

# Leverage TurningPoint Applications to Support Research-Based Learning Theories

## Active Learning BONWELL & EISON

Involvement of learners directly and actively in the learning process itself. This means that instead of simply receiving information, students receive, participate and do.

### APPLICATIONS

Add an answer option of "unsure" so learners will not guess and instructors can know that help is needed. Advanced response devices allow students to send the instructor questions and comments. Instructors can use on-the-fly or custom questions to then pose student questions for the entire group to respond.

### FEATURES

On-the-Fly Questions, Custom Questions, Need Help Answer, Messaging

## Agile Teaching BRUFF

The ability for the instructor to quickly adapt and change course pace, as well as alter course structure to suit the needs and abilities of the learner.

### APPLICATIONS

Poll on-the-fly to enable flexible questioning. Build conditional branching slides that will automatically move to specific slides based on the learners' responses. Check for understanding and have learners self-evaluate their comprehension level using the moment-to-moment slide available within PowerPoint polling.

### FEATURES

On-the-Fly Questions, Conditional Branching, Moment-to-Moment Slides

## Assessment for Learning STIGGINS

Assessments of learning check to see if the learners have met required objectives. Assessments for learning, on the other hand, are designed to check if students are making progress toward meeting objectives during the learning process. One is for accountability, while the other is used to support learning.

### APPLICATIONS

Learners can rank their confidence levels of comprehension by changing answers from 1 to 10 during instruction. Allow them to respond without the stress of grading. Uncheck "Show Results" when there is a potential for a large percentage of incorrect responses during a pre-test that may lead to discouragement. Provide pre- and post-questions within one session and display changes with the comparative feature.

### FEATURES

Live Charts, Show Results, Comparative Feature, Anonymous Polling

## Engagement PRENSKY

Implementing teaching strategies that can reach a younger generation that grew up with interactive technology as the norm. This includes providing meaningful and regular student involvement throughout the learning experience.

### APPLICATIONS

Conduct a warm-up by having two to three questions related to previous materials in combination with fastest responder slides to involve students in their learning process. Priority ranking questions allow learners to identify several topics they are interested in learning more about.

### FEATURES

Fastest Responder, Priority Ranking

## Enhanced Lecture FAUST

This pedagogy encourages instructors to incorporate interactive teaching methods as part of a more traditional classroom environment in order to keep students engaged.

### APPLICATIONS

Instructors can use interactive questions to engage students and spark discussions.

### FEATURES

TurningPoint Questions, On-the-Fly Questions, Messaging, Priority Ranking, Countdown Timer

## Flipped Classroom WALVOORD

A model in which students gain first-exposure learning prior to class and focus on the processing part of learning (synthesizing, analyzing, problem-solving, etc.) in class.

### APPLICATIONS

Use interactive questions to instantly pinpoint areas where students need help and to spark debates that can serve as informal checks of student understanding. These can also support higher-level learning by promoting in-depth discussions and supporting collaborative questions.

### FEATURES

On-the-Fly Questions, Priority Ranking, Live Charts, Show Results

## Gamification PETTIT

Using competitive exercises, either pitting the learners against each other or encouraging them to challenge themselves in order to motivate better learning.

### APPLICATIONS

Use multiple gaming slides and simultaneously have learners compete individually or as teams. Show leader boards frequently, and encourage ongoing competition by posting the team scoring reports on a weekly basis.

### FEATURES

Team Slides, Team Scoring, Leader Boards, Speed Scoring, Reports, Fastest Responder

## Immediate Feedback EPSTEIN

Providing students with immediate feedback when they answer a question inaccurately has been shown to increase test scores and retention of material.

### APPLICATIONS

By providing a chart and correct answer indicator, learners and instructors get immediate results and awareness of the correct answer. To view learner-specific responses, use a split/dual screen to view the participant monitor only on the instructor's laptop. Provide each individual learner with their "Results by Participant" report as a study guide.

### FEATURES

Correct Answer Indicator, Individual Reports, Participant/Live Results Monitor

## Learning Styles KEEFE

The theory of learning styles is not concerned with "what" students learn, but rather "how" they prefer to learn. This includes audio, kinesthetic and visual learning preferences.

### APPLICATIONS

Use demographic slides to identify individual learning styles and compare student performance on different questions. Utilize images for visual learners and include video/audio files to appeal to additional learning styles. Set the chart settings to correct and incorrect to visually show a green/red chart.

### FEATURES

Demographics, Data Slicing, Insert Images, Answer Now, Chart Colors, Insert Video/Audio

## Motivation KELLER

Attention, Relevance, Confidence and Satisfaction (ARCS) are four steps for promoting and sustaining motivation in the learning process. In order to encourage motivation, an instructor must capture learners' attention, clearly show the relevance of the material, build student confidence and illustrate a correlation between effort and results.

### APPLICATIONS

Use a countdown timer to motivate learners to answer quickly and display response grids to motivate participation. Leader boards spaced throughout a session will encourage competition. Positive and negative point values can be used to encourage motivation based on total points.

### FEATURES

Countdown Timer, Response Grids, Leader Boards, Gaming Slides, Point Values

## Peer Instruction MAZUR

Learners are asked a question and formulate their own answers. They then discuss their answers in groups and attempt to reach consensus on the correct answer. This process forces the learners to think through the arguments being developed, and enables them (as well as the instructor) to assess their understanding of the concepts even before they leave the classroom.

### APPLICATIONS

Ask the question initially without discussion. After discussion, ask the same question once again. Copy the question to show a comparative relationship between the first and second polling.

### FEATURES

Repoll, Comparative Feature

## Positive Reinforcement REID

Promotes the rapid questioning model and the positive reinforcement of correct responses. Encourages instructors to closely monitor learners' responses and expectation of learning mastery.

### APPLICATIONS

Use the correct answer indicator and display fastest responders or leader boards to reinforce correct answer choices. Use all positive point values for both correct and incorrect answers. Incorrect choices can be set at a lower value.

### FEATURES

Correct Answer Indicator, Point Values, Fastest Responders, Leader Boards

## Socratic Questioning HAKE

Pose questions that are more meaningful than those a novice of a given topic might develop on his or her own. Create and sustain intellectually stimulating learning environments and acknowledge the value of the learner in that environment.

### APPLICATIONS

A custom standards list allows for reporting based on the difficulty level of questions. Build on the learners' growing expertise by adding questions within a lecture with increasing difficulty. Use conditional branching to advance through material that has been mastered and monitor progress with the continue prior session feature.

### FEATURES

Custom Standards List, Conditional Branching, Continue Prior Session

## Spacing Effect GREENE

Learners easily remember or learn items when they are studied a few times over a long period of time.

### APPLICATIONS

Continue prior session can be used to collect data from various questions spaced between class periods. Provide learners with "think time" by inserting an essay answer question that students can answer using advanced response devices.

### FEATURES

Continue Prior Session, Essay Slide

## Team-Based Learning MICHAELSEN

A collaborative strategy designed around "modules" of instruction taught in a three-step cycle: preparation, in-class readiness assurance testing and application-focused exercise. The tests consist of an individual readiness assurance test (IRAT) which students complete on their own and a team readiness assurance test (TRAT) that they complete as part of a collaborative team.

### APPLICATIONS

Through real-time engagement and interactive assessments, students will receive frequent and immediate feedback during class. Students can be held accountable for individual work and team work by using team-based slides.

### FEATURES

Team Assignment, Participant Leader Board, Team Leader Board

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