Chapter 7

Techniques for Discussion

EXCHANGING INFORMATION, IDEAS, AND OPINIONS in open and provocative discussion lies at the heart of collaborative learning. McKeachie describes discussion as the *prototypic* teaching method for active learning and one of the most valuable tools in the teacher's repertoire (2002, p. 30). Davis notes, "A good give-and-take discussion can produce unmatched learning experiences as students articulate their ideas, respond to their classmates' points, and develop skills in evaluating the evidence of their own and others' positions" (1993, p. 63). Use of discussion as an effective teaching tool is well established: class discussion has been and remains the single most popular instructional method in higher education, with 83 percent of all college teachers reporting that they use it in all or most of their classes (U.S. Dept. of Education, 2000).

Why is discussion so popular? Perhaps it is because teachers recognize that discussion helps students learn in many ways. Discussion helps students formulate their ideas and learn to communicate them clearly. It encourages students to think in the language and habits of the discipline. It exposes students to multiple perspectives, increases their awareness of ambiguity and complexity, and challenges them to recognize and investigate assumptions. It teaches students to be attentive, respectful listeners. It helps students learn more deeply and remember longer by requiring them to connect what they hear and what they say to knowledge that they already possess.

Yet getting students to participate in a really good discussion is difficult. If students have been sitting passively listening to a lecture, many are content to continue sitting passively when the lecture shifts to discussion, quietly listening to a few others contribute comments. Good discussion

requires participants to speak and say what they truly think, feel, and believe, and many students are reluctant to take this risk. Students are afraid of being publicly embarrassed if their comments are viewed as incorrect or stupid. If a student is an immigrant or international student and English is not his or her primary language, or if a student is still struggling to become acculturated to modes of appropriate college classroom behavior, speaking in class is even more threatening. Whatever the reasons for student reticence to speak, many instructors find it challenging to generate stimulating classroom discussion.

The six Discussion CoLTs are good strategies for improving class discussion. Used as a small-group alternative or as a warm-up to whole-class participation, these CoLTS address many of the general problems of discussion by

- Dividing the class into pairs or small groups so that each individual has the opportunity to participate in the discussion

- Establishing a framework (such as giving each student a meaningful role) that requires every student to be engaged and to contribute

- Reducing the risk associated with speaking and saying what one really thinks because the discussion is occurring within a small group of peers rather than publicly in front of the whole class and teacher

- Allowing students to clarify their thoughts and rehearse their comments before speaking in the whole class

- Providing individual students the opportunity to find other students who may agree and support them in their opinion before they "go public"

Although the CoLTs in this chapter are joined by the commonality of communicating through spoken words, they also have unique attributes and functions. A brief description and the primary purpose of each of the Discussion CoLTs are provided in Exhibit 7.1.

EXHIBIT 7.1

Discussion CoLTs

This CoLT	Is a Technique in Which Students:	It Is Particularly Useful for:
1: Think-Pair-Share	Think individually for a few minutes, and then discuss and compare their responses with a partner before sharing with the entire class	Preparing students to participate more fully and effectively in whole class discussions
2: Round Robin	Generate ideas and speak in order moving from one student to the next	Structuring brainstorming sessions and ensuring that all students participate
3: Buzz Groups	Discuss course-related questions informally in small groups of peers	Generating lots of information and ideas in a short period of time to prepare for and improve whole-class discussions
4: Talking Chips	Participate in a group discussion and surrender a token each time they speak	Ensuring equitable participation
5: Three-Step Interview	Interview each other and report what they learn to another pair	Helping students network and improve communication skills
6: Critical Debates	Assume and argue the side of an issue that is in opposition to their personal views	Developing critical thinking skills and encouraging students to challenge their existing assumptions

COLLABORATIVE
LEARNING
TECHNIQUE

1

Think-Pair-Share

Characteristics	
Group Size	PAIRS
Time on Task	5–15 MINUTES
Duration of Groups	SINGLE SESSION
Online Transferability	LOW

DESCRIPTION AND PURPOSE   In this simple and quick technique, the instructor develops and poses a question, gives students a few minutes to think about a response, and then asks students to share their ideas with a partner. Think-Pair-Share is particularly effective as a warm-up for whole class discussion. The "Think" component requires students to stop and reflect before speaking, thus giving them an opportunity to collect and organize their thoughts. The "Pair" and "Share" components encourage learners to compare and contrast their understandings with those of another, and to rehearse their response first in a low-risk situation before going public with the whole class. This opportunity to practice comments first with a peer tends to improve the quality of student contributions and generally increases willingness and readiness to speak in a larger group.

PREPARATION   Prior to coming to class, spend time developing an engaging question or problem that has many potential responses. Try responding to the question yourself. Decide how you are going to present the question (such as worksheet, overhead transparency, whiteboard) and how you are going to have students report out.

PROCEDURE
1. Pose the question to the class, giving students a few minutes to think about the question and devise individual responses.
2. Ask students to pair with another student nearby.

3. Ask Student A to share his or her responses with Student B, and then Student B to share ideas with Student A. Suggest that if the two students disagree, they clarify their positions so that they are ready to explain how and why they disagree. If useful, request that pairs create a joint response by building on each other's ideas.

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EXAMPLES

English Composition

A freshman writing instructor planned to have students write argument essays throughout the semester, so he shared several passages from arguments for students to read as homework. In the next class meeting, he used Think-Pair-Share to help students examine features of a compelling written argument. The professor began by posing the following question to the class: *What makes a written argument effective?* The instructor asked students to think about the assigned passages individually and to consider the features that made those arguments effective. He waited two minutes and then asked students to form pairs with students seated nearby to compare and jot down ideas.

After giving students several minutes to exchange ideas, the instructor asked for responses from each pair, writing them on the board as students spoke. Next, students were given an instructor-generated list of features of effective arguments against which they compared their lists. Overall, the lists were similar, and the instructor commended the students for their ability to identify qualities of a good argument. The students and the instructor then worked together to combine and refine a set of criteria, with the instructor guiding the discussion by asking questions. Together, they developed a strong set of argument evaluation criteria used both by students in peer assessment of each other's writing and by the instructor in grading.

