

Student Response Best Practices for Higher Education

The benefits of using TurningPoint in the classroom are tremendous. Once you are comfortable using the system, a little extra effort is required to create an effective presentation and accomplish the goal of your lecture.

There are four steps to consider when creating a TurningPoint presentation to be used in class.

1. Establish objectives for your presentation.
2. Determine in what context you would like to use your interactive slides.
3. Create the questions and presentation.
4. Integrate the presentation into your lesson plans.

Establish Presentation Objectives

When creating a TurningPoint presentation, you should have specific objectives in mind for what you would like to accomplish by using the technology. Establishing a goal will help you to create an effective presentation, as well as provide you with data that will help you enhance your class. Below is a list of common objectives to consider:

1. To modify lectures on the fly based on the responses from the class
2. To improve your lecture style based on analyzing data collected in class ³
3. To recognize students' misconceptions or preconceptions ³
4. To encourage attendance, participation, and discussion ³
5. To extract and discuss diverse points of view in controversial subjects
6. To review, offer feedback, and identify areas of difficulty in the curriculum ³
7. To evaluate mastery of content, basic topic knowledge, and comprehension: Remembering facts, terms, concepts, definitions, and principles ⁴
8. To judge the students' ability to apply concepts or principles ⁴
9. To observe the student's ability of analysis and breaking down of the material ⁴
10. To encourage the students to try to synthesize material, producing something new or original from component parts

Once you have outlined your objectives for your class, you can create effective questions and adapt your presentations to accomplish that objective.

Determine Context for Interactive Slides

Generally, there are 4 contexts in which to use your questions. These relate back to your class objectives and what you want to accomplish by using TurningPoint. Categorizing your possible questions will allow you to place them in the most effective context of your lecture, unit, or lesson plan. Below are common categories used to classify the types of questions to be asked in class.

Pre-Assessment

By using TurningPoint as a pre-assessment tool, you will be able to assess your students' prior knowledge, as well as any misconceptions they might have. These types of questions should be used at the beginning of a new unit or at the beginning of a lecture.⁴

Mid-Topic Assessment

By using TurningPoint as a mid-topic assessment tool, you will be able to assess your students' current understanding of the principles, how they might apply concepts, and how their current thinking might be changing. These questions should be used occasionally throughout a unit or lecture. They will also enable you to alter the direction of the course by allowing you to judge the students' comprehension.⁴

Post-Assessment

By using TurningPoint as a post-assessment tool, you will be able to judge the students' ability to synthesize concepts in order to solve problems, to see how their understanding might have changed, and to observe their overall comprehension of the subject. These questions may be used for review at the end of a unit or lecture, or for assessment at the end of the semester.⁴

Discussion Generators

By using TurningPoint as a discussion generator, you will be able to get the students thinking about the subject, as well as involved in the topic. Use these questions to ask a question that will have multiple viewpoints, and then use the responses to generate disagreement, discussion, and possible consensus. These can be used anywhere, but make sure to allow enough time for the discussion to play itself out.

Create Questions and Presentation

While creating your questions and putting them into your presentation, remember the objectives and contexts that you decided upon in steps 1 and 2. Anyone who has used a Student Response System for a long period of time has their own suggestions on how to create the most effective questions. Below is a compilation of suggestions found in books, articles, and interviews with professors of all different fields of study.

Do not make questions overly complex.

Keep questions short to optimize comprehensibility in a slide, and most studies suggest offering no more than five answer options. Also, avoid requiring lots of complex calculations that may encourage students to guess rather than thinking through the question.⁶

Simplify sentences and questions.

A question should be easy to read and understand in a short period of time. Questions that have too many unnecessary words only confuse the students and produce unreliable results. Most educators agree that a question setup for response cards should never display more than 25 to 30 words.⁶

Keep the slide easy to see and uncluttered.

It's easy to get excited about all the different objects, backgrounds, and graphics you can place into a slide or presentation. However, a good rule of thumb is, "The simpler, the better." You should try to keep the slide as clean and easy to read as possible. Using too many of these objects and graphics can create confusion, distraction, and even difficulty reading the slide. Use only the objects that are necessary for your class to understand the question and for you to feel comfortable with the results.¹

Give the students extra options.

Consider adding a "Not Sure" or "Abstain" option to True/False, multiple choice, or even discussion generating questions. This will add interest and will increase the percent of students who respond to the question, as well as give you an idea of how many students might truly not understand the topic.¹

Use images to enhance the questions.

Consider adding relevant diagrams, clip art, or pictures. Images can add an important dimension to a question, and give the class another point of reference in selecting a response. TurningPoint has a special Picture Slide capability that will even allow you to use the images as possible answers.

Survey for opinions and feelings.

