

Strategy 1

Brainstorming and Discussion



WHAT: DEFINING THE STRATEGY

What is it we want our students to know and be able to do as a result of this course or unit of instruction?

How will we know when each student has learned it?

What are effective strategies for monitoring student learning?

How do we respond when students are not learning?



These are only a few of the pertinent questions that should be consistently asked and answered when adults are participating in professional learning communities (PLCs). These questions can lead to rich discussion regarding ways to improve student learning, which should be the goal of every professional learning opportunity.

I still remember attending a graduate class in which, if a student's answer didn't concur with the professor's, the professor criticized the answer and humiliated the student. Isn't it funny that I remember this experience because it was personally emotional for me, and yet I don't recall any of the course content? I spent the entire semester fearing I would be called on and be unable to anticipate what the professor had in mind.

Administrators, professional developers, and college and university professors who engage adult brains with opportunities to brainstorm ideas without fear of criticism, to debate differing opinions, and

to answer questions at varying levels of Bloom’s taxonomy (knowledge, comprehension, application, analysis, evaluation, and synthesis) have faculty meetings and classes in which participants master amazing amounts of content and solve job-embedded problems. These are classes in which brainstorming and discussion are utilized and numerous responses are respected and valued. Refer to Figure 1.2, *Bloom’s Taxonomy Revised*, at the end of this chapter for samples of question stems that can generate quality discussion.



WHY: THEORETICAL FRAMEWORK

- Teachers expressed the need for more time to talk with one another, but only 46% stated that collaboration was promoted as a part of their professional development (Gregory & Kuzmich, 2007).
- When teachers can discuss and brainstorm new ideas with other teachers in professional learning communities, they are more successful in implementing what they are learning in professional development (Nolly, 2011).
- Questions during brainstorming and discussion should be divided into two general categories: (1) those that can be answered by deductive reasoning or for which one can find the correct answer to the question by deducing it from the data provided, and (2) those that can be answered by inductive reasoning or questions to which there may be multiple solutions (Delandtsheer, 2011).
- When study groups dialogue about teaching and learning, the conversation focuses on reflection, inquiry, and exploration (Gregory, 2008).
- The purpose of discussion is to talk about something in a friendly and constructive manner while offering data, ideas, knowledge, information, and rationales for opinions and positions and attempting to convince others to accept your position (Costa, 2008).
- Following an actual experience, having people verbally retell events and ideas through discussion and dialogue assists the brain in tapping into cognitive memory (Fogarty, 2009).
- It is beneficial to adolescents and adults to have the opportunity to lead their own discussions as a group (Jensen, 2007).
- The stresses of change can be easier to manage when administrators and teachers develop teams that take on the leadership and ownership of professional learning (Gregory & Kuzmich, 2007).
- Allowing people to conduct an unguided discussion around a specific topic is an ideal way to motivate them to change and develop their knowledge, since they do not feel that they are being coerced into believing what their teacher wants them to believe (Jensen, 2007).
- When facilitating group discussions, selecting appropriate responses from the following facilitation menu may prove helpful: (1) paraphrase, (2) check for meaning, (3) give positive feedback, (4) expand or elaborate on a participant’s comment, (5) increase the pace, (6) serve as the devil’s advocate, (7) relieve tension, (8) consolidate by putting together ideas, (9) change the process, and (10) summarize the major views or discussions of the group (Silberman, 1999).

HOW: PROFESSIONAL LEARNING ACTIVITIES



- Have participants circulate around the room and discuss, with at least three people, their expectations for the course and what knowledge, skills, and behaviors they aspire to attain upon completion.
- Establish a participant Parking Lot as in Figure 1.1 by placing a piece of chart paper on the wall. Place four to six sticky notes on the chart paper. When participants have a question for discussion during a workshop or course, have them select a sticky note, write the question on the note, and place it back in the Parking Lot. At an appropriate time, select questions from the Parking Lot, read them aloud, and provide answers or allow participants to do so.