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Introduction to Physical Anthropology

This is a hybrid course, in which students attend classes on campus but do a considerable amount of work online. In this adaptation of Think-Pair-Share, Professor Sara McShards organizes students into pairs and then quads at the beginning of the semester. On

> Thursday of each week, she posts three questions online that require students to read, understand, and apply concepts from readings that will prepare them for the next week's in-class activities. Before the class meets on Monday, partners must have worked together to create and write down joint responses to the questions. For the first ten minutes of each Monday class, the two sets of partners meet as a quad to discuss, compare, and contrast their responses before submitting a group worksheet.

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ONLINE IMPLEMENTATION   Without adaptation, this CoLT does not transfer effectively to the online environment. Even in a synchronous activity such as a chat session, it would be impractical to interrupt the session, organize the students into pairs, and have them communicate together before returning to whole class discussion. If the online class is small and enrollment is stable, consider adapting Think-Pair-Share by assigning student pairs to work together over an extended period of time. Post the question on a discussion board and then ask students to communicate first with their partner in instant or private messaging, and then one student posts the joint response.

VARIATIONS AND EXTENSIONS

- Export the "think" step by posing a question for students to consider outside of class. When they return to class, ask students to pair and share their homework responses.

- Give students time to write their responses down before pairing; this variation is called Write-Pair-Share (Johnson, Johnson, & Smith, 1991; Lyman, 1981).

- Ask each pair to share and compare their "paired" ideas with those of another pair before, or instead of, the whole-class discussion; this variation is called Think-Pair-Square (Lyman, 1981).

OBSERVATIONS AND ADVICE   See Chapter Two, Structuring the Learning Task, for ideas on developing and presenting good prompts.

Give students sufficient time to think before pairing and responding; the time required will depend on the nature, scope, and complexity of the question, as well as on the students' level of familiarity with the topic. For a conceptual question, allow at least a minute for individual responses. This provides students time to formulate and rehearse ideas before sharing them. In addition to think time, plan enough time for both students to express and

compare their responses. This "share" time will give students the opportunity to discuss well-thought-out answers with peers and to refine their answers before speaking to the whole class.

Announce a time limit, but gauge time needed by decibel levels as well. If the pairs are all still actively engaged, consider extending that limit by a minute or two.

If one student seems to be dominating the other in the pair, set time limits for each student response.

The simplest reporting out strategy is to have each pair share their most important point with the whole class. Limit the number of responses, repetition, and time required in the report out by asking each pair after the first to share only ideas not yet mentioned. Following the reports, conclude with a synthesis to validate student responses by highlighting the good points that students brought out. Gently correct any responses that are incorrect, and add any points that weren't covered. If appropriate, provide learners with an expert response, allowing them to check and revise their individual and pair responses. If time is limited or the class is large, randomly call on student pairs or collect a written version of the pair responses and review them outside of class.

To promote active listening during the report out phase, randomly call on students and ask them to summarize what the reporting student just said.

The reporting out usually provides instructors with sufficient feedback to assess student understanding. However, in cases where student pairs have exhibited a great deal of difficulty or confusion in their responses, it may be useful to do additional assessment. Consider using *Minute Paper* (CAT 6, Angelo & Cross, 1993, pp. 148–153) and ask students to write a Half-Sheet Response to a question such as, *What aspect of the prompt question was most difficult for you to answer?* or *On what points did you and your partner agree, or disagree?*

Think-Pair-Share is typically used as an informal strategy to stimulate discussion, and is not generally used for grading purposes.

KEY RESOURCES

Lyman, F. (1981). The responsive classroom discussion. In A. S. Anderson (Ed.), *Mainstreaming digest*. College Park: University of Maryland College of Education.

Lyman, F. T. (1992). Think-Pair-Share, Thinktrix, Thinklinks, and weird facts: An interactive system for cooperative learning. In N. Davidson & T. Worsham (Eds.), *Enhancing thinking through cooperative learning* (pp. 169–181). New York: Teachers College Press.

Millis, B. J., & Cottell, P. (1998). *Cooperative learning for higher education faculty.* American Council on Education, Series on Higher Education. Phoenix, AZ: Oryx Press, pp. 72–78, 115–116.

COLLABORATIVE LEARNING TECHNIQUE

2

Round Robin

Characteristics	
Group Size	4–6
Time on Task	5–15 MINUTES
Duration of Groups	SINGLE SESSION
Online Transferability	LOW

DESCRIPTION AND PURPOSE Round Robin is primarily a brainstorming technique in which students generate ideas but do not elaborate, explain, evaluate, or question the ideas. Group members take turns responding to a question with a word, phrase, or short statement. The order of responses is organized by proceeding from one student to another until all students have had the opportunity to speak. This CoLT is especially effective for generating many ideas because it requires all students to participate, and because it discourages comments that interrupt or inhibit the flow of ideas. Round Robin also ensures equal participation among group members. The ideas that students generate can be compiled in a list that serves as the basis for a next-step assignment.

PREPARATION The purpose of a brainstorming session is to create an extensive list of ideas. Crafting a prompt that can generate a sufficiently rich array of responses that can be expressed quickly and succinctly is particularly important. Practice ahead of time by thinking of and listing as many possible responses as you can. You can use the length of your list to predict the duration of your in-class exercise and to decide whether or not groups should rotate through Round Robin more than once.

PROCEDURE 1. Ask students to form groups of four to six.

2. Explain that the purpose of brainstorming is to generate many ideas. Group members will take turns, moving clockwise, and respond to the question. Inform students that to prevent interrupting or inhibiting

the flow of ideas, they must refrain from evaluating, questioning, or discussing the ideas.

3. If it would be beneficial for students to assume a role (such as recorder or rule enforcer), allow a few moments for role assignment.

4. Tell students whether or not they will go around the group once or multiple times, announce a time limit, and pose the prompt.

