

## Quick-Thinks: Making Lectures More Interactive

The following Quick-thinks were designed for application to a wide range of content areas. They were developed as strategies through which to make lectures more interactive. This procedure was developed by Susan Johnston, Ed.D. and Jim Cooper, Ph.D., and is adopted from the cooperative Learning and College Teaching newsletter vol. 8, no. 1 (Fall 1997) presented by the Teaching Academy at the University of Wisconsin-Madison.

In order to make a lecture more interactive, the following types of informal assessment activities can be used after a particular topic is covered in the lecture.

1. SELECT THE BEST RESPONSE
2. CORRECT THE ERROR
3. COMPLETE A SENTENCE STARTER
4. COMPARE OR CONTRAST
5. SUPPORT A STATEMENT
6. REORDER THE STEPS
7. REACH A CONCLUSION
8. PARAPHRASE THE IDEA

One approach to piloting some of these techniques might be to select one course on which to focus. Review the main topics and list the most essential content to be learned at each class session- those concepts, skills, principles, or facts that have the highest priority. One way to think about this is to consider which "big ideas" you would like students to remember one year after they complete your course.

Then match each of these content focal points with a Quick-think task that seems to fit best. For example, if you are going to teach a procedural skill, task #6 (REORDER THE STEPS) might be a good choice so that students can gain familiarity with that procedure. If you are going to teach an abstract concept that has a complex definition, you might want to choose # 8 (PARAPHRASE THE IDEA) so that students can translate technical language into their own words and test their own understanding.

At the first class meeting in which you plan to use Quick-thinks, you will need to explain to your students how you will be using this strategy and how it will positively affect their learning. There is no set formula for how often to stop and ask students to think about the content being explained. Our experience and some quantitative evidence suggest that every fifteen minutes or so results in increased attention, interest, and learning. Participation options vary: students can record their responses individually and then explain their answers to a neighbor, they can verbally generate an answer with a neighbor, or they can be asked to silently think about a possible response. The instructor then needs to provide feedback so that students can hear or share correct or possible answers. Following are specific descriptions of eight Quick-thinks.

### 1. Select the Best Response

This task is most similar to the traditional multiple-choice test item. Students are presented with a question or scenario and then asked to consider which one of several alternatives best answers it. This task can simply require the recall of information just covered in the lecture or the application of that information.

The original question or scenario can be:

- an incomplete sentence that is completed by the selection of one response.
- an incomplete sentence containing an internal blank line to be filled in by the correct answer.
- a complete sentence followed by several; possible answers.

#### *Example*

Course: Psychology

Content to be learned: Defense mechanism

Format selected: Incomplete Sentence

While Professor Woods was going through a painful divorce, he tended to create unnecessarily difficult tests and gave his students unusually low grades. A psychoanalyst would be most likely to view the professor's treatment of his students as an example of

- a. repression
- b. projection
- c. displacement (Correct answer: c. displacement)

### 2. Correct the Error

For this task, the instructor creates an intentional error based on important content just discussed. Students are then asked to correct that mistake. This active-thinking task requires a basic level of comprehension and some immediate processing of content just heard or observed.

The intentional error can contain:

- inaccurate or illogical statements, conclusions, predictions, or implications
- weak arguments
- unlikely quotations

#### *Example*

Course: Teaching Methods

Content to be learned: Learning outcomes

Format selected: Inaccurate Statement

A learning outcome in a lesson plan describes how the teacher will present the new content.

(Correct answer: A learning outcome is a description of what the students will do to demonstrate their understanding.)

### 3. Complete a Sentence Starter

For this task, instructors create a sentence stem that needs completion to reflect an accurate statement. In order to complete the statement accurately, students need to understand the information that was just explained, discussed or read. The content described can be presented in a way that requires only a rote level of understanding where students simply recall information just described by the instructor. In order to elicit a deeper level of understanding, the sentence starter would require reflection that goes beyond recall to levels of application, analysis or evaluation.

The sentence starter can focus on:

- a definition
- a cause/effect relationship
- an implication
- a rationale
- a controversy

#### *Example*

Course: Criminal Justice

Content to be learned: California's "three-strikes" sentencing policy

Format selected: Cause/effect Relationship

"The 'three strikes' mandatory sentencing laws might result in \_\_\_\_\_."

