Chapter 9 Structured and Creative Problem Solving in Groups

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Case Study No More Horsing Around

Horseback-riding stable owners in the county meet to develop a joint plan for attracting more customers, particularly in light of the recent economic downturn. Three group members own prestigious private stables that board and train horses for their owners. Four members own open-to-the public stables that rent horses by the hour and offer riding lessons. Sally—who owns one of the public stables—agrees to chair the group's meetings.

All seven group members are competent, hardworking, and interested in increasing business at their stables. At the first meeting, they agree to seek consensus when making decisions; *all* members have to be satisfied with the final group decisions. They also talk about the need for a promotional campaign to increase their business.

At the second meeting, Sally works diligently to encourage equal participation by everyone in the group. Within a short time, however, things are not going well. Tension runs high because the private and public stable owners see the problem quite differently. The three members who own private stables are very forceful and insistent. Perhaps because these members are wealthy and highly respected among horse professionals, the rest of the group lets them do most of the talking. The private owners want to place full-color ads in specialized horse publications, while the public owners are more interested in getting free publicity about their stables and in funding a few small ads in public outlets. Even though they constitute a majority, the public stable owners feel powerless; they resent the unspoken power and influence of the other three members.

In an attempt to broaden the scope of the discussion, Sally distributes a list of questions she believes the group should talk about and answer:

- How serious is our decline in business?
- Why do we have fewer customers?
- How have stables in other counties responded to the problem?
- What limitations do we face in addressing this problem (lack of finances, lack of public relations expertise)?
- What should we do?

The three private stable owners jump to the last question. One of them says, “We know the answers to these questions. We need a good PR campaign. So let’s stop talking about other things and decide how to do this—as soon as possible.” Rhett, the owner of a public stable, responds quickly with, “Whoa, there. The last thing I want to do is spend a lot of money on fancy-pants ads that none of my customers will see.”

Sally interrupts and beseeches the group to slow down before deciding what to do. She tries to include everyone in the discussion by turning the meeting into a brainstorming session. Sally explains brainstorming ”rules” and asks the group to think creatively about ways to increase business. If nothing else, the brainstorming session succeeds in reducing tensions between the two factions.

When you finish reading this chapter, you should be able to answer the following critical thinking questions about this case study:

1. How would you word the questions this group should try to answer?
2. Was choosing consensus as the decision-making method appropriate for this group? Why or why not?
3. Which dialectic tensions are likely to affect the group’s ability to achieve its goal?
4. How well did the group select and use a structured, problem-solving procedure or a creative, problem-solving method?
5. How did politics, preexisting preferences, and/or power affect the group’s ability to make decisions and solve problems?

Before you read any further, visit Pearson's MyCommunicationLab website and watch the short videos "Planning a Playground" and "The Politics of Sociology," which illustrate **Chapter 9** concepts. Each video comes with a set of study questions to keep in mind as you read this chapter.

Planning the Playground

The Politics of Sociology

Group Decision Making

What do you do when you have to make an important decision? Do you consider several options and select the most reasonable one? Do you rely on your instincts and do what *feels* right? Do you ask other people's advice and go with the majority? Or do you just ignore it and hope it will go away?

Now think about what groups must do when they make *collective* decisions. Should they use logic, trust their instincts, rely on majority rule, or pass it on to a higher authority? As hard as it is to make a *personal* decision, the difficulties of *group* decision making are multiplied many times. At the same time, groups often make better decisions than individuals working alone. In this chapter, we examine the many ways in which groups address the challenge of making decisions and solving problems.

Decision Making and Problem Solving

Decision making and *problem solving* are not the same. **Decision making** involves making a judgment, choosing an option, and making up your mind about something. Group decision making results in a position, opinion, judgment, or action. Most groups make decisions but may not solve problems. For example, hiring committees, juries, and families make decisions. Which applicant is best? Is the accused guilty? Whom should we invite to the wedding? Management expert Peter Drucker explains, "A decision is a judgment. It is a choice between alternatives."[1] (See **Figure 9.1** for a comparison of decision making and problem solving.)

Decision Making	A judgment: The group chooses an alternative. • Guilty or not guilty • Hire or not hire • Spend or save • Voting or consensus seeking	Asks who, what, where, and when. • Whom should we invite? • What should we discuss? • Where should we meet? • When should we meet?
Problem Solving	A process: The group develops a plan. • Analyze the problem • Develop options • Debate the pros and cons • Select and implement a solution	Asks why and how. • Why don't more students vote in student government elections? • How should we publicize and persuade students to vote?

Figure 9.1 Decision Making and Problem Solving

Problem solving is a more complex process in which groups analyze a problem and develop a plan of action for solving the problem or reducing its harmful effects. For example, if student enrollment has declined significantly, a college faces a serious problem that can jeopardize its future. Problem solving requires many decisions. Fortunately, there are decision-making and problem-solving procedures that can help a group make up its mind.

There are many reasons to trust group decision making and problem solving. Sheer numbers enable a group to generate more ideas than a single person working alone. Even more important, a group is better equipped to find rational and workable solutions to complex problems. As a rule, group decision making generates more ideas and information, tests and validates more arguments, and produces better solutions to complex problems.[2]

In **Chapter 1** , "Introduction to Group Communication," we introduce the structure↔spontaneity dialectic by noting that structured procedures help groups balance participation, resolve conflicts, organize discussions, and empower members. They also help groups solve problems. If a group becomes obsessed with procedures, however, it loses the benefits of spontaneity and creativity. Group communication scholar Marshall Scott Poole notes:

> Too much independence may shatter group cohesion and encourage members to sacrifice group goals to their individual needs . . . . Too much structured work . . . is likely to regiment group thinking and stifle novel ideas.[3]

Remember This

To be effective, a group must maintain a golden mean, a balance between independent, creative thinking and structured, coordinated work.[4]

Decision-Making Methods

There are many ways to make group decisions. A group can let the majority have its way, reach a decision that everyone can live with, or leave the final decision to someone else. Effective groups match the virtues of each method to the needs and purpose of the group and its task.

Voting.

Voting is the easiest and most obvious way to make a group decision. No other method is more efficient and decisive. Nevertheless, voting may not be the best way to make important decisions. When a group votes, some members win, but others lose.

A **majority vote** requires that more than half the members vote in favor of a proposal. When a group makes a major decision, there may not be enough support to implement the decision if only 51 percent of the members agree on it. The 49 percent who lose may resent working on a project they dislike. Some groups use a two-thirds vote rather than majority rule. In a **two-thirds vote ,** at least twice as many group members must vote for a proposal as vote against it. A two-thirds vote ensures that a significant number of group members support the decision.

Voting works best when:

- a group is pressed for time.
- the issue is not highly controversial.
- a group is too large to use any other decision-making method.
- there is no other way to break a deadlock.
- a group's constitution or rules require voting on certain types of decisions.

Consensus.

Because voting has built-in disadvantages, many groups rely on consensus to make decisions. A **consensus** decision is one "that all members have a part in shaping and that all find at least minimally acceptable as a means of accomplishing some mutual goal."[5] Consensus does not mean 100% agreement. Rather, it reflects a sincere effort and willingness to make an acceptable decision that will help the group achieve its common goal.

When reached, consensus can unite and energize a group. Not only does consensus avoid a disruptive win/lose vote, but it also presents a united front to outsiders. **Figure 9.2** lists guidelines for seeking consensus.