5. Ask one student to begin the activity by stating an idea or answer aloud. The next student continues the brainstorming session by stating a new idea. The activity continues, moving from member to member in sequence, until all students have participated.

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EXAMPLES

Survey of International Business

> Professor Mark Etting decided to use Round Robin to generate ideas and enthusiasm for a unit on risk analysis. He organized students into groups of five or six and assigned one person in each group to be the recorder. He then asked the students to respond to the prompt, *Identify a force that influences the competitive business environment.* Students took turns responding, each student adding a new idea. After groups had generated ideas for about ten minutes, the professor moved from group to group asking the recorder to share one new idea, which he then wrote on the board under the rubrics of Political, Cultural, and Social Influences. The many ideas on the board led to a stimulating whole-class discussion on the relative importance and risk each of the factors might play in affecting the global commercial community.

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Conversational French

> In this language course, students engaged in intensive oral practice in order to increase their ability to apply the grammatical and syntactical structures they had studied in a previous course. The professor used Round Robin sessions to engage students in fun, fast-paced activities to increase communicative competency and vocabulary. Responding to prompts such as *Say words for different kinds of food,* individual students in succession contributed a French word, and the next student translated it into English. Students who could not respond within a few seconds lost a turn.

> The groups continued until they had exhausted their vocabulary, and then they would move on to another word prompt. As students became more fluent, the professor expanded the prompts to require responses in full sentences, such as *Describe your favorite restaurant.*

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ONLINE IMPLEMENTATION Spontaneous brainstorming is possible in a synchronous environment such as a Chat session or Instant Messaging, but it is difficult to get online students together in real time, and if the software does not save text transcripts, brainstorming information will get lost. An adaptation that retains some of the Round Robin characteristics is to use an asynchronous environment like a Threaded Discussion, and establish ground rules such as (1) Each posting must present new ideas, (2) Students should not agree, disagree, or question what is already posted, and (3) Every student in the class or a base group should post a response before posting a second comment or response.

VARIATIONS AND EXTENSIONS

- Although Round Robin works best for brainstorming, its circular response organization can structure regular group discussion to ensure equal participation. To do this, explain to students that their discussion must move clockwise around the group, with each student giving an opinion or sharing an idea until all students have participated. Decide whether each student should be able to respond to a prior student's comments, or whether each student should express only new ideas until everyone has contributed to the discussion.

- Use this structure for learning activities other than brainstorming that still benefit from structured practice of quick responses. For example, organize Round Robin activities to recite words, phrases, or formulae until they become habitual (such as for ESL or foreign languages) or are memorized (such as for science or mathematics).

OBSERVATIONS AND ADVICE When the activity is simple (such as asking students to list answers in a word or short phrase), this activity is fast moving and may be conducted in as few as five minutes. If the activity is more complex and requires students to contribute longer responses, this CoLT can move slowly and lack energy, resulting in boredom and wasted time. Therefore, rather than asking students to engage in complex thinking and reasoning tasks, use this technique

for straightforward tasks such as helping students generate lists, review material, or identify obvious applications of ideas.

Once several ideas are on the table, students may find themselves "stumped" and feel pressured if they cannot come up with new ideas. Ideally, team members should not skip turns, but it is better to pass than hold up the process. Set a time limit and establish some ground rules, such as allowing a student who has nothing to contribute to pass. When only a couple of students are left participating, the procedure should end.

Some students will find this activity difficult if they have trouble expressing themselves. Specify the type of responses expected in order to help alleviate anxiety. Also consider using written rather than oral responses (see *CoLT 25: Round Table*).

Controlling participation in this way has advantages and disadvantages. Requiring people to participate when they have nothing to contribute—or limiting the participation of those who want to contribute something additional until all others have participated—can be counterproductive. On the other hand, this strategy can address problems of inequitable participation because it provides the structure to ensure that everyone participates.

Brainstorming sessions generate ideas, but these ideas are not evaluated, sorted, or discussed. It is essential to use the students' ideas so that they see the value of their work and input. Therefore, decide how ideas will be used to structure an appropriate follow-up activity. Whole-class discussion is one option, but Round Robin is particularly effective linked with another CoLT. For example, students may prioritize the ideas, sort the ideas into categories using *CoLT 19: Affinity Grouping,* or graph the relationship of the ideas to each other, using *CoLT 23: Word Webs.*

KEY RESOURCES   Kagan, S. (1992). *Cooperative learning,* 2nd ed. San Juan Capistrano, CA: Resources for Teachers, pp. 8:3, 8:9, 12:1, 10:12.

Sharan, S. (Ed.). (1994). *Handbook of collaborative learning methods.* Westport, CT: Greenwood Press, pp. 117–118, 228, 237, 257–258.

COLLABORATIVE
LEARNING
TECHNIQUE

3

Buzz Groups

Characteristics	
Group Size	4–6
Time on Task	10–15 MINUTES
Duration of Groups	SINGLE SESSION
Online Transferability	LOW

DESCRIPTION AND PURPOSE   Buzz Groups are teams of four to six students that are formed quickly and extemporaneously to respond to course-related questions. Each group can respond to one or more questions; all groups can discuss the same or different questions. Discussion is informal, and students do not need to arrive at consensus, but simply exchange ideas. Typically, Buzz Groups serve as a warm-up to whole-class discussion. They are effective for generating information and ideas in a short period of time. By dividing the whole class into small groups, more students have the opportunity to express their thoughts. Because students have had a chance to practice their comments and to increase their repertoire of ideas in the Buzz Group, the whole-class discussion that follows is often richer and more participatory.

PREPARATION   Prior to coming to class, decide what the Buzz Groups will discuss. Craft one or more engaging discussion prompts that tend toward the conceptual rather than factual and that will stimulate an open-ended examination of ideas. Try responding to the questions yourself, so that you are confident that they will generate a variety of responses. Choose the manner in which you are going to present the prompt questions, such as on a worksheet, overhead transparency, or whiteboard.

PROCEDURE   1. Form groups; announce the discussion prompts and time limit.