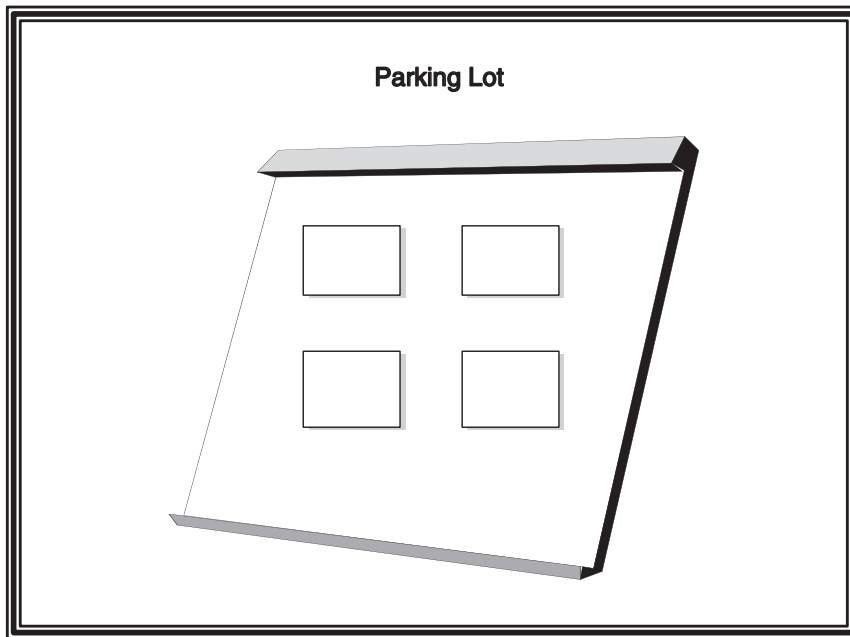


Figure 1.1

- Conduct a class session for the major purpose of exploring ideas related to a course topic or having participants offer input into the course objectives and strategies for implementation. Have participants come to class prepared to generate questions for discussion prior to teaching or participate in dialogue related to the topic.
- Give participants an open-ended question to which there may be multiple answers. Have them participate in a

brainstorming session, generating multiple ideas while adhering to the following **DOVE** guidelines: participants **D**efer judgment when others are responding, only **O**ne idea is given at a time, a **V**ariety of ideas are encouraged, and all participants are expected to direct their **E**nergy to the task.

- As content is discussed, use the *Bloom’s Taxonomy Revised* question stems that follow to formulate questions at all levels. Have participants answer questions during both whole-class and small-group discussion.
- Involve participants in a Socratic Seminar during a faculty meeting or course according to the following guidelines:
 - Determine the major concepts to be discussed from a text selection.
 - Formulate a set of questions that encourages participants to use the higher-level thinking skills of application, analysis, evaluation, and synthesis.
 - Have participants engaged in the discussion sit in the inner circle; note takers sit in the outer circle.
 - To begin a discussion, start by asking a core question such as *What are the characteristics of a professional learning community?*
 - Have participants from either the inner or outer circle conclude the discussion with a summary statement.
 - Debrief with participants by asking for ways in which the format of the seminar could have been improved (Tanner & Cassados, 1998).
- Have participants work in cooperative groups to explain their answers to a class assignment as well as the reasoning behind the answers. When answers vary, have participants defend their answers unless convinced to change them.
- Have participants form groups based on interest in particular topics. Have each group select an article or read a book of interest to them all. Have the groups meet to discuss the content by asking questions of one another, making connections, and challenging one another’s opinions.
- Have participants work in cooperative groups to brainstorm as many answers as they can come up with to a designated question. For example, during a PLC meeting, participants are asked to come up with as many ways as possible to improve the comprehension scores of fourth grade students.
- As a review activity, give participants 2 minutes to brainstorm on paper as many concepts as they can remember from a previous class session. Have them compare their brainstormed list with the

list of one of their peers. Each participant receives one point for every concept recalled that is not on his or her partner’s list. The object is to accumulate as many points as possible by brainstorming a longer and more unique list.

- Have participants use the question stems of the *Bloom’s Taxonomy Revised* to generate test questions that can be used for assessment purposes throughout the professional learning experience.

Bloom’s Taxonomy Revised

Bloom’s *Taxonomy* (1956) has stood the test of time. Recently, Anderson and Krathwohl (2001) have proposed some minor changes to include the renaming and reordering of the taxonomy. This reference reflects those recommended changes.

I. REMEMBER (KNOWLEDGE)

(shallow processing: drawing out factual answers, testing recall, and recognition)

<i>Verbs for Objectives</i>	<i>Model Questions</i>	<i>Instructional Strategies</i>
Choose	Who?	Highlighting
Describe	Where?	Rehearsal
Define	Which one?	Memorizing
Identify	What?	Mnemonics
Label	How?	
List	What is the best one?	
Locate	Why?	
Match	How much?	
Memorize	When?	
Name	What does it mean?	
Omit		
Recite		
Recognize		
Select		
State		

II. UNDERSTAND (COMPREHENSION)

(translating, interpreting, and extrapolating)

<i>Verbs for Objectives</i>	<i>Model Questions</i>	<i>Instructional Strategies</i>
Classify	State in your own words.	Key examples
Defend	What does this mean?	Emphasize connections
Demonstrate	Give an example.	Elaborate concepts
Distinguish	Condense this paragraph.	Summarize
Explain	State in one word . . .	Paraphrase
Express	What part doesn’t fit?	STUDENTS explain
Extend	What exceptions are there?	STUDENTS state the rule
Give Example	What are they saying?	“Why does this example . . . ?”