Guidelines	Strategies
• Listen carefully to other members and consider their information and points of view.	• Try to be logical rather than emotional. • Be open to the opinions of others rather than stubbornly argue for your own position.
• Don't change your mind in order to avoid conflict or reach a quick decision.	• Hold out rather than giving in, especially if you have a crucial piece of information or new argument to share. • Remind members that they don't have to agree to a decision or solution they can't possibly support.
• Avoid "easy" ways of reaching a decision.	• Avoid techniques such as flipping a coin, letting the majority rule, or trading one decision for another.
• If the group is deadlocked, work hard to find the next best alternative that is acceptable to everyone.	• Make sure that members not only agree but also will be committed to the final decision.
• Get everyone involved in the discussion.	• Engage even the quietest member, who may have key information or suggestions that can help the group make a better decision.
• Welcome differences of opinion.	• Remind the group that disagreement is natural and can expose the group to a wide range of information and opinions.

Figure 9.2 Consensus Guidelines and Strategies

Groups in Balance…

Avoid False Consensus

Many groups fall short of achieving their common goal because they believe the group *must* reach consensus on *all* decisions. The problem of false consensus haunts every decision-making group. **False consensus** occurs when members reluctantly give in to group pressures or an external authority. Rather than achieving consensus, the group has agreed to a decision masquerading as consensus.[6]

In addition, the all-or-nothing approach to consensus "gives each member veto power over the progress of the whole group." To avoid an impasse, members may "give up and give in" or seek a flawed compromise. When this happens, the group will fall short of success as "it mindlessly pursues 100% agreement."[7]

In *The Discipline of Teams,* John Katzenbach and Douglas Smith observe that members who pursue complete consensus often act as though disagreement and conflict are bad for the group. Nothing, they claim, could be further from the reality of effective group performance. "Without disagreement, teams rarely generate the best, most creative solutions to the challenges at hand. They compromise…rather than developing a solution that incorporates the best of two or more opposing views.… The challenge for teams is to learn from disagreement and find energy in constructive conflict, not get ruined by it."[8]

Consensus does not work well for all groups. Imagine how difficult it would be to achieve genuine consensus if a leader had so much power that group members were unwilling to disagree or express their honest opinions. Consensus works best when members have equal status or where there is a supportive climate in which everyone feels comfortable expressing their views.

Authority Rule.

Sometimes groups use **authority rule ,** in which a single person or an executive group within or outside the group makes the final decision. For this method, groups gather information and recommend decisions to another person or a larger group. For example, an association's nominating committee may consider potential candidates and recommend a slate of officers to the association. A hiring committee may screen dozens of job applications and submit the top three to the person making the hiring decision.

Authority rule can have detrimental effects on a group. If a leader or an outside authority ignores or reverses group recommendations, members may become demoralized, resentful, or nonproductive on future assignments. Even within a group, a strong leader or authority figure may use the group and its members to give the appearance of collaborative decision making. The group thus becomes a rubber stamp and surrenders its will to authority rule.

Decision-Making Questions

As is the case with all groups, decision-making and problem-solving groups need a clear goal. We strongly recommend wording the group's goal as a question for the group to answer. A question focuses group members on seeking a specific and realistic answer. Choosing a question of fact, conjecture, value, or policy can help your group clarify what members need to know and do in order to make a good decision or solve a problem.

Questions of Fact.

A **question of fact** asks whether something is true or false, whether an event did or did not happen, or whether something caused this or that. Did product sales decrease last year? The answer to this question is either yes or no. A question such as "What was the decrease in sales?" requires a more detailed answer, with possible subquestions about the sales of particular products or product sales in different regions. When a group confronts a question of fact, it must seek and scrutinize the best information available.

Questions of Conjecture.

A **question of conjecture** asks whether something will or will not happen. Will the economy generate more jobs next year? Will the unemployment rate go up or down? Unlike a question of fact, only the future holds the answer to this type of question. Instead of focusing on what *is,* the group does its best to predict the future. If a group waits until the future arrives, it may be too late to make a good decision or solve a problem. Groups should use reputable facts, expert opinions, and valid data to answer questions of conjecture.[9]

Questions of Value.

A **question of value** asks whether something is worthwhile: Is it good or bad; right or wrong; moral or immoral; best, average, or worst? Questions of value are difficult to discuss because the answers depend on the attitudes, beliefs, and values of group members. In many cases, the answer to a question of value may be, "It depends." Is a community college a better place to begin higher education than a prestigious university? The answer to this question depends on a student's finances, professional goals, academic achievement record, work and family situation, and beliefs about the quality of education at each type of institution.

Questions of Policy.

A **question of policy** asks whether a specific course of action should be implemented to address a problem. Questions of policy ask: What should we do about a particular problem? Here are some examples: What changes, if any, should we make to improve customer service? Which candidate should we support as president of the student government association? What can we do to ensure that our school system maintains a culturally diverse teaching staff? Policy questions often require answers to subquestions of fact, conjecture, and value.

Use All Four Types of Questions.

Problem-solving groups rarely focus on one type of question. Dennis Gouran, a pioneer in group communication research, notes: “A fascinating aspect of many policy discussions is that in trying to determine the most suitable course of action, group members must deal with the other three kinds of questions.”[10] For example, if your family were trying to make a decision about where to go for a summer vacation while saving money for a new car, you might start with questions of fact and conjecture: “How much do we usually spend on a summer vacation?” “How much money will we have in savings for a new car next year?” Then the discussion could move to questions of value: “How much do we value the time and place where our family vacations?” “How important is it that we buy a new car this year?” Finally, you would conclude with a question of policy: “How can we both take a summer vacation and save money for a new car?” In many cases, a group must address all four types of questions to make a rational decision or solve a complex problem. When preparing for a group meeting or discussion, make sure you are prepared to share accurate and relevant facts, make informed projections, support your opinions with strong arguments, and offer logical and realistic solutions to a problem.

Decision-Making Styles

The way you make decisions may be very different from other group members. In **Chapter 4** , "Diversity in Groups," we identify two Myers-Briggs traits—thinking and feeling—that focus on how we make decisions. Thinkers, for example, are task-oriented members who use logic when making decisions. Feelers are people-oriented members who want everyone to get along, even if it means compromising to avoid interpersonal problems. When thinkers and feelers work together, misunderstandings often occur. However, when thinkers and feelers appreciate their differences as decision makers, they become an unbeatable team. Thinkers make decisions and move the group forward, while feelers make sure the group is working harmoniously.

In *Decision Making Style,* Suzanne Scott and Reginald Bruce take a detailed look at various decision-making styles.[11] They describe five styles, all of which have the potential to improve or impair group decision making:

- **Rational Decision Maker .** "I've carefully considered all the issues." Rational decision makers carefully weigh information and options before making a decision. They use logical reasoning to reach and justify their conclusions. However, they must be careful not to analyze a problem so long that they never make a decision.
- **Intuitive Decision Maker .** "It just feels like it's the right thing to do." Intuitive decision makers make decisions based on instincts and feelings. They may not always be able to articulate specific reasons for decisions but know that their decisions "feel" right.
- **Dependent Decision Maker .** "If you think it's okay, then I'll do it." Dependent decision makers seek the advice and opinions of others before making a decision. They feel uncomfortable making decisions that others may disapprove of or oppose. They may even make a decision they aren't happy with just to please others.
- **Avoidant Decision Maker .** "I just can't deal with this right now." Avoidant decision makers feel uncomfortable making decisions. As a result, they may not think about a problem at all, or they delay making a final decision until the very last minute.
- **Spontaneous Decision Maker .** "Let's do it now and worry about the consequences later." Spontaneous decision makers are impulsive and make quick decisions on the

spur of the moment. They often make decisions they later regret.