2. Ask group members to exchange ideas in response to the prompts.

3. Check periodically to see whether groups are still actively engaged and focused on the assigned topic. If off topic, shorten the time limit. If on topic and the time has ended, consider extending the limit for a few minutes.

4. Ask the students to return to whole-class discussion and restate the prompt to begin.

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EXAMPLES

The Nature and Origin of Major Social Problems

Professor Jen Derr was frustrated with the superficial quality of discussion in her lower-division sociology class. Despite her efforts to engage students in meaningful dialogue about significant social problems, students avoided controversy and offered only safe, predictable comments. In an attempt to move a discussion on gender issues to a more meaningful level, she decided to experiment using Buzz Groups as a warm-up to whole-class discussion. To introduce the topic of gender discrimination, she divided the room into male and female students and then asked them to subdivide into groups of four of the same gender. Her hope was that at least some students might have personal experiences related to this topic, and that they would feel safe sharing these experiences in a small group of same-sex peers. On an overhead transparency, she posted the prompt, *Can you recall a situation in which you experienced or observed gender-based discrimination?*

The groups were soon engaged in spirited discussion. After fifteen minutes, she stopped the Buzz Groups and shifted the focus back to the whole class but asked students to remain in the male or female sides of the room. She alternated between male and female groups, asking a volunteer from each group to report out to the whole class one or two of the experiences their group found most compelling. Following each report, she invited comments from students on the other side of the room. Professor Derr found that students felt empowered and supported by the presence of their same-sex peers. The whole-class discussion proceeded at a level of depth and with a sense of immediacy that had been lacking when she had tried to generate whole-class discussion on this topic in previous semesters.

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Leadership Issues in Community Colleges

> A professor of a graduate-level seminar containing students who were primarily upper-level college administrators had been accustomed to lecturing about a topic first and then moving to whole-class discussion. She decided to reverse this order and to use Buzz Groups to introduce students to the topic of mergers and consolidations in the community college sector. Among the list of questions she prepared for each group to discuss were, *What is the difference between a consolidation and a merger? Have you had any experience with consolidations or mergers? What are some of the issues that would attend a consolidation or merger?* These were open-ended questions, and she hoped that her students would be able to draw on their own experiences in college administration to respond to them.
>
> It soon became apparent that several students within each Buzz Group had experienced consolidations and mergers on their campuses, and that they had strong opinions about those experiences. When Buzz Groups reported out, the professor used group comments as the basis for a whole-class discussion. She was able to integrate the information that she had intended to cover in the lecture by offering comments such as, *What Carol is describing is an example of what is called _____.* In the whole-class discussion, students explored the political issues, organizational problems, and personnel dilemmas associated with consolidations and mergers at a level that was deep and engaging. The Buzz Group discussions had provided a good introduction to the topic by allowing students to connect theoretical constructs to work-related situations that had occurred in their professional lives. Furthermore, by integrating what would have otherwise been her lecture on theory into the whole-class discussion, the professor was able to offer students a framework for understanding their personal experiences that illuminated the importance of connecting theory to practice.

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ONLINE IMPLEMENTATION   Preserving the impromptu, spontaneous character of Buzz Groups is possible in a synchronous environment such as a Chat session. Or consider instead modifying this activity for an asynchronous environment. Form groups of eight to twelve at the beginning of the semester, identify each

group (for example, Group A, Group B, and so forth), and create a forum for each group. Post discussion prompts on each group's forum and ask students (for example) to reply at least twice: once directly to the prompt, and once to another student's response.

VARIATIONS AND EXTENSIONS

- Assign the groups a task other than responding to questions. Instead, ask them to generate questions or ideas, share information, or solve problems.

- Hold the discussion without formal or structured questions, but rather as an opportunity to discuss the course texts in general or a specific assigned reading. This variation, called Relaxed Buzz Groups, is simply a conversation, and students do not report out. Students are required, however, to keep the discussion focused on issues from the readings. They can question, highlight passages, look for the thesis, and identify flaws (Brookfield & Preskill, 1999).

- After each Buzz Group has completed an initial discussion, have two Buzz Groups join together and continue the conversation as a single, larger group. Groups can combine again, with each group doubling in size at successive iterations. This variation, called Snowball Discussion (Brookfield & Preskill, 1999), is good for allowing students to network with their peers and to hear many diverse views and opinions. Furthermore, students generate additional ideas at each new combination, so the conversation becomes more complex.

OBSERVATIONS AND ADVICE

This is a good technique for introducing a topic and having students engage in semi-structured conversations about important issues in the field. However, the informal, minimally structured nature of Buzz Groups can allow students to get off task, and discussions to degenerate into aimless chitchat. Avoid this problem by creating engaging, open-ended, multiple-response discussion prompts and by enforcing a time frame. Walking around the room monitoring group progress and offering procedural guidance as needed may also help to keep discussion focused.

Because of the unstructured nature of Buzz Groups, students might miss important issues (Brookfield & Preskill, 1999), so be prepared to offer these ideas during the closure period.

In the Snowball variation, in which students combine groups multiple times, adding new students and new ideas each time, students may feel shaken up or disjointed by the process (Brookfield & Preskill, 1999).

Ameliorate this by alerting students to this in advance, and by emphasizing that the purpose is to meet many students and to generate lots of information in a short period of time.

For the reporting out stage, go around the room and ask a representative from each group to share one of the group's most important points with the whole class, contributing only ideas that have not yet been mentioned. Invite students to comment on how different groups' ideas compare and contrast.

If the Buzz Groups responded to different questions, an alternative report out strategy is to have each group serve as a panel. Each student who serves on the panel can share one of the major themes or discussion points generated in their Buzz Group. The whole class is then invited to ask panel members questions.

When Buzz Groups report out, instructors typically receive sufficient insight into how much or what students have learned in their discussions. To gain additional feedback, consider using *CAT 23: Directed Paraphrasing* (Angelo & Cross, 1993, pp. 232–235). Ask students to summarize and restate the most important ideas or information from their Buzz Group discussion, imagining that the paraphrase would provide a succinct summary for a student who was not able to attend class that day. These paraphrases will illustrate how deeply students have understood and internalized the information generated in the discussions. These written summaries may be used for grading purposes.