(Continued)

Figure 1.2 (Continued)

Illustrate	What seems to be . . . ?	Create visual representation
Indicate	Which are facts?	(concept maps, outlines, flow
Interrelate	Is this the same as . . . ?	charts, organizers, analogies,
		pro/con grids) PRO/CON
Interpret	Read the graph (table).	Note: The faculty member can
		show them, but they have to
		do it.
Infer	Select the best definition.	Metaphors, rubrics, heuristics
Judge	What would happen if . . . ?	
Match	Explain what is happening.	
Paraphrase	Explain what is meant.	
Represent	What seems likely?	
Restate	This represents . . .	
Rewrite	Is it valid that . . . ?	
Select	Which statement	
	supports . . . ?	
Show	What restrictions would	
	you add?	
Summarize	Show in a graph or table.	
Tell		
Translate		

III. APPLY

(knowing when to apply; why to apply; and recognizing patterns of transfer to situations that are new or unfamiliar or that have a new slant for students)

<i>Verbs for Objectives</i>	<i>Model Questions</i>	<i>Instructional Strategies</i>
Apply	Predict what would happen if . . .	Modeling
Choose	Choose the best statements that apply.	Cognitive apprenticeships
Dramatize	Judge the effects.	“Mindful” practice—NOT just a “routine” practice
Explain	What would result?	
Generalize	Tell what would happen.	Part and whole sequencing
Judge	Tell how, when, where, why.	Authentic situations
Organize	Tell how much change there would be.	“Coached” practice
Paint	Identify the results of . . .	Case studies
Prepare		Simulations
Produce		Algorithms
Select		
Show		
Sketch		
Solve		
Use		

IV. ANALYZE (breaking down into parts, forms)

<i>Verbs for Objectives</i>	<i>Model Questions</i>	<i>Instructional Strategies</i>
Analyze	What is the function of . . . ?	Models of thinking
Categorize	What's fact? Opinion?	Challenging assumptions
Classify	What assumptions?	Retrospective analysis
Compare	What statement is relevant?	Reflection through journaling
Differentiate	What motive is there?	Debates
Distinguish	Related to, extraneous to, not applicable.	Discussions and other collaborating learning activities
Identify	What conclusions?	Decision-making situations
Infer	What does the author believe?	
Point Out	What does the author assume?	
Select	Make a distinction.	
Subdivide	State the point of view of . . .	
Survey	What is the premise? What ideas apply? What ideas justify the conclusion? What's the relationship between? The least essential statements are . . . What's the main idea? Theme? What inconsistencies, fallacies? What literary form is used? What persuasive technique? Implicit in the statement is . . .	

V. EVALUATE (according to some set of criteria, and state why)

<i>Verbs for Objectives</i>	<i>Model Questions</i>	<i>Instructional Strategies</i>
Appraise	What fallacies, consistencies, or inconsistencies appear?	Challenging assumptions
Judge		Journaling
Criticize	Which is more important, moral, better, logical, valid, appropriate?	Debates
Defend	Find the errors.	Discussions and other collaborating learning activities
Compare		Decision-making situations

(Continued)

Figure 1.2 (Continued)**VI. CREATE (SYNTHESIS)****(combining elements into a pattern not clearly there before)**

<i>Verbs for Objectives</i>	<i>Model Questions</i>	<i>Instructional Strategies</i>
Choose	How would you test . . . ?	Modeling
Combine	Propose an alternative.	Challenging assumptions
Compose	Solve the following.	Reflection through journaling
Construct	How else would you . . . ?	Debates
Create	State a rule.	Discussions and other
Design		collaborating learning
		activities
Develop		Design
Do		Decision-making situations
Formulate		
Hypothesize		
Invent		
Make		
Make Up		
Originate		
Organize		
Plan		
Produce		
Role Play		
Tell		

Figure 1.2 Bloom's Taxonomy Revised

Source: Anderson & Krathwohl, 2001. Compiled by the IUPUI Center for Teaching and Learning. Revised December 2002. Used with permission.

REFLECTION AND APPLICATION



How will I incorporate *brainstorming and discussion* into professional learning to engage participants' brains?

Which brainstorming and discussion activities am I already incorporating into my professional learning?

What additional brainstorming and discussion activities will I incorporate?