

Chapter 9

Problem Solving and Decision Making

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If you can dream it, you can do it.

–Walt Disney

Introduction

Problem solving and decision making in multicultural work teams are the last of the skill areas to be covered in this book. This topic will be discussed from the cultural, individual, and organizational levels of multicultural team development, building on the frameworks that have been presented in previous chapters. Many theorists consider problem solving and decision making as synonymous—all decisions are made in response to a problem or opportunity. Simply stated, if *problem solving* is the process used to find a solution to the problem, challenge, or opportunity. However, how one solves problems can be quite varied. An individual can use analytical tools based on logic, deduction, or induction, or intuition based on an understanding of principles, or creative thinking. Problem-solving abilities and approaches may vary considerably, actually using different paradigms or frameworks. In this chapter one approach, with the steps and methods to do problem solving in work teams, will be presented.

Decision making involves making choices, determining an outcome, or making up one's mind about something. It also occurs by progressing through a prescribed set of steps. Although there are many different techniques from which to choose in each of the steps, the decision-making steps themselves are the same. Many decisions are routine or operational, and once initially made can be repeated in the same way until the conditions under which it was first made change. There is really no *problem* to be solved. For example, when a team needs to organize materials for a training, some of the decisions to be made can include where the materials will be assembled, who will do the editing, what information should be delivered in the session, how the materials will be produced, when the research for the documents will be done, and who will be the contact person for the training. If the division of the work is acceptable to all of the team and the end results are positive, the team may

decide to use the same approach for all future training presentations. There are two items worth noting here: (1) several decisions have been made in order for the team to complete its work together; and (2) there was no problem needing to be solved. Is it possible that a problem may have developed somewhere in the process of the team's completing its task? Certainly it is possible, but it is not a requirement! In the work cycle of a team there are many routine or operational decisions made daily. If a problem does arise the team will need to revisit the decision-making process and determine what, if anything, might need to be completed in a different way.

There are also decisions made that are more tactical, or strategic, and require more creativity or time spent in the preliminary phases of the process. This happens because the outcome of the decision is less well understood by the team, or there may indeed be a problem, challenge, or opportunity that requires more attention. The actual decision is only a part of the whole process. Problem solving has a broader scope than decision making, and strategic decision making uses many of the same steps used in problem solving. For example, the same team above may find the workload among team members is uneven and the timeline for completing the work too short for all team members to complete what they had decided to do. In order to resolve this problem for future tasks the team may need to look more strategically at how each understood the task assigned, and what their expectations of the members were for the task and their role in it. In resolving a problem there can be one or many decisions made, and strategic decisions will require more work than routine decisions. So what does this mean? *All problem solving involves some decision making; decision making does not always involve problem solving.*

There are six steps to the problem-solving model described and demonstrated in this chapter. Several of those steps within the model are used for decision-making, and are covered as well. *How* a team makes the decision, and *who* on the team makes it are important elements and will also be discussed. As prior chapters have noted, membership of multicultural teams varies greatly. The procedures each member follows, the different value orientations guiding their behavior (Smith et al. 2002), the nature of the tasks they must complete, and the communication tools they employ (face-to-face and/or technology-based) all impact how they approach problem solving and decision making. When done effectively, problem solving, which includes decision making, moves through all the steps described here equally, engaging the knowledge and skills of all team members.

This chapter will first present theoretical frameworks for problem solving, then define the steps that comprise problem solving and decision making within them. This will be followed by a discussion of the cultural variations, and impact of individual styles and societal assumptions on decision-making. Shared mental models and consensus are offered as methods to equalize participation in team decision making, and an overview of other methods provided. The last section will look at ways to coordinate the stages of team development with the variety of problem-solving and decision-making techniques in order to maximize a team's effectiveness.

Learning Objectives

After reading this chapter you should be able to:

- Compare traditional problem solving and appreciative inquiry
- Describe a synergistic model for problem solving, including decision making, that can be used in multicultural groups
- Identify factors that influence decision making in a team
- Discuss how cultural considerations impact the individual's view of problem solving and what they value in decision making
- Describe ways in which individual personality and social identity impact our problem-solving and decision-making processes
- Define shared mental models and consensus, their value in problem solving and decision making, and their misuse in groupthink
- Name and describe various techniques for problem solving and decision-making and relate their use to different stages of team development

Approaches to Problem Solving

A Synergistic Approach to Problem Solving

There is wide cultural variation in the definition of problem solving as a team or management process. When we look at problem solving as a method for organizational change and development, there are two approaches that are useful for a team to be familiar with, and to be comfortable in using. As a team process these approaches provide different ways to conduct problem solving. The origins of each are quite different, and can mean very different mindsets on the part of team members to the entire topic of problem solving, and whether problem solving can, or should, even be done.