KEY RESOURCES Brookfield, S. D., & Preskill, S. (1999). *Discussion as a way of teaching: Tools and techniques for democratic classrooms.* San Francisco: Jossey-Bass, pp. 104–105.

McKeachie, W. J. (1994). *Teaching tips: A guidebook for the beginning college teacher,* 9th ed. Lexington, MA: D. C. Heath, p. 44.

**COLLABORATIVE
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4

Talking Chips

Characteristics	
Group Size	4–6
Time on Task	10–20 MINUTES
Duration of Groups	SINGLE SESSION
Online Transferability	LOW

DESCRIPTION AND PURPOSE   In Talking Chips, students participate in a group discussion, surrendering a token each time they speak. The purpose of this CoLT is to ensure equitable participation by regulating how often each group member is allowed to speak. Because it emphasizes full and even participation from all members, this technique encourages reticent students to speak out and talkers to reflect. Talking Chips is useful for helping students discuss controversial issues, and it is also useful to solve communication or process problems, such as dominating or clashing group members.

PREPARATION   Determine a question or problem for group discussion. Bring poker chips, playing cards, or simply gather a sufficient number of paper clips, pencils, chalk, or other available items to serve as tokens.

PROCEDURE   1. Form student groups.

2. Give each student three to five tokens that will serve as permission to share, contribute, or debate in the conversation.

3. Ask students to participate equally in the group discussion, specifying that as they contribute comments, they should surrender a token and place it in view of the other group members.

4. When all students have contributed to the discussion and all tokens are down, ask students to retrieve and redistribute the chips so that the procedure repeats for the next round of discussion, or end the discussion if the activity is complete.

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EXAMPLES

Introduction to Social Welfare

This course was a historical overview of social problems and welfare, focusing on sociological theory to explain the development of social service systems. The professor wanted groups to discuss the pros and cons of various programs that had been established to deal with unwanted pregnancies. These programs varied in terms of their support of adoption, abortion, or birth mothers keeping and raising their babies. He felt that it was important for all students to speak so that groups could explore the issues thoroughly, evaluating the programs from the perspective of society, mother, and the unborn child. The professor knew that many students would have strong feelings about the topic and possibly even personal experience. He wanted to create a discussion structure that encouraged equitable participation, and decided to implement Talking Chips. After he had formed groups and given students the discussion prompt, he explained the process and gave each student four poker chips to use as tokens.

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Calculus

Professor Anna Log decided to form groups to work together for the entire semester. About two weeks into the semester, she noticed that while most of the groups were working well, a few were not. For example in one group, one student seemed to dominate the discussion, while other members were often silent. The quiet members seemed to accept the dominant member's responses regardless of the quality of the response. In another group, two students consistently challenged each other's comments and the discussion frequently deteriorated into a debate on who was right. To address group process problems, she decided to structure the next discussion using Talking Chips.

Professor Log posed a problem for group work. She told groups that in order to ensure full participation from all group members, she was giving each student one poker chip and that after each student had made a suggestion, posed a question, or supported or refuted a point made by another member of the group, he or she should surrender the chip, placing it in the center of the table. Once a student's chip was gone, he or she should wait to speak again until all chips had been placed in the center, collected, and redistributed. Professor Log instructed the groups to begin their discussions. She found that students soon became accustomed to the tokens and observed that students were participating in all groups more equitably. As part of her closure comments, she asked students to use the discussion as a model for future discussions.

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ONLINE IMPLEMENTATION

Although this CoLT could be adapted to monitor participation in Threaded Discussions (for example, by telling participants that once a group member has posted comments, the same group member should wait until all—or most—other members have contributed to the discussion before posting again), it would most likely be counterproductive. Students would become impatient logging on, checking in to the discussion, and finding repeatedly that it is not yet their turn to contribute additional comments. Consider instead simply establishing discussion ground rules regarding number and length of comments. If a student repeatedly violates the ground rules, send him or her a private message affirming the importance of providing other students with an opportunity to contribute, the difficulty of reading lengthy text, and so forth.

VARIATIONS AND EXTENSIONS

- Give each student several chips of the same color. For example, Student A receives blue chips, Student B receives yellow chips, and so forth. Allow the conversation to proceed for a while. Ask students to examine the surrendered chips and to reflect on how the conversation has gone. Ask them to continue with their discussion but to try to work toward an equal number of chips from each group member.

- To regulate the length of time each student speaks more than the number of times they speak, give each student several chips and instruct them to surrender a chip every three to five minutes that they have the floor.

- Give each student only one chip. When everyone has contributed, retrieve the tokens and start the process again. This variation could be useful in brainstorming or listing items.

- Instead of using chips, assign a group member the task of recording individual contributions to a conversation. Do this by creating a grid sheet with one column for student names and an additional column or columns for the recorder to note down when each individual speaks. The recorder can place a checkmark or simply keep a tally by each person's name. Explain that recorders will use the sheet for a set period of time and that the aim is to promote an even level of participation among group members. When time is up, ask group members to review the sheets and analyze the interaction.

OBSERVATIONS AND ADVICE   Talking Chips can help to build listening and communication skills because students who tend to "spout off" consider more carefully what they have to say, since it will require their surrendering a token. Reticent students feel encouraged to speak because the ground rules have created an environment that promotes participation by all (Millis & Cottell, 1998, p. 98).

Controlling participation in this way has advantages and disadvantages. It can inhibit the natural flow of conversation, making discussions feel stilted and artificial, and hence should not be overused. On the other hand, helping students to see how they participate during group work develops teamwork skills and self-awareness. In addition to providing a structure to discuss controversial items, this CoLT is probably best used to give students insight into effective teamwork and to solve problems of inequitable participation.

Consider asking students to engage in a closing activity in which they write a short reflective essay describing their participation in the discussion, their comfort during this activity, and their plans for improvement. This may be most effective if students reflect personally upon how their involvement in the discussion changed because of the use of tokens. Individual essays could be followed by a group assignment in which students discuss, write, and submit a group report on how they plan to improve group communication.