Consider the ways in which different decision-making styles could improve or impair group decision making. For example, what would happen if half of the group were rational decision makers and the other half were intuitive decision makers? Also consider the potential pitfalls of having only one type of decision-making style in a group, such as dependent or avoidant decision makers. Effective groups respect, adapt to, and benefit from members' different decision-making styles.

Structured Problem Solving

Group communication scholar Marshall Scott Poole identifies structured procedures as "the heart of group work [and] the most powerful tools we have" for improving the quality of group work.[12] Even a simple procedure such as constructing and following a short agenda enhances meeting productivity. Time and effort spent on developing and using a well-planned, structured procedure can produce the following benefits:

- **Balanced participation.** Procedures can minimize the impact of powerful leaders or members by making it difficult for them to dominate a group's discussion.
- **Conflict resolution.** Procedures often incorporate guidelines for managing conflict, resolving disagreements, and building genuine consensus.
- **Organization.** Procedures require members to follow a clear organizational pattern and focus on the same thing at the same time. Procedures also ensure that group members do not skip or ignore major discussion items.
- **Group empowerment.** Procedures provide a sense of control. "This happens when members know they have followed a procedure well, managed conflict successfully, given all members an equal opportunity to participate, and as a result have made a good decision."[13]

There is no “best” structured procedure to ensure effective problem solving in groups. As a group gains experience and successfully solves problems, members learn that some methods work better than others and some need modification to suit the group’s needs. In this chapter, we present two well-established methods: the Standard Agenda and the Single Question Format. (See **Figure 9.3** .)

To appreciate the similarities and differences between these two procedures, let’s follow a hypothetical example that illustrates how the various steps apply to group problem solving.

> Fallingstar State College
> For three consecutive years, Fallingstar State College has experienced declining enrollment and no increase in funding from the state. To balance the budget, the college has had to raise tuition every year. There are no prospects for more state funding in the near future. Even with significant tuition increases, overall college revenue is down. The college’s planning council, composed of representative vice presidents, deans, faculty members, staff employees, and students, has been charged with answering the following question: Given the severe budget constraints and declining enrollment, how can the college preserve high-quality instruction and student services?

Although the Fallingstar example does not offer many details, it can help demonstrate the ways in which a group may use structured procedures to solve problems.

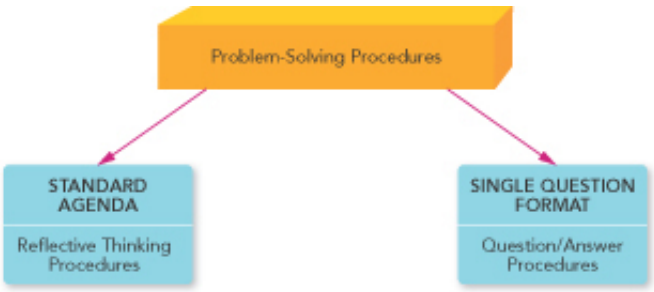


Figure 9.3 Structured Problem-Solving Procedures

Figure 9.4 Steps in the Standard Agenda

The Standard Agenda

The founding father of problem-solving procedures is John Dewey, a U.S. philosopher and educator. In 1910, Dewey wrote *How We Think,* in which he described a set of practical steps that a rational person should follow when solving a problem.[14] These guidelines are known as the **Reflective Thinking Process .** Dewey's approach begins with a focus on understanding the problem and then moves to a systematic consideration of possible solutions. The **Standard Agenda** incorporates the seven major steps in Dewey's process[15] (see **Figure 9.4**).

Task Clarification.

During this initial phase, a group makes sure that everyone understands the task or assignment. For example, the planning council at Fallingstar State College could dedicate the beginning of its first meeting to reviewing the council's goal and deadlines as well as the need to produce written recommendations. During this phase, group members ask questions about their roles and responsibilities in the problem-solving process.

Problem Identification.

Overlooking this second step can send a group in the wrong direction. In the case of Fallingstar State College, there may be several different ways to define the college's problem. Is declining enrollment a problem? Some group members may consider this an advantage rather than a disadvantage because having fewer students can result in smaller classes, more individualized instruction, less chaos at registration, and easier parking. Is the problem a lack of money? Although lack of money seems to be a universal problem, perhaps Fallingstar is being run inefficiently. If that's the case, the planning council could find that the college in fact has enough money if it enhances productivity and becomes more businesslike.

The group should word the problem as an agreed-upon question. Whether this is a question of fact, conjecture, value, or policy determines the focus and direction of the discussion. The question, "Given the severe budget constraints and declining enrollment, how can the college preserve high-quality instruction and student services?" is a question of policy that also requires answering questions of fact, value, and conjecture.

Fact Finding.

During the fact-finding step, group members have several obligations reflected in the following questions of fact and value: What are the facts of the situation? What additional information or expert opinions do we need? How serious is the problem? What are the causes of the problem? What prevents us from solving the problem? These questions require investigations of facts, conclusions about causes and effects, and value judgments about the seriousness of the problem.

Remember this

> A group's "ability to gather, share, and retain a wide range of relevant information is the single most important determinant of high-quality decision making."[16]

Fallingstar State College's planning council could look at many factors: the rate of enrollment decline and future enrollment projections, the anticipated budgets for future years, the efficiency of existing services, the projected impact of a slow economy, estimated salary increases, predictable maintenance costs, the likely causes of declining enrollment, and so on. It could take months to investigate these questions, and even then it may be impossible to find clear answers to all of them. Failure to search for such answers, however, is much more hazardous than not searching at all.

Solution Criteria.

In a review of group procedures, Susan Jarboe describes solution criteria as member ideas about what a solution should accomplish.[17] For example, the Fallingstar planning council recognizes the need for an *affordable* method for *both* increasing enrollment *and* preserving high-quality instruction and student services. Here are some general criteria to consider:

- Will the solution work—is it reasonable and realistic?
- Do we have the resources (money, equipment, personnel) to implement the solution?
- Do we have enough time to implement the solution?
- Does the solution reflect and protect our values?[18]

Criteria should reflect a realistic understanding of *solution limitations,* which may include financial, political, and legal restrictions. For the college planning council, criteria could include affordability, acceptance of the solution by all subgroups (administrators, faculty members, staff members, and students), a commitment to using fair and open procedures to assess existing programs, and considerations of the political and legal consequences of proposed actions.

Solution Suggestions.

At this point in a group's deliberations, some solutions may be obvious. Even so, the group should concentrate on suggesting as many solutions as possible. Having spent time understanding the task, identifying the problem, analyzing its consequences and causes, and establishing solution criteria, members should be able to offer numerous solutions. Later in this chapter, we describe a technique called *brainstorming* that can help a group generate creative options.

Suggestions from the college's planning council could include a wide range of options: raise tuition, embark on a new promotional campaign, seek additional grants and corporate donations, freeze raises and promotions, require additional teaching by faculty members, increase class size, reduce the number of administrators and staff members, eliminate expensive programs and services, lobby the state for more funds, and charge student fees for special services. This list could double or triple, depending on the creativity and resourcefulness of the group.

Solution Evaluation and Selection.

This stage of the Standard Agenda may be the most difficult and controversial. Here, group members discuss the pros and cons of each suggestion in light of their agreed-upon solution criteria. Questions of conjecture arise as the group considers the possible consequences of each option. Discussion may become heated, and disagreements may grow fierce. In some groups, members may be so tired or frustrated by the time they get to this phase that they have a tendency to jump to conclusions. If group members have been conscientious in analyzing the problem and establishing criteria for solutions, however, they will reject some solutions quickly, while others will swiftly rise to the top of the list.