(Correct answer might include: prison overcrowding, increased pressure on judges to make exceptions, increased employment opportunities in prisons, new prisons built, and/or reduced crime rates.)

### 4. Compare or Contrast

For this task, instructors identify two important parallel elements from the lesson. As students are asked to focus on similarities or differences, they must think about the content at a deep level. This strategy is most effective if the instructor has not already provided a comparison, but has simply presented the two elements separately in some depth.

The items being compared or contrasted can be:

- theories, methods, or models
- examples of writing, music, art. . problems or solutions
- aspects of historical or current events. . authentic or mythical scenarios

#### *Example*

Course: Art History

Content to be learned: Twentieth-century painting

Format selected: Examples of Art

After viewing the 1933 Joan Miro painting entitled *Composition* and the 1950 Jackson Pollock painting entitled *One*, record one similarity between the two paintings. (Correct answer might include: fluidity of design, non-realistic content, or impression of movement.)

## 5. Support a Statement

For this task, instructors create a statement for which students must locate support from their immediate lecture notes or from the homework reading or they can be asked to generate their own reasons or data to support the statement. Rather than passively accept information given by the instructor, students are asked to think about why a statement might be justified.

The statements requiring support can be:

- conclusions
- inferences
- theories
- opinions
- descriptions

### *Example*

Course: Geography

Content to be learned: Negative impact of political decisions on ecology

Format selected: Conclusion

"Warfare has historically had a devastating impact on the earth's resources. Give three pieces of evidence to support this statement." (Correct answer might include: the systematic scorching of the earth by retreating armies, tank exercises that destroyed animal and vegetative life in the southern California desert, hydrogen bomb testing that rendered some Pacific islands uninhabitable.)

## 6. Re-order the Steps

For this task, instructors present a series of steps in a mixed order and students are asked to re-order the items into the correct sequence. This task can be used either as a motivational technique where students are asked to anticipate the order and make a logical guess before learning the information or as a method to allow students to review the content that they have just learned.

Steps needing to be re-ordered can belong to a:

- procedure
- sequence
- method
- plan
- strategy
- technique

### *Example*

Course: English

Content to be learned: Using the American Psychological Association (APA) format to write in-text citations when paraphrasing someone else's work in a written essay or research paper

Format selected: Procedure

These steps need re-ordering:

- 1 - write your paragraph or sentence
- 2 - place an ending period
- 3 - write the author's full name and the year of publication
- 4 - enclose with parentheses

(Correct answer: Step 1, 3, 4, 2)

## 7. Reach a Conclusion

This task requires students to make a logical inference about the implications of facts, concepts, or principles they just learned. A conclusion can be drawn from: data, opinions, events, or solutions. The statements provided to students may result in multiple responses that can all be logically derived from the content provided.

The inferred conclusions can be:

- \* probable results
- \* probable causes
- \* negative and/or positive outcomes

### *Example*

Course: Earth Science

Content to be learned: Testing for hardness using common objects equivalent to minerals on Moh's Hardness Scale

Format selected: Probable Results

"If you can scratch the smooth surface of a mineral with a tempered-steel file but not with a piece of glass, you could conclude that \_\_\_\_\_"

(Correct answer might include: The mineral cannot be quartz, topaz, corundum, or diamond. The mineral has a hardness between 6 and 10 on Moh's scale.)

## 8. Paraphrase the Idea

This task requires students to rephrase an idea using their own words. When students engage in this kind of translation process, they are forced to check their own understanding of what they think they just heard. It is often helpful to have students target their paraphrase toward a specific audience, such as: a novice, a colleague, or a client.

The content to be paraphrased can be a:

- definition
- theory
- statement
- procedure
- description

### *Example*

Course: Health

Content to be learned: The body's adaptation to stress

Format selected: A Statement

Paraphrase this statement so that a member of your family would understand what is specifically happening to his body during a stressful event: When an individual perceives a stressor, the body automatically responds with a three-stage process known as the General Adaptation Syndrome.