KEY RESOURCES   Millis, B. J., & Cottell, P. G. (1998). *Cooperative learning for higher education faculty.* American Council on Education, Series on Higher Education. Phoenix, AZ: Oryx Press, pp. 98–99.

Sharan, S. (1994). *Handbook of cooperative learning methods.* Westport, CT: Greenwood Press, p. 119.

COLLABORATIVE
L E A R N I N G
T E C H N I Q U E

5

Three-Step Interview

Characteristics	
Group Size	2, THEN 4
Time on Task	15–30 MINUTES
Duration of Groups	SINGLE SESSION
Online Transferability	MODERATE

DESCRIPTION AND PURPOSE In Three-Step Interview, student pairs take turns interviewing each other and then report what they learn to another pair. The three steps (Interview-Interview-Report) are

Step 1:   Student A interviews Student B.

Step 2:   Student B interviews Student A.

Step 3:   Students A and B each summarize their partner's responses for Students C and D, and vice versa.

The type of questions used depends upon the course goals and may probe for values, attitudes, prior experience, or comprehension of course content.

Three-Step Interview creates the opportunity for students to network and improve specific communication skills. Interviewers must listen carefully, concentrating on the interviewee's responses and encouraging elaboration but refraining from imposing their own thoughts and opinions. Interviewees practice expressing their thoughts succinctly. Because the spotlight is solely on them and they are not exchanging comments as in a discussion situation, their responses require a high degree of personal commitment. Finally, the interviewers must understand and incorporate the information gathered from their interviewees' responses at a deep enough level to be able to summarize and synthesize the responses effectively for other students.

PREPARATION   Develop a list of interview questions prior to the class session. Interview questions that are particularly effective ask a person about opinions or experiences related to course content. An example of this type of question is, *What was the most powerful scene for you from the film* Amistadt *that we watched in class, and why?* or *Describe a situation in which you had to either stay true to your personal ethics or bow to group pressure. What did you decide to do, and why?*

PROCEDURE   1. Students divide into groups of four, and quads subdivide into pairs A-B and C-D.

2. Student A interviews B and student C interviews D for a predetermined time. The interviewer asks questions, listens, and probes for further information but does not evaluate or respond.

3. Partners reverse roles and interview each other for the same amount of time.

4. Students A and B introduce each other with synthesized summaries of their partner's interview responses to Students C and D. Students C and D do the same for Students A and B.

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EXAMPLES

Introduction to Music

On the first day of a general education music appreciation class, Professor Clara Nett wanted students to participate in an icebreaker, but she wanted the interaction to focus on course content rather than simply hobbies or how students spent their summer vacation. Before the class started, she wrote on the chalkboard: *Welcome to Music 1. What musician recording today (from any style) do you think people will still be listening to in fifty years, and why?* She asked students to reflect upon the prompt as she was calling attendance. She then formed quads, instructing students within each quad to pair up to participate in a Three-Step Interview. She asked students to interview each other to learn names, academic majors, and to share their responses to the question on the chalkboard. After the report out within the quads, Professor Nett asked each quad to share the names of their artists with the whole class, and she wrote the names on the board. She asked students to look at the cumulative list and to identify characteristics the musicians had in common. Professor Nett used their comments to illustrate the distinction between "classic" and "popular," closing by explaining that in this class, they

would be studying music masterworks from a variety of genres that had stood the test of time and were now universally acknowledged as classics.

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Calculus

In this calculus class, the professor knew that a majority of students had had difficulty with the most recent homework assignment. He also knew that some of the students struggled with math and were becoming increasingly anxious because they believed that they were falling far behind the other students in the class. Historically, this had been a point in the semester when a significant number of students dropped, and he was trying to improve course retention. He asked students to engage in a Three-Step Interview using the following prompt question: *What homework problem did you find most difficult and why?* He asked the quads to report out to the whole class which of the problems had been identified in their groups, and wrote the numbers of the problems on the board. It became evident that the majority of students had had difficulty with the same few problems, and he knew that this would be reassuring to the struggling students. He used the information generated in the quads to review the most challenging problems and to focus on the issues and steps that had been most troublesome. To help students help each other for the next homework assignment, he reserved the last few minutes of class and suggested that if they wished, they could use the time to make arrangements with one of the other students to work together for peer tutoring and support.

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Patient Care in Radiation Oncology

The instructor of an advanced course in radiologic technology wanted to prepare her students for their clinical practicum. She decided to use a Three-Step Interview to help students anticipate and solve problems they might encounter in the clinics. She hoped that this preparation would increase her students' confidence, reduce their anxiety, and help them transition to the professional world more successfully. She created a series of *What would you do if…?* questions drawn from her medical experience that addressed

the kinds of difficult situations her students were most likely to encounter. After partners had interviewed each other and summarized responses for the quad, she gave quads a few minutes to choose the question that had concerned them most. She used their responses as the basis for a whole class discussion on how best to handle the most anxiety-provoking scenarios.

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ONLINE IMPLEMENTATION   Creating a sense of community in online classes is a challenge many instructors face. Implementing a modified Three-Step Interview can be an effective strategy to help students get to know other students in the class. Divide students into base groups of eight to twelve and subdivide each base group into pairs A-B, C-D, and so forth. Create a private forum for each group. Give partners a designated amount of time to interview each other through private messaging or e-mail. Give students additional time to synthesize responses and post an introduction of their partner on the forum to the other students in the base group. You may wish to retain these base groups and partnerships throughout the semester for other kinds of collaborative activities.

VARIATIONS AND EXTENSIONS
- Decide upon a general topic, and ask each student to develop interview questions themselves.

- Rather than asking questions that generate new information, use Three-Step Interview as an activity for students to review what they learned from a lesson.

- Have three teammates interview the fourth in depth; this variation is called a Team Interview (Kagan, 1992).

- Consider having interviewers write up their findings in a format appropriate for the course (for example, in an executive summary, descriptive essay, newspaper article, and so forth).