The first, *traditional problem solving*, has been valued through the years for its ability to find the “true,” objective answer. The traditional problem-solving approach uses as its theoretical framework classic scientific inquiry, which is based on the belief that there is one objective reality, and that reality is discernable. It involves understanding the current situation, whether a problem or opportunity, identifying problems and/or gaps, brainstorming solutions, selecting and testing a solution, and analyzing the results. The traditional problem-solving approach concentrates on the opportunity or issue that needs the attention of members in the organizational system. Accurate description of the task at hand, and expansive treatment of the possible actions to be taken will lead to the best decision and implementation plan. It concentrates on *fixing* the problem.

Beliefs that resonate with traditional problem solving and classic scientific inquiry:

- There is a model or method for objectively viewing the world
- It is possible to do complex planning because the world is predictable
- Things can be best understood if they are broken down into parts

In recent years an approach to organizational change and problem solving called *appreciative inquiry* (AI) has gained in popularity. Originally used in action research, its roots are in non-Western cultures, and in the new sciences framework, which is based on the belief that there is no one objective reality, and that “reality” can be created by what one focuses on. Initial research attests to its usefulness as an alternative to the more widely known traditional problem-solving approach to change and management. Appreciative inquiry relies more on the emerging new sciences framework (Watkins and Mohr 2001). The basic assumption of the appreciative inquiry approach is that changes happen through the process of identifying what all individuals value or appreciate in an organization, and think contributes to the success of the organization and accomplishment of its mission. Information is collected from members within the whole system on best practices in the organization; results are shared and then framed with an emphasis on the perceived strengths of the organization. Appreciative inquiry looks at what is being done well now, and how that can be built upon for the future.

Beliefs that resonate with appreciative inquiry and the new sciences approach:

- The world is complex and subjective
- Planning is part of a continual on-going re-evaluation process
- All things are interconnected and should be considered as part of a whole

Table 9.1 highlights some of the broad differences between traditional problem solving and appreciative inquiry:

Table 9.1 Traditional problem solving vs. appreciative inquiry (Adapted from Cooperrider et al. 2005)

Problem solving	Appreciative inquiry
Identification of the problem or opportunity to be addressed	Identification of a need or opportunity to be addressed
Gathering information and analysis of the causes for the problem or opportunity	Appreciation of the best of what exists currently, and a desire to foster more of this in the environment
Identification of solutions	Envisioning what might be possible in the future
Analysis of possible solutions	Discussing what should be
Action planning for resolution	Innovating towards improvement

As you read the case study below, consider what information they will need to gather using the traditional problem solving method and what information they will need to gather using the appreciative inquiry method.

Case Study: Faculty Exchange Program

A higher education institution is about to design a faculty exchange program with institutions in two other countries. An alumna from the agricultural sciences department made the initial contact, but faculty from other departments and the administrators of all the institutions are very excited about the

possibilities. An inter-institutional work team has been in face-to-face (f2f) meetings for two weeks now, sharing information about the academic programs and administrative systems that should be carried forward to the joint design. They are given a start date 18 months from now, but will not meet again as a whole team in a face-to-face (f2f) setting before the start of the program.

At today's meeting they begin on an agenda that includes:

- *Developing a survey to be distributed to faculty and administrators that will capture what each sees are the possibilities for collaboration across institutions*
- *Determining a method for collating this information as a basis for building a vision for the future joint program*
- *Setting a timetable to gather this information so it can be analyzed and discussed with the administrators from each institution*
- *Deciding how they will communicate with each other—how often, in what formats*
- *Determining the process they will use to make decisions as a work team for the coming months*

Proponents of the traditional problem-solving approach believe this can be one of the team processes where people are most focused in their work. There is emphasis on the issue at hand and creative alternatives are identified. Success in the traditional problem-solving method depends on all the steps in the problem-solving process being completed accurately. Appreciative inquiry posits that the traditional problem-solving approach is limiting, and can potentially lead to inaccurate results because the focus is on finding the best solution.

