To provide students with practical scenarios that allow them to apply key course concepts in a realistic context, enhancing their understanding and retention of the material.</p> <p>**Introduction and Background:** Scenario-based learning is an effective educational strategy that immerses students in real-world situations where they must apply their knowledge and skills. This approach not only reinforces theoretical concepts but also develops critical thinking, problem-solving, and decision-making abilities. By engaging with scenarios, students can see the relevance of their learning and are better prepared for real-life applications.</p> <p>**Procedure:**</p> <p>**1. Scenario Development:**</p> <ul style="list-style-type: none"> - **Identify Key Concepts:** Begin by identifying the core concepts or skills you want students to apply. These should align with your course objectives. - **Create Realistic Scenarios:** Develop scenarios that are relevant to the students' field of study or future career paths. Ensure these scenarios are complex enough to challenge students but not so difficult that they become discouraged. - **Incorporate Multiple Perspectives:** Design scenarios that require students to consider different viewpoints or roles, encouraging them to think critically and empathetically. <p>**2. Scenario Presentation:**</p> <ul style="list-style-type: none"> - **Introduce the Scenario:** Present the scenario to the students, providing all necessary background information. This can be done through written descriptions, videos, or role-playing activities. - **Clarify Objectives:** Clearly outline what students are expected to achieve by the end of the scenario exercise. This could include identifying problems, proposing solutions, or making decisions based on the information provided. <p>**3. Scenario Engagement:**</p> <ul style="list-style-type: none"> - **Group Work:** Divide students into small groups to encourage collaboration and discussion. Each group can work on the same scenario or different ones, depending on the class size and objectives. - **Guided Exploration:** Provide guiding questions or prompts to help students navigate the scenario. Encourage them to apply course concepts and consider the implications of their decisions. - **Facilitate Discussion:** As students work through the scenario, circulate the room to offer support, answer questions, and prompt deeper thinking. <p>**4. Scenario Debrief:**</p> <ul style="list-style-type: none"> - **Group Presentations:** Have each group present their findings and solutions to the class. This allows students to learn from each other's perspectives and approaches. - **Class Discussion:** Facilitate a class-wide discussion to reflect on the different solutions proposed, the application of course concepts, and any challenges encountered during the exercise. - **Feedback and Reflection:** Provide feedback on the students' application of concepts and encourage them to reflect on what they learned and how they might apply it in the future. <p>**Follow-up:**</p> <ul style="list-style-type: none"> - **Written Reflection:** Ask students to write a brief reflection on the scenario exercise, focusing on what they learned and how they applied course concepts. - **Scenario Revisions:** Based on student feedback and performance, revise scenarios for future use to better align with learning objectives and student needs. <p>**Comments:** Scenario-based learning is a dynamic way to engage students and deepen their understanding of course material. By simulating real-world situations, students can see the practical application of their learning, which enhances motivation and retention.</p>

Table 5. An example of generated suggestions from our prototype.