OBSERVATIONS AND ADVICE   Three-Step Interview is an effective strategy for drawing out students' experience and knowledge from outside of class. Used in this way, it can help motivate students because it bridges the gap between the academic and the "real" world.

Try to create interview questions that are likely to generate a wide array of interesting responses. If interview questions have predictable and similar

answers, the interviews will lack energy and the reporting out within the quads will be boring.

Generally, students should interview students whom they do not know well so that the interview is fresh and generates information that is new to the interviewer. This CoLT also helps achieve the goals of exposing students to several views and ideas and of meeting other students in the class.

Establish a time limit so that student discussion does not drift into socializing that has nothing to do with course content.

An initial level of reporting out will have already occurred when student pairs introduce their partner to the next pair. If there is enough class time and the interview questions elicit responses that are important for everyone to hear, have quads report out to the whole class. First give each quad a few minutes to choose a spokesperson and to select one or two responses from their group that they think were most imaginative (or comprehensive, or humorous, for example). As each quad's spokesperson reports out, validate the group's efforts by commenting on what was particularly informative about their contribution.

As with many of the other discussion CoLTs, the built-in reporting feature gives faculty on-the-spot information about how students are connecting with course content. If additional assessment information is desired, conduct a variation of *RSQC2* (CAT 46, Angelo & Cross, 1993, pp. 344–348). This assessment technique provides a five-step structure for students to recall, summarize, question, connect, and comment on either the Three-Step Interview or the follow-up whole-class discussion. Use the entire sequence of assessment activities, or select one step. For example, ask students to *Recall the most important response from the interview you conducted of your partner* or, *Now that we have had a chance to discuss this as a whole class, what questions on this topic do you think would be interesting to ask students to use in next semester's interviews?* Ask students to write their responses in an essay that they submit for evaluation.

If the interview activity was particularly important, consider having students take notes or even record and transcribe the interview. Students could then analyze the interview or use the information to write a biographical essay about the person that they interviewed. Written assignments of this nature can be submitted for evaluation.

KEY RESOURCE   Millis, B. J., & Cottell, P. G. (1998). *Cooperative learning for higher education faculty.* American Council on Education, Series on Higher Education. Phoenix, AZ: Oryx Press, pp. 85–86.

COLLABORATIVE
L E A R N I N G
T E C H N I Q U E

6

Critical Debate

Characteristics	
Group Size	4–6, THEN 8–12
Time on Task	1–2 HOURS
Duration of Groups	SINGLE SESSION
Online Transferability	MODERATE

DESCRIPTION AND PURPOSE In a Critical Debate, individual students select the side of an issue that is contrary to their own views. They then form teams and discuss, present, and argue the issue against an opposing team. Preparing for, participating in, and listening to debates offers many benefits to students. Debates can increase motivation, enhance research skills, promote critical thinking, and develop communication proficiency. Debates expose the class to a focused, in-depth, multiple-perspective analysis of issues. Because Critical Debates have the added dimension of requiring students to assume a position opposite to their own, they encourage students to challenge their existing assumptions. This can move students beyond simple dualistic thinking, deepen their understanding of an issue, and help them to recognize the range of perspectives inherent in complex topics. In this way, Critical Debate may also build appreciation for diversity and develop tolerance for other viewpoints.

PREPARATION Critical Debate is a fairly complex CoLT and thus requires ample preparation. First, spend sufficient time selecting a controversial topic in the field with two identifiable, arguable, and opposing sides that are appropriate to debate. Carefully craft the debate proposition into a one-sentence statement, such as, *Universities should use affirmative action policies to determine student admission.* Proposition statements should avoid ambiguity, yet be general enough to offer students flexibility in building arguments.

Second, determine whether students need any background information to address the proposition. Prepare students for the debate through lecture, assigned reading, discussion, or student research on the topic.

Third, identify ground rules. For example, allow students to use as many arguments as they wish, or have students spend five to ten minutes brainstorming all possible arguments supporting their position and then select their five best arguments. Consider whether each team should select one person as spokesperson, or whether each member of the team will be responsible for presenting at least one of the arguments. Thinking about ground rules ahead of time will also provide the opportunity to decide whether to assign team members specific roles, such as team leader or timekeeper.

PROCEDURE
1. Propose the motion and ask students to identify which side of the proposition they most support. They can indicate a preference by raising their hands or by writing their names and choice on a sign-up sheet or piece of paper.

2. Explain to students that they will argue the side that is contrary to their own beliefs, stressing the benefits of arguing against their personal views (for example, it helps them to clarify their own ideas and to deepen their understanding of the issue).

3. Divide students into four- to six-member teams, with half the teams assigned to one side of the argument and the other half assigned to the opposing argument. Try to get as many students as possible arguing for the side they disagree with, realizing that especially with complex issues, students will likely not divide evenly. A large group of students who "don't know" or who gravitate toward a middle position will provide a fair amount of flexibility in group formation.

4. Explain ground rules and give students time to assign roles and organize how they will prepare for and conduct the debate.

5. Give students time to prepare their arguments (such as fifteen to thirty minutes).

6. Pair teams representing opposing sides.

7. Announce and allow time to present arguments (such as five minutes each side, ten minutes total).

8. Give teams time to prepare rebuttals (such as ten minutes).

9. Announce and allow time to present rebuttals (such as five minutes each side, ten minutes total).

10. Hold a whole-class discussion to summarize the important issues and to give students the opportunity to discuss the experience of arguing opinions they do not hold.

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EXAMPLES

Philosophy of Law

Due to an increase in illegal immigration, terrorist attacks, and Internet sabotage, Professor Lex Rex was starting the semester amid heightened publicity on the need to improve national security. One solution that received significant media attention was a proposal to implement an expanded, federally maintained and integrated individual identification system. Professor Rex believed that it was important for his law students to understand the complexity of the issues regarding individual versus national rights underlying proposals such as this. He therefore decided to add to his course a unit on privacy rights.