Offer questions that do not necessarily have right or wrong answers. Likert questions, for example, can provide an important outlet for a class to express opinions about important or controversial topics. Students also like to see how their opinions compare to the rest of the class. These questions can generate great class discussions.

Intersperse questions throughout your presentations.

Classes enjoy having the opportunity to provide input, and can provide you with valuable feedback as to how they are absorbing the material. Therefore, if you place them in strategic places throughout your presentation, instead of lumped together at the end, you can not only keep the class engaged, but also gather the information necessary to see where a class might start going astray.¹

Try using a “warm-up” question.

Insert a question at the beginning of your presentation, to get the students “warmed-up.” This allows the students to sit down, get set up, and actually start to focus on class material, during the time that they might usually sit idle or socializing.

Try connecting question topics together.

Questions are often effective when they are linked logically together with the solution to the previous question given at the start of the next question. This helps to promote continuity and dialogue with the class.¹

Pose questions with no clear answer

A University of Massachusetts study suggests, “There is less need for rigor when questions are low risk. Questions may include deliberate (or accidental) mistakes, be ill-posed, invalid, or ambiguous. For example, a multiple-choice question, for which only one selection is required, may have more than one correct choice, no correct choices, or choices that are only partially correct. These “unsound” questions may provoke discussion and support learning far better than a formally valid question.”²

Consider delaying the answer choices.

Questions may be better delivered in “hidden” mode, in which answer choices are delayed until after the question has been attempted or discussed. For example, if a student can verify the correct choice by working backwards, it is appropriate to hide the possibilities until an answer has been worked out on paper. You can do this by using custom animations on your answers, and setting them to appear after the question.¹

Try asking questions more than once.

Ask a question, show the results but not the correct answer, and ask to discuss with neighbors or in groups, then re-poll the question from the TurningPoint showbar. This will allow the class to reconsider the answer, as well as see how that changed the responses.⁵

Let your audience know what is going on within the slide.

Try including one or two objects in your slide that will clarify things for your students, or even increase responsiveness. TurningPoint offers several choices, including an “Answer Now” prompt to differentiate between lecture slides and interactive polling slides, a “Correct Answer” indicator to visually identify the appropriate answer, and a “Countdown Timer” which will close polling after a set amount of time.⁷

Integrate the Presentation into Your Lesson Plans

Just as there are many strategies for creating questions, there are multiple approaches to integrating student response into the classroom. Below are suggestions, but be creative and use methods that work well for you!

Try using a question cycle to develop a lesson plan.

Ask a question via TurningPoint, then allow students group discussion time and to answer. After the students respond, show the chart and use it to generate class discussion, asking for reasoning. Based on ideas generated during discussion, you can follow up with general observations, a brief micro-lecture, perhaps another related TP question, or any necessary materials for closing, as well as final responses. *Be sure to allow time for discussion when planning your lesson.*²

Use demographics.

Assign demographics to track how specific student groups respond. For example, looking at basic results, you can see that 75% of students understood the material. However, by viewing it by demographic, you may find that 75% were all people who were subject majors and that the non-majors were confused, allowing the opportunity to change the way you may explain the material.

Allow the students to steer the lecture.

Modify your lecture in real time, based on the students' responses. Use on-the-fly slides or conditional branching to allow for various answers.

Create slides and questions to add to regular discussion.

Use your slides to emphasize a theme, incident, or character that is important to the day's lecture. Include the students in the discussion of the results.

Use for review.

Studies show that the students benefit most with a combination of review questions and opinion questions. Try asking review questions that cover similar material and ask similar questions (but not identical) to what will be covered on the test. This helps to develop the students' processing skills, as well as familiarity with material.

Ask a question to create the discussion for the day.

Try asking a controversial question (or just a question the students will have varied and strong opinions about), and use the results to create the day's class discussion.

Use for participation or attendance.

Assign point values to answers instead of simply setting them as right or wrong and award attendance and/or participation points.

Create competitions and teams for review or discussion.

Add a fun, competitive element by tracking individual teams, groups, or students using a "Participant List". You can then view individual or team scores from your session, or even see who answered the fastest by adding a "Fastest Responder" slide to your presentation. ⁷

Additional Considerations ⁴

Provide clear instruction to the class.

Make sure everyone understands the process and how to use the technology. This may require extra time during the first couple uses. *Be sure to allow time for instructions when planning your lesson.* ⁴

Test everything ahead of time.

Check out the classroom location in order to identify any potential technical problems. Allow plenty of time to set up and test the system before class. Rehearse the question presentation to ensure that it will run smoothly. ⁴

Do not over use the system.

Ask questions sparingly to highlight the concepts you most want to emphasize. Think carefully about the main points of a lecture and create questions to target them. ⁴

Allot extra time for your presentations.

Question slides take time to ask, as well as to answer. Allow enough time in your lesson plans for student questions and discussion (if applicable), especially if the students are working in teams. ⁴

Sources

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