Proponents of the appreciative inquiry framework believe that in every organization, group, or individual there are some strengths that can contribute to their success. In a time when change must happen rapidly it is easier to move to the future if the most treasured parts of the past are retained. Traditional problem solving advocates are concerned that the emphasis on future may not resolve the issue currently in front of the team or organization, leaving the potential for the problem to grow.

Clearly these two approaches, while grounded in the idea of scientific inquiry, have taken very different paths and each will lead teams to a different orientation to problem solving and the decision making within it. Traditional problem solving looks at and resolves the issue. In the appreciative inquiry approach there is no mention of a *problem* that needs solving; but more an opportunity to be in touch with those aspects of the organization that are of value, and should be built upon as the organization improves. Neither framework captures the whole picture—traditional problem solving may not lead to

positive transformation, while appreciative inquiry may leave real and immediate needs unattended.

Some authors have termed the comparison of the two approaches *deficit-based change* (traditional problem solving) to *asset-based change* (appreciative inquiry) (Whitney and Trosten-Bloom 2003). One thing is certain—a diverse work team will need to understand both orientations in order to be successful. Using the following exercise, try each approach and see how the varying emphasis of each framework might change the focus of the topic at hand.

Case Study: Recognizing Different Orientations to Problem Solving and Resolution—Community Nonprofit Housing Program

As you read the case study below, consider the following questions:

- *If you were to approach this problem using the traditional problem-solving approach, how would you suggest the team define the issue?*
- *How would you approach solving the problem?*
- *If using an appreciative inquiry approach, how would suggest the team define the issue?*
- *How would you approach solving the problem?*

A nonprofit community-based organization that provides subsidized housing for low-income community residents has a wonderful reputation in the community for offering housing referrals and placement services, while also providing emotional support and childcare for parents who are at work. A core team of five people, all with relatively equal levels of responsibility, manages the organization. Each person manages a different aspect of the organization. The gap between clients' earnings at minimum wage employment and the costs of shelter and food has placed increased demand for affordable housing in the community.

When the core team meets to set their goals for the next year in preparation of their annual budgeting exercise, they need to determine how their agency might respond to this gap in the coming year.

Most useful for multicultural work teams is an approach that captures the best attributes of both, such as the synergistic approach below.

One of the desired outcomes of a culturally synergistic organization is for the management processes to reflect the cultural and individual diversity of its work teams. Culturally synergistic organizations create new work processes that transcend the distinct cultures of their members (Adler 2002). They recognize the

similarities and differences of the individuals and their cultural approaches to the processes of work teams. No matter what type of team, or teams, are formed, problem solving, and the decision making within it, are processes they must perform.

Creating a culturally synergistic problem solving model that recognizes the problem solving orientations of each of its members and allows the cultural and individual diversity of the team members to be used beneficially for the team requires that the contributions of all be heard, valued, and considered. Borrowing some of the practices and perspectives from the appreciative inquiry approach and incorporating them into the traditional problem-solving framework may be useful.

Adler proposed a model for developing a culturally synergistic approach to problem solving (Adler 2002). She was interested in the fact that cultural orientations towards time and acceptance of an existing situation as unchangeable, rather than a problem to be addressed, would drastically change how a team would manage the problem-solving and decision-making process. This example is one of many possibilities where the fundamental way in which an individual sees the world would impact the approach to problem solving.

Building upon this idea, the choice of approach—traditional problem solving or appreciative inquiry—would also significantly alter how a team viewed a problem. This is before even taking into account individual decision-making styles or societal assumptions.

As Chapter 5 suggests, before a team begins to work on the task(s) assigned to them, the procedures and norms to be used should be discussed and agreed upon. In order to set the stage for effective team problem solving and decision-making, I have adapted the Adler model to incorporate the principles of both appreciative inquiry and traditional problem solving. This framework will encourage team members to share preferred approach to problem solving.