To introduce the unit, he had students complete a survey in which they rated from 1 to 5 their level of agreement with a series of statements on the national collection, maintenance, and disposal of personal records. During the weeks that followed, he took care to cover a wide range of examples of the basic conflict from several perspectives, including real-life scenarios concerning everything from financial and medical records to confidentiality of opinions expressed in e-mail and on the Internet. By the completion of the unit, students had at least a basic knowledge of the challenges from both the individual's and the government's perspectives.

To help students synthesize the information presented in the unit and to help them clarify their personal views, he closed the unit with a Critical Debate. Using the initial survey as a guide, he organized students into two groups based on their overall tendency to support individual or national rights. Professor Rex then assigned individual students to a team charged with arguing for or against the proposal, *The government is justified in collecting and maintaining personal information on private citizens.* Wherever possible, he assigned students to a team asked to argue the side contrary to their general beliefs. After the debate, he had students retake the original survey. He then had students compare their individual pre- and post-responses to the survey, noting any areas of change. As a final activity, he had students write an essay responding to the prompt by summarizing the issues using concrete examples and concluding with their personal viewpoints.

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**ONLINE
IMPLEMENTATION**

Prepare as you would for a face-to-face (F2F) debate. Write a paragraph that explains the rationale behind Critical Debate, provides the discussion proposal, and gives assignment directions. Provide a deadline for students to choose the side they support least. Organize students into "Pro" or "Con" teams of eight to twelve students, and create a forum for each team. If possible, make the forums "protected access" so that only team members can access their forum. On the whole-class discussion board, inform students of their team assignment and give team members one or two weeks to research and post their arguments on the appropriate forum. After the deadline, open forums to all students, require students to read through the arguments on a forum from the side opposed to their own, and allow an additional week for students to formulate and post rebuttals. Consider summarizing and synthesizing the debate, or assign students to do this task. Although the online debate may lack the sense of immediacy achieved in an in-class debate, the essential characteristics of requiring students to assume, investigate, and debate a contrary perspective are preserved. Consider posting a follow-up Threaded Discussion, in which students can share how it felt to assume a position contrary to their beliefs and inviting them to say whether participating in the debate changed their viewpoints.

**VARIATIONS AND
EXTENSIONS**

- Instead of forming teams, ask students to work in pairs to present opposing sides to each other.

- Identify a topic that has three clear sides, and set up a three-way debate.

- Use a within-team debate in which a team researches the topic. One student presents an argument for one side, and then another student presents an argument from the opposing side. The debate continues as various members within the team alternate between additional arguments and rebuttals.

- In a variation called Structured Academic Controversy (Millis & Cottell, 1998, pp. 140–143), student partners review material on an issue and then synthesize the information to support their position. Two pairs with opposing positions form a quad, and each pair presents the arguments supporting their position to the other pair. Pairs then reverse their positions and argue for the opposing position. The pairs work together to synthesize their findings and to prepare a group report. All four students must agree with the summary. To close the activity, teams make a presentation to the whole class.

- For a more comprehensive assignment, have students research the topic in preparation for the debate.

- If it is not necessary to have students do their own research on the topic, prepare background materials for them that can be distributed in advance or covered at the beginning of the class. This will allow teams to move quickly into the debate.

- Add a writing component by requiring students to work together to draft the four best arguments for their side. After the groups have had time to write out their arguments, ask groups to share their arguments supporting or opposing the proposition.

- Ask students to write a follow-up paper describing issues that they clarified or confirmed, surprises they encountered, new information they gained, or the sources they used to validate new information.

OBSERVATIONS AND ADVICE

This technique works best if students have a reasonably deep knowledge or understanding of the topic so that they can make better arguments and rebuttals. Critical Debate is therefore best used after students have had time to investigate a topic beforehand either through lecture, discussion, or reading assignments. Use this CoLT to introduce a new topic only if the topic can be addressed through common knowledge.

Try to pick a topic that has two appealing sides. Part of the purpose of this CoLT is to help students carefully consider a side of an argument that is contrary to their own beliefs. It is therefore best if the instructor does not have strong feelings of support for one or the other side themselves.

The topic must be one that is engaging. It is especially effective when topics address issues that are contemporary and connected to students' lives.

Try to select a topic that will generate opposing viewpoints. One way to determine this in advance is to use a preliminary assessment technique such as *Classroom Opinion Polls* (CAT 28, Angelo & Cross, 1993, pp. 258–262) to determine attitudes ahead of time.

In some contexts, students will tend to have similar opinions about issues or want to assume the side that they perceive is popular or "politically correct." They may not feel safe to argue a side that is in opposition to their own or that they know is generally unpopular. If one is careful to set up a nonthreatening environment and explain the purpose of Critical Debate, however, students can enjoy role reversal, and the activity can take on the qualities of a fun game.

Depending upon the importance of this CoLT to overall teaching goals, choose an additional follow-up activity. For example, use *Pro and Con Grid* (CAT 10, Angelo & Cross, 1993, pp. 168–171) and require students to list each argument and balance it with a competing claim or rebuttal. This

assessment technique provides a quick overview of each student's final analysis and understanding of both sides of the issue. A more complex assignment for use after the debate is *Analytic Memo* (CAT 12, Angelo & Cross, 1993, pp. 177–180). For this activity, ask students to write a one- or two-page analysis of the issue, being careful to provide equitable coverage of both sides. Suggest that they select a role such as "policy analyst for a legislator" or "consultant for a corporation's chief executive officer." Taking on such a role may make it easier for them to assume a position and it also establishes the writing audience.

KEY RESOURCES   Bean, J. C. (1996). *Engaging ideas: A professor's guide to integrating writing, critical thinking, and active learning in the classroom.* San Francisco: Jossey-Bass, pp. 6–7, 176–177.

Brookfield, S. D., & Preskill, S. (1999). *Discussion as a way of teaching: Tools and techniques for democratic classrooms.* San Francisco: Jossey-Bass, pp. 114–115.

McKeachie, W. J. (1994). *Teaching tips: A guidebook for the beginning college teacher,* 9th ed. Lexington, MA: D. C. Heath, p. 44.