The college's planning council may hear students argue against increased tuition, whereas faculty members predict a decline in instructional quality if they are required to teach more or larger classes. Administrators and staff members may cringe at freezing salaries, whereas faculty members may support reductions in administrative staff. In this phase, group members should remember their solution criteria and use them to evaluate the strengths and weaknesses of each suggested solution. At the end of this stage, a group selects one or more solutions.

Solution Implementation.

Having made a difficult decision, a group faces one more challenge: How should we implement our solution? Is our group responsible for implementation or do we delegate implementation to someone else? For all the

> Theory in Groups
>
> ### The Functional Perspective and Group Problem Solving

Group communication scholars Dennis Gouran and Randy Hirokawa have identified a set of critical functions that help predict the success of decision-making and problem-solving groups.[19] Their **Functional Perspective** claims that "communication is the instrument by which members or groups, with varying degrees of success, reach decisions and generate solutions to problems."[20]

Effective communication, they contend, is more important than the order in which groups perform these functions. As was the case with the Standard Agenda, the origin of the Functional Perspective is John Dewey's Reflective Thinking Process. A second major source is sociologist Robert Bales's study of problem-solving groups. Bales claimed that groups strive for equilibrium (or balance) in satisfying the demands of both task and social dimensions that enable members to perform as a unit.[21]

Unlike the Standard Agenda (and the Single Question Format in the next section), the Functional Perspective is not a set of steps or rules but a call for effective critical thinking and communication skills. Three functions stand out as essential for effective group problem solving:

1. Members must be well-prepared and skilled critical thinkers, and effective communicators who know how to generate strong arguments and how to analyze the validity of arguments made by other members.
2. Members with leadership skills must cultivate a supportive communication environment and push the group toward making a high-quality decision.[22]

3. Members must make sure they have identified the sources of information they will need.

time a group spends trying to solve a problem, it may take even more time to organize and implement the solution. If the planning council wants a new promotional campaign to attract students, the campaign must be well planned and affordable to achieve its goal. If the college wants to enhance fundraising efforts, a group or office must have the authority and resources to seek such funds.

Remember This

Brilliant solutions can fail if no one takes responsibility or has the authority to implement them.

The Single Question Format

The **Single Question Format** is a seemingly simple problem-solving procedure that, according to researchers Frank LaFasto and Carl Larson, approximates the way successful problem solvers and decision makers naturally think.[23] Its five steps, shown in **Figure 9.5** , provide a sharp focus on an agreed-upon question that, if thoroughly analyzed and responsibly answered, should provide the solution to a problem.[24]

Identify the Problem.

What is the *single* question, the answer to which is all that the group needs to know in order to accomplish its agreed-upon goal? Although reaching agreement on the single question may take many hours, the investment is essential.[25] For example, the planning council at Fallingstar State College decides to address this question: How can we increase enrollment and preserve high-quality instruction and student services? In a business setting, a single question might be: How should we eliminate $4 million of annual expenses without damaging the company or its customer relationships? At home, you could ask: Given limited funds, how can we take a vacation and purchase another car?

Create a Collaborative Setting.

This second step is absent from most other problem-solving procedures. Here, you ask group members to agree on a set of norms by generating a list of "we will" statements designed to foster open discussion and participation. For example:

- We will listen to *all* points of view.
- We will ask for facts as well as opinions.
- We will be tough on issues but not on one another.
- We will put aside personal agendas.

In addition to the "we will" list, identify assumptions and biases that may influence the discussion. Ask the group the following questions: Have past approaches worked, or do we need a new approach? Do we *really* understand the problem, or do we need to take a fresh look at the situation? Are we ignoring some approaches because of personal or political biases?

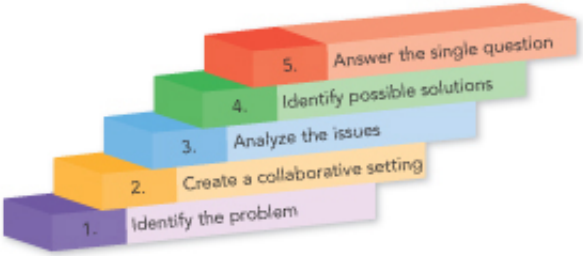


Figure 9.5 The Single Question Format

In the case of the Fallingstar planning council, members may decide not to use the names of specific administrators when describing failed programs. Rather than assuming that the college recruitment office “ain’t broke, so why fix it?” they may decide that there is room for improvement in all offices. When a group such as the Fallingstar planning council examines volatile issues such as tuition increases, staff reductions, and increased workloads, members will understandably want to protect their personal interests. If the group fails to create a collaborative setting for such discussion, the process could deteriorate into destructive conflict and flawed decision making.

Analyze the Issues.

The third step requires a group to identify and analyze relevant subquestions such as these:

- What issues should we address in order to answer our single question?
- Do we have accurate and relevant facts about each issue?
- Given what we know, what is the best or most reasonable response to each issue?

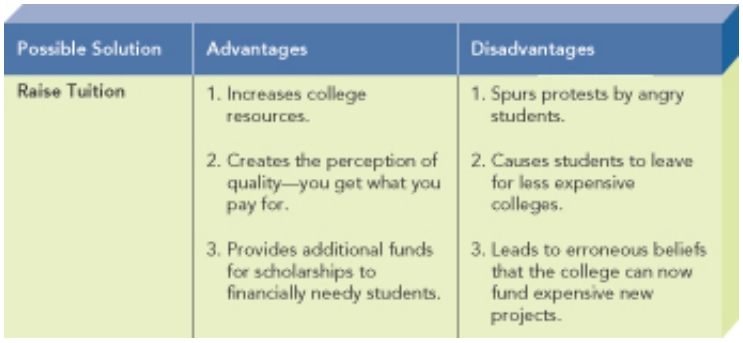
Completing this step helps a group "avoid arriving at a solution too early, before understanding the critical components of the problem."[26] This step is similar to the second and third steps in the Standard Agenda (problem identification and fact finding).

Analyzing issues differs by focusing on critical thinking rather describing. Fallingstar council members must do more than share facts about the rate of enrollment decline and future enrollment projections or anticipated budgets. They must determine whether the facts and suggested causes are valid.

Identify Possible Solutions.

This step asks a group to suggest two or three reasonable solutions to the overall single question *and* to discuss the advantages and disadvantages of each solution, much like similar steps in the Standard Agenda. This is a crucial step in which strong opinions and disagreements may arise. By listing advantages and disadvantages, however, a group may be able to *see* that the advantages for one solution far outweigh the disadvantages.

A Fallingstar vice president might suggest efficiency moves such as increasing class size as well as a more aggressive marketing plan. A student might recommend an organized protest at the state capitol in support of more funding. In the Single Question Format, the group would consider the advantages and disadvantages of every reasonable solution and determine the extent to which each suggestion could or should be part of an *ideal* solution that answers its single question. A simple table as shown in **Figure 9.6** could help group members generate the pros and cons for each option.



Possible Solution	Advantages	Disadvantages
Raise Tuition	1. Increases college resources. 2. Creates the perception of quality—you get what you pay for. 3. Provides additional funds for scholarships to financially needy students.	1. Spurs protests by angry students. 2. Causes students to leave for less expensive colleges. 3. Leads to erroneous beliefs that the college can now fund expensive new projects.

Figure 9.6 Identifying Possible Solutions

Your textbook describes three structured procedures to solve problems: the Standard Agenda, the Functional Perspective, and the Single Question Format. Which procedure would you recommend to this group as it makes critical decisions about what to include in the next edition of the school newspaper?