- *Describe the situation.* Each team member should describe the situation they have been asked to resolve from their own cultural and individual perspective. *What are the attributes of the situation/problem, and which of those are valuable to retain?* Allowing all members to voice their views will contribute to developing an understanding of the members and their relationship to the situation and each other;
- *Culturally interpret the situation.* Each member should identify the cultural and societal assumptions that explain their perspective regarding problem solving and decision making as much as possible. *Which assumptions might explain the perspective and behavior of others? Where are there similarities and differences across the members?* In this way, members can present not only their cultural perspectives, but also their own as individuals or as a subculture within the larger cultural frame of reference. This also allows for asking questions to better understand.
- *Share and discuss the impact.* Each member should discuss with the team how they can make collective use of the information received before beginning to

work on the situation/problem at hand. *What can be learned from the various cultures and individual styles represented that will enhance team effectiveness in problem solving? How can we combine these approaches into our problem-solving strategies?*

Discussing the perspective and value each individual brings to the team will promote more creative options without losing sight of the problem at hand. This has been illustrated here using the Community Nonprofit Housing Program.

Case Study: Creating a Synergistic Approach to Problem Solving Revisited—Community Nonprofit Housing Program

A nonprofit community-based organization that provides subsidized housing for low-income community residents has a wonderful reputation in the community for offering these housing referrals and placement services, while also providing emotional support and childcare for parents who are at work. A core team of five people, all with relatively equal levels of responsibility, manages the organization. Each person manages a different aspect of the organization. The gap between clients' earnings at minimum wage employment and the costs of shelter and food has placed increased demand for affordable housing in the community.

As the core team meets to set their goals for the next year in preparation of their annual budgeting exercise they need to determine how their agency might respond to this gap in the coming year. Before the meeting begins the facilitator suggests they go around to each staff member and ask:

- *What do you think are the most important aspects of this issue the team needs to address?*
- *What would a positive outcome look like to you?*
- *How did you make this choice?*

Once all have answered these questions they are invited to ask for clarification or more information about the contributions of each of the members. Each is then asked how they think the team should proceed to determine a goal-setting approach for the year. The questions are repeated as often as needed to move the staff to a consensus on an approach to setting their goals for the year.

By asking these questions the team continually moves towards using synergistic problem-solving techniques that are acceptable to the cultural norms and individual behaviors of all team members while creating an environment in which they can choose to participate in a manner that is most appropriate for each of them. This synergistic approach will guide all the steps used in the actual problem-solving-process as described here.

A Synergistic Model for Problem Solving and Decision Making

In addition to determining the frame of reference to be used in problem solving, the team must have a method or multiple methods for solving the problems and making the actual decisions. There are several basic, useful models for actual problem solving and decision making available. Some of the models most appropriate to multicultural teams are noted here, and a synergistic model that combines elements of each is then presented.

Adler (2002) believes there are five steps in the decision-making process and that there are cultural variations, which she demonstrates, in each. She does make reference to problem solving specifically. The steps she describes are: problem recognition, information search, construction of alternatives, choice, and implementation.

Other problem-solving models (Kayser 1994; Halverson 2004) are similar in identification of the steps, but break them down more completely and add a step for evaluation of the decision. Some of these use the visual representation of a wheel, where a team can move freely from one *spoke* to another as it realizes the need to be more comprehensive in its thinking at one step or another. For example, if a team makes the realization at the Choice phase that it does not really believe as a team that any of the alternatives are viable, it can return to the Information Search phase and generate more ideas.

Harrington-Macklin (1994) begins the process with the gathering of ideas, step two of the other models mentioned, and does not include evaluation, but she does include an additional step for analysis. The value of her model is in the wide variety of tools she suggests as useful in each step, allowing for many visual and verbal possibilities for each step in the process.

Combining the major ideas from these models, I offer below a model for understanding and working with problem solving and decision making in multicultural teams. It builds on the synergistic approach already discussed. This is followed by Table 9.2, which compares the traditional problem solving and appreciative inquiry approaches, cultural and individual variations, implications of these variations on the problem-solving and decision-making process, and tools and techniques that might assist the team during each phase of the synergistic model. The cultural and identity considerations, and descriptions of how to use some of the tools and techniques, will be discussed more fully later in the chapter. Each team must choose what is best for it at the particular point in its team development.

Problem-Solving Steps in a Synergistic Model

1. *Developing problem awareness.* A situation or problem is identified that the team believes they should address. The parameters of the situation