Answer the Single Question.

After analyzing the pros and cons of each potential solution, the group selects "the best solution to the problem based on a clear, shared understanding of all the relevant issues. This clarity, in turn, allows a group to proceed with sufficient confidence to their final decision and commit to it."[27]

Although the Single Question Format shares many characteristics with the Standard Agenda, two features make it both different and highly effective. First, it focuses sharply on goal clarity (a prerequisite for any work group) and issue analysis. Second, it cultivates a supportive group climate that helps members identify, raise, and resolve many interpersonal and procedural problems that can affect group success.

Creative Problem Solving

Curiosity and creativity fuel all *great* groups. These two qualities allow groups to "identify significant problems and find creative, boundary-bursting solutions rather than simplistic ones."[28] When Walt Disney "asked his artists to push the envelope of animation, he told them 'If you can dream it, you can do it.' He believed that, and, as a result, they did too."[29]

Remember This

Effective group leaders understand the near-magical quality that creativity can inject into the group process.

Creativity has two components: (1) the nonjudgmental process of seeking, separating, and connecting unrelated ideas and elements, and (2) combining these elements into new ideas.[30] Encouraging and rewarding creativity can be as important to problem solving as following any of the structured procedures described in this chapter. For example, one of us once chaired a meeting in which the injection of creativity broke through a problem-solving logjam:

> I was chairing a meeting of graphic artists, copywriters, and public relations staff members at the college. Our assignment was to write and design a commemorative booklet for the college's fortieth anniversary. On the conference table sat a dozen such booklets from other colleges. The group had reviewed all the samples and come up with a list of common features. The problem was this: We had limited funds to print the booklet, so we had to confine ourselves to twenty-four pages. Very quickly, the process bogged down. An uncomfortable silence settled over the group. At this point, I asked, "If you hadn't seen any of these model booklets, what would you write and design to commemorate our anniversary?" The response was immediate and energizing: "You mean we can come up with something new and different?" The answer was yes. The result: A new sense of excitement and eagerness permeated the group. The "model" booklets were swept off the table. Highly creative, outside-the-box alternatives materialized.

When groups engage in creative problem solving, members share imaginative ideas and unusual possibilities. Although it is impossible to describe the creative process in precise terms (it wouldn't be all that creative if we could), we can outline the basic stages of the process in groups. Usually, there are four stages:

- **Investigation.** Group members gather information and attempt to understand the nature and cause(s) of a problem.
- **Imagination.** Group members engage in free thinking by removing procedural and mental roadblocks. The group generates and discusses new and unusual ideas.
- **Incubation.** The group allows a period of time in which imaginative ideas can percolate and recombine in new ways. During this stage, the group may take a break or focus on another topic or issue.
- **Insight.** The "aha!" moment occurs and new approaches or solutions emerge. Group members recognize the "breakthrough moment" and may build on or improve the idea.

Fortunately, group members can learn to use creativity in effective ways when solving problems. In fact, when members receive training in creative problem solving, they

participate more, criticize one another less, support new ideas more, exhibit more humor, and produce ideas that are more worthwhile.[31] John Kao, the academic director of the Managing Innovations program at Stanford University, compares balancing creativity and structured group process to tending the flames of a fire. “The spark needs air, breathing room, and freedom to ignite. But let the air blow too freely, and the spark will go out. Close all the doors and windows, and you will stifle it.”[32]

As is the case with structured problem solving, there are many creative problem-solving methods. Again, there is no best technique. Fortunately, there are procedures for making decisions and solving problems more effectively by harnessing group ingenuity and creativity (see **Figure 9.7**).

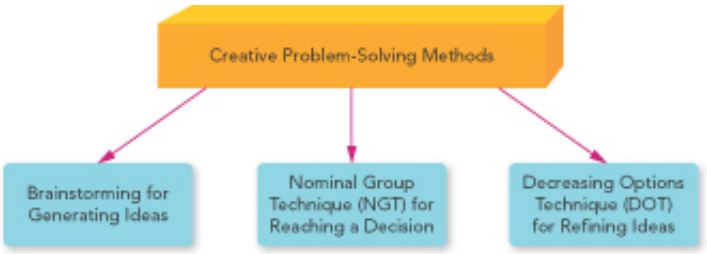


Figure 9.7 Creative Problem-Solving Methods

Brainstorming

In 1953, Alex Osborn introduced the concept of brainstorming in his book *Applied Imagination.* [33] **Brainstorming** is a technique for generating as many ideas as possible in a short period of time. When a group wants to identify the causes of or solutions to a problem, brainstorming can increase the number and creativity of responses. Brainstorming is fairly simple and widely used. In fact, more than 70 percent of businesspeople use brainstorming in their organizations.[34] Unfortunately, many groups do not use brainstorming effectively.

Brainstorming is based on two key principles: (1) Deferring judgment improves the quality of input, and (2) the quantity of ideas and output breeds quality. The idea that quantity breeds quality comes from the notions that the first ideas we come up with are usually the most obvious and that truly creative ideas will come only after we have gotten the obvious suggestions out.[35] The guidelines in **Figure 9.8** present six strategies and related skills for an effective brainstorming session.

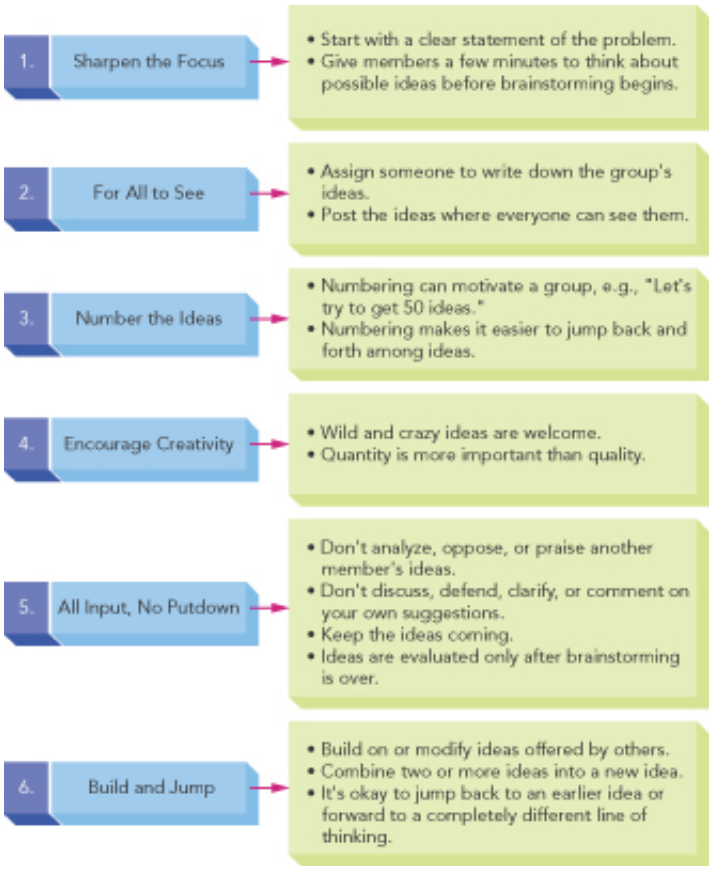


Figure 9.8 Brainstorming Strategies and Skills

Brainstorming is based on two key principles: (1) Deferring judgment improves the quality of input, and (2) the quantity of ideas and output breeds quality. How does this photograph illustrate a group's use of these principles?

However, brainstorming may be counterproductive under certain circumstances.[36] For example, the comments of a powerful member or "the boss" may influence and limit the direction of ideas. In some cases, group members may not participate in group brainstorming if they experience high levels of communication apprehension, become distracted by member comments, or leave it to others to come up with good ideas.[37]

In an effort to be more democratic, some groups have members speak in turn. But this approach prevents the group from building momentum and results in fewer ideas. Finally, some members try to write down all the group's ideas. Those members end up being so focused on note taking that they rarely contribute ideas. Instead, one person should record and post all the ideas contributed by the group members.

Although brainstorming is popular, its effectiveness depends on the nature of the group and its members. If a group is self-conscious and sensitive to implied criticism, brainstorming can fail. If a group is comfortable with such a freewheeling process, brainstorming can enhance creativity and produce many worthwhile ideas.

Nominal Group Technique (NGT)

Andre L. Delbecq and Andrew H. Van de Ven developed the **Nominal Group Technique (NGT)** as a way of maximizing participation in problem-solving and program-planning groups while minimizing some of the interpersonal problems associated with group interaction.[38] The term *nominal* means "existing in name only." Thus, a nominal group is a collection of people who, at first, work individually rather than collectively. NGT combines aspects of silent voting with limited discussion to help a group build consensus and arrive at a decision.[39]

There are two separate phases in a Nominal Group Technique session: an idea generation phase and an evaluation/voting phase. During the idea generation phase, group members sit around a table in full view of one another.

Phase 1: Idea Generation

1. Each member writes his or her ideas on a piece of paper.
2. At the end of five to ten minutes, a structured sharing of ideas takes place. Each member, in turn, presents one idea from his or her private list.
3. A recorder writes the ideas on a flip chart (or posts ideas using computer projections) in full view of other members. There is no discussion at this point—only the recording of members' ideas.
4. Round-robin listing continues until all members have no further ideas to share.[40]

Returning to the case of the college planning council, members could use the Nominal Group Technique to generate a list of possible causes of declining enrollment or a list of possible solutions. The listing of ideas in an NGT session is different from brainstorming because each member works alone to generate ideas.

During the second, evaluative phase of a Nominal Group Technique session, the group discusses each recorded idea and then votes to create a rank order of items.

Phase 2: Idea Evaluation and Voting

1. Members discuss each idea before independent voting.
2. Members may clarify or state their support or nonsupport for each listed item.

> Follow the Research
>
> ### Which Is Better—Brainstorming or the Nominal Group Technique?
>
> Several researchers comparing the usefulness of brainstorming and the Nominal Group Technique conclude that the Nominal Group Technique often works better than brainstorming for generating ideas that are both numerous and creative. An article in the *Encyclopedia of Creativity* claims

that the number of ideas generated in a period of time using the Nominal Group Technique almost always exceeded those from group brainstorming, and that brainstorming usually fails to match the Nominal Group Technique in terms of the quality of ideas.[41] There are several possible reasons for this conclusion.[42]

- Waiting for a turn to speak in a brainstorming group (rather than writing down ideas in advance) may disrupt the thinking of group members and slow the production of ideas.
- Group members who fear negative evaluation from others may withhold good ideas even though the brainstorming group has been told to defer judgment.
- Some members may loaf, or ”free-ride,” and let others do all the thinking and talking.
- Members who make more contributions to a brainstorming session often earn higher status, which may discourage others from speaking.

The Nominal Group Technique avoids most of these problems because members have time to think and write during the idea-generating process. Brainstorming can avoid these problems when group members use networked computers programmed to generate a master list of ideas simultaneously *and* anonymously.[43]

Even though the Nominal Group Technique may be more effective in generating both the quantity and quality of ideas, brainstorming does have advantages. It can benefit a group by improving morale and by giving members time to have fun in a supportive communication climate as they generate creative ideas.

3. Members vote by ranking or rating ideas privately, in writing.
4. The group decision is the mathematically pooled outcome of the individual votes.[44]

The Nominal Group Technique works particularly well when individual judgments and expertise are valued. Groups use NGT to rank job applicants, determine which of many possible solutions receives the most support, establish budget priorities, and reach consensus on the causes of a problem. The highly structured NGT process guarantees equal participation during the idea generation phase and provides opportunities for discussion and critical evaluation in the second phase. NGT can also be useful when dealing with a sensitive or controversial topic on which contrary opinions or a myriad of details could paralyze the discussion.[45]

An NGT session requires a great deal of time and a skilled moderator to make it work efficiently and effectively. Given NGT's highly structured format, it is difficult to adjust or modify suggested items, and this may frustrate group members who prefer spontaneous interaction. At the same time, NGT can curb members who dominate or block the ideas and comments of others.

Decreasing Options Technique (DOT)

When a group generates dozens of ideas, the number of topics to be reviewed can overwhelm a group and discourage members from participating. Valuable meeting time can be consumed by discussing every idea, regardless of its merit or relevance. The **Decreasing Options Technique (DOT)** is a decision-making tool that helps groups reduce and refine a large number of suggestions into a manageable number of ideas

9.9 [46]

Generate Individual Ideas.

At the beginning of the DOT process, group members generate ideas or suggestions related to a specific topic. Ideas can be single words or full-sentence suggestions. Groups can generate and submit ideas before the group meets or at the beginning of a meeting. Group members should follow the guidelines for effective brainstorming to generate ideas.

Post Ideas for All to See.

Each idea should be written on a separate sheet of paper in large, easy-to-read letters—only one idea per page. These pages are posted on the walls of the group's meeting room for all to see and consider. When members submit their ideas in advance, the postings can be completed before the meeting begins.

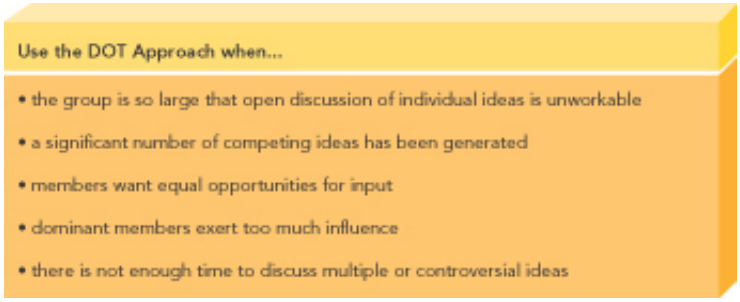


Figure 9.9 Criteria for Using the DOT Approach

Sort Ideas.

Not surprisingly, many group members will contribute similar or overlapping ideas. When this happens, sort the ideas and post similar ideas close to one another. For example, when facilitating the development of a college's vision statement, phrases such as *academic excellence, quality education,* and *high-quality instruction* were posted near one another. After everyone is comfortable with how the postings are sorted, give a title to each grouping of ideas. In the vision statement session, for instance, the term *quality education* was used as an umbrella phrase for nearly a dozen similar concepts.

Prioritize Ideas.

At this point, individual members decide which of the displayed ideas are most important. To prioritize ideas efficiently, every member receives a limited number of colored sticky dots. They use their stickers to "dot" the most important ideas or options. For example, each member of a group developing an organization's vision statement receives ten dots; then the members are told to "dot" the most important concepts from among 25 phrases posted on the walls. After everyone has finished posting their dots, the most important ideas are usually very apparent. Some ideas will be covered with dots; others will be speckled with only three or four; some will remain blank. After a brief review of the outcome, the group can eliminate some ideas, decide whether marginal ideas should be included, and end up with a limited and manageable number of options to consider and discuss. **Figure 9.10** summarizes the four steps of DOT.

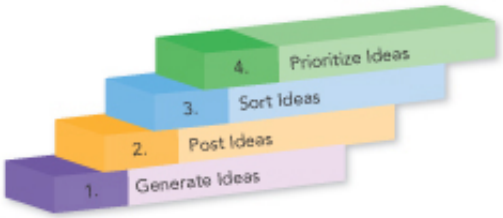


Figure 9.10 Steps in the DOT Method

Perhaps the greatest advantage of DOT is its most obvious feature: It is visual. In his book, *Visual Meetings*, David Sibbet notes that adding a visual component to group decision making and problem solving enhances both the efficiency and effectiveness of group work. Two of the factors that support his claim are directly applicable to the reason the DOT Method succeeds:

1. Participation and engagement explode when group members' contributions are posted for all to see.
2. Groups get smarter when they can see the big picture that allows for comparisons and pattern finding.[47]

Although the examples described focus on face-to-face interaction, the DOT strategy also works very well in virtual settings. A virtual group can follow the same steps by using email or networked software designed for interactive group work.

Enhancing Group Creativity

Given the benefits of creative problem solving, we recommend four strategies for enhancing group creativity, regardless of the chosen method: (1) control judgment, (2) encourage innovation, (3) ask "what-if" questions, and (4) use metaphors.

Control Judgment.

It's hard to think of anything that inhibits group creativity more than negative responses to new ideas and innovative solutions. "That won't work." "We've tried that." "That's bizarre." Sometimes a bizarre idea can evolve into a creative solution. "Keeping the process open and avoiding premature closure are crucially important. Because creative work is exploratory in nature, it deserves suspension of belief in the early stages."[48]

Virtual Groups

Adapting Decision-Making and Problem-Solving Methods

The group decision-making and problem-solving methods in this chapter were designed for face-to-face meetings. These methods also work well in virtual groups using commonly available technology. Specialized computer software can facilitate group collaboration, decision making, and problem solving.

Different types of technology, however, are not equally well suited to all types of virtual groups. In *Mastering Virtual Teams*, Deborah Duarte and Nancy Tennant Snyder offer a matrix (see below) that rates the effectiveness of different types of technology to the goals of a meeting.[49] In this matrix, *product production* refers to a meeting in which group members work on a collaborative project such as analyzing complex data, developing a design, or drafting a policy. Electronic meeting systems are used in face-to-face settings and range from electronic voting systems to computer-aided systems in which members use a laptop computer to provide input into a central display screen.[50]

Group experts John Katzenbach and Douglas Smith remind us that "whenever teams gather through groupware to advance, they need to recognize and adjust to key differences between face-to-face and groupware interactions."[51] They also caution against approaching every virtual meeting in the same way. Group problem-solving and decision-making tasks require more opportunity for interaction than, for example, does information sharing or presentations. A virtual group should select the technology that is best suited to its problem-solving method.

Interestingly, virtual groups have the potential to stimulate more ideas and overall productivity with fewer blocking behaviors.

Type of Technology	Information Sharing	Discussion & Brainstorming	Decision Making	Product Production
Telephone or Computer Audioconference	Effective	Somewhat effective	Somewhat effective	Not effective
Email	Effective	Somewhat effective	Not effective	Not effective
Bulletin Board, Restricted Blog	Somewhat effective	Somewhat effective	Not effective	Not effective
Videoconference without shared documents	Effective	Somewhat effective	Effective	Not effective
Videoconference with text and graphics	Effective	Effective	Effective	Effective
Electronic Meeting System with audio, video, and graphics	Effective	Highly effective	Highly effective	Effective
Collaborative Writing with audio and video	Effective	Effective	Somewhat effective	Highly effective

Meeting Selection Matrix for Virtual Groups

Some studies have found that idea generation and consolidation using computers are more productive and satisfying than if done face-to-face.[52] However, computer groups require more time for task completion, and group members may become frustrated or bored.

In light of the advantages *and* cautions associated with virtual group problem solving, we offer several strategies to help your group meet the various challenges that arise in such meetings:[53]

1. Ask members to send in their opinions or recommendations prior to the meeting. Appoint someone to collect and summarize these contributions

and share them with members so they have time to process the information.
2. Make sure that all members receive the agenda and any other documents they need in time to review them before the meeting begins.
3. Depending on the topic and type of technology, use anonymous features for functions such as brainstorming, voting, and reaching consensus.
4. When possible, use technology such as group editing and collaborative writing to obtain "buy in" on the final recommendations or product from everyone.

Encourage Innovation.

In his book on creativity in the workplace, Lee Towe presents four approaches that affect how we solve problems (see **Figure 9.11**).[54] These approaches also apply to group problem solving. Remember the group trying to design the commemorative booklet for the college's anniversary? Until their creativity was released, they were bogged down in inertia, instruction, and imitation. Encouraging group members to be innovative and imaginative sparked the group's creative powers.

Four Sources of Action	
Inertia	We've done it before.
Instruction	Someone showed us how to do it.
Imitation	We've seen how it's done
Innovation	We've developed a new way to do it!

Figure 9.11 Problem Solving Approaches

Ask What-If Questions.

Group members are often reluctant to think creatively because they have preconceived notions about what to do. Asking what-if questions can set aside these constraints. John Kao suggests that there are two types of knowledge. The first is raw knowledge—facts, information, and data. The second type of knowledge is insight, or the "aha!" It is "a response to the *what ifs* and *if only we coulds.*"[55]

Here are some questions that the commemorative booklet committee could have asked: What if we had a million dollars to design and print the commemorative booklet; what would we do? What if we had one hundred pages to work with? What if we created an online only brochure? What if we could hire a famous author or designer to do this—what would they do? Group members could consider one more "what-if" scenario: What if we do nothing?[56] What are the consequences, if any, if we don't produce a commemorative booklet?

Ethics in Groups

The Morality of Creative Outcomes

In *Organizing Genius: The Secrets of Creative Collaboration,* Warren Bennis and Patricia Ward Biederman warn that “creative collaboration is so powerful a phenomenon that it inevitably raises moral issues.”[57] John Rawls, a contemporary ethicist, urges us to examine the consequences of group creativity. He believes fairness is an important consideration in creative problem solving.[58] For example, creative groups need to ask if their creative innovations have the potential to help or hurt others. Should political consulting firms help the wealthiest or the worthiest candidates? What are the consequences when corporate executives find creative ways to ”cook the books” and collect millions of unearned dollars?

Many of the creative geniuses who collaborated to create and test the atomic bomb during World War II subsequently struggled to deal with the consequences of their work. Dr. Richard Feynman, who later won a Nobel Prize in physics, was one of those scientists. He recalled that the group became so caught up in the frenzy and excitement of creating the bomb that they didn’t stop to think about the consequences. However, when a colleague of Feynman’s said, “It’s a terrible thing that we made,” he realized that they had unleashed the greatest terror on earth.[59]

Use Metaphors.

The answers to many problems already exist. It's just that they are hiding in other areas of our lives.[60] You can find these hiding places in common metaphors. Metaphors can help group members explain, understand, guide, and direct their creative thinking in ways they would not have thought of otherwise.[61] For example, the metaphor of an emergency room could help redesign the registration process at some colleges. Students who don't need help can register online. Those who need help meet a kind of "triage nurse," a college advisor who can answer simple questions, direct them to a clerk for processing, or send them to a private room where they can receive "intensive care" from a "specialist" counselor. The beauty of metaphors is that they force group members to look at a problem in new and creative ways.

Problem-Solving Realities

Although procedures may be the most powerful tool available to improve the conduct of meetings, several other factors affect the outcome of group decision making and problem solving. We would be remiss if we did not acknowledge that politics, preexisting preferences, and power often infiltrate the group process. Group "decision making in the real world is often messy."[62]

Politics

In organizational settings, almost all decisions have a political component. Regardless of the procedures, many group members come to meetings with hidden agendas and political interests. For example, a member who wants to get ahead may be reluctant to oppose an idea supported by the boss. Another member who knows why a plan won't work may remain silent in order to make sure that the person responsible for implementing the plan fails. Although most conscientious and ethical group members do not engage in such deceptive behavior, it would be naïve to assume that all members care equally about achieving the group's common goal. In some groups, meetings are political arenas in which individuals and special-interest groups are only dedicated to meeting their own needs. Fortunately, the use of clear procedures can minimize the influence of such members.

Remember This

Meetings can become a political arena in which individuals and special-interest groups are dedicated to fulfilling their own needs.

Preexisting Preferences

An intelligent group member is rarely a blank slate who walks into a meeting uninformed or unconcerned about the topic or issue to be discussed. Well before it's time for a decision, most of us have powerful preexisting preferences that affect how we vote.

Psychologists report that we often resist or dismiss information that doesn't mesh with our preconceived beliefs, and that when we hear or read something that supports our preferences, we view it as valid and persuasive–a phenomenon known as **confirmation bias .** [63] When we encounter something that challenges our beliefs, we often view it as flawed.[64] In his book *True Enough,* Farhad Manjoo writes that in addition to holding different opinions, "we're also holding different facts," a tendency that distorts our "perceptions about what is 'real' and what isn't."[65] For example, in a 2004 survey of 928 studies about climate change published in prestigious scientific journals, not a single one disagreed with the view that humans contribute significantly to global warming.[66] Why, then, do polls continue to show that less than half of Americans believe there is strong evidence that human actions are changing the Earth's climate?[67] Preconceived beliefs take a long time to change.

Fortunately, a combination of open discussions, clear goals, and the use of procedures can moderate these preferences, particularly when members analyze them logically and fairly. Even when members have preexisting preferences, procedures that require a pro-and-con discussion of each option help members understand the nature and causes of a problem.

Power

The power of individual group members can have a significant effect on whether a group achieves its goals. It is no secret that powerful people influence group decisions. They affect how and whether other members participate as well as whose ideas and suggestions get serious consideration. Highly influential members can convince a group "to accept invalid facts and assumptions, introduce poor ideas and suggestions, lead the group to misinterpret information presented to them, or lead the group off on tangents and irrelevant discussion."[68] In short, one powerful but misguided member can be responsible for the poor quality of a group's decision.

Summary Study Guide

Group Decision Making

- Decision making results in a judgment or a choice from among alternatives. Problem solving is a complex process in which groups analyze a problem and agree to a plan that will solve it or reduce its negative effects.
- Groups make decisions by voting, seeking consensus, and/or relying on authority rule.
- Groups should be wary of false consensus, which occurs when members reluctantly give in to group pressures or an external authority.
- There are four types of decision-making questions: questions of fact, questions of conjecture, questions of value, and questions of policy. Some discussions require answers to all four types of questions.
- Differences in rational, intuitive, dependent, avoidant, and spontaneous decision-making styles can cause conflict and tension in groups.

Structured Problem Solving

- The Standard Agenda includes the following steps: task clarification, problem identification, fact finding, solution criteria, solution suggestions, solution evaluation and selection, and solution implementation.
- The Single Question Format differs from the Standard Agenda in that it focuses on goal clarity and issue analysis and recommends cultivating a supportive group climate.
- The Functional Perspective emphasizes the importance of seeking the best possible information and having members with effective critical thinking and communication skills.

Creative Problem Solving

- Creative problem solving in groups includes four stages: investigation, imagination, incubation, and insight.
- Brainstorming asks group members to generate as many ideas as possible in a short period of time without criticism or analysis.
- The Nominal Group Technique (NGT) is a two-phase process in which individual members engage in fact finding and idea generation on their own, followed by an analytical discussion of ideas and, as a result, decision making.
- The Decreased Options Technique (DOT) helps groups reduce and refine a large number of ideas into more manageable categories.
- Virtual groups must carefully match the decision-making or problem-solving method to the appropriate technology.
- Regardless of the method, groups can enhance creativity by controlling judgment, encouraging innovation, asking ”what-if” questions, and using creative metaphors.

Problem-Solving Realities

- Politics in a group manifests itself in hidden agendas and special interests.
- Open discussion and clear procedures can diminish the impact of preexisting preferences.
- Differences in power affect how and whether group members participate, whose ideas are accepted, how decisions are made, and which solutions are chosen.

GroupWork What Is Your Decision-Making Style?[69]

Directions: For each of the following statements, indicate the degree to which you agree or disagree by circling a number based on the following scale:

1 = Strongly disagree

2 = Disagree

3 = Undecided

4 = Agree

5 = Strongly agree

There are no right or wrong answers. Respond to the statements as honestly as you can. Think carefully before choosing option 3 (Undecided)—it may suggest you cannot make decisions.

Scoring: To determine your score in each category, add the total of your responses to specific items for each type of decision making. Your higher scores identify your preferred decision-making style(s).

DECISION-MAKING STATEMENTS	1	2	3	4	5
1. When I have to make an important decision, I usually seek the opinions of others.	1	2	3	4	5
2. I tend to put off decisions on issues that make me uncomfortable or that are unpleasant.	1	2	3	4	5
3. I make decisions in a logical and systematic way.	1	2	3	4	5
4. When making a decision, I usually trust my feelings or gut instincts.	1	2	3	4	5
5. When making a decision, I generally consider the advantages and disadvantages of many alternatives.	1	2	3	4	5
6. I often avoid making important decisions until I absolutely have to.	1	2	3	4	5
7. I often make impulsive decisions.	1	2	3	4	5
8. When making a decision, I rely on my instincts.	1	2	3	4	5
9. It is easier for me to make important decisions when I know others approve or support them.	1	2	3	4	5
10. I make decisions very quickly.	1	2	3	4	5

Answers to items 3 and 5 = _____ Rational Decision Maker

Answers to items 4 and 8 = _____ Intuitive Decision Maker

Answers to items 1 and 9 = _____ Dependent Decision Maker

Answers to items 2 and 6 = _____ Avoidant Decision Maker

Answers to items 7 and 10 = _____ Spontaneous Decision Maker

Group Assessment Problem-Solving Competencies

Directions: Use this instrument to evaluate your communication behavior in group problem-solving discussions. There are five competencies related to accomplishing the group's task and three competencies dealing with conflict, climate, and interaction. Rate yourself on each item in order to assess how well you help your group solve problems and make important decisions.

1 = Superior 2 = Satisfactory 3 = Needs improvement

PROBLEM-SOLVING COMPETENCIES	1	2	3
Defining and analyzing the problem. I help clarify, define, and analyze the problem confronting the group.	1	2	3
Identifying solution criteria. I actively participate in identifying criteria for assessing the quality of the group's outcome.	1	2	3
Generating solutions. I suggest and explain potential solutions or options.	1	2	3
Evaluating solutions. I participate in evaluating potential solutions and options.	1	2	3
Focusing on the task. I stay focused on the task, issue, or agenda item under discussion.	1	2	3
Managing conflict. I encourage constructive disagreements and do my best to resolve nonproductive conflict.	1	2	3
Maintaining a collaborative climate. I support other group members.	1	2	3
Communicating effectively. I interact with others and encourage other members to participate.	1	2	3

1. What are my strengths and communication competencies as the member of a problem-solving group:

_____

_____

_____

2. What and how can I improve my communication competencies as the member of a problem-solving group:

_____

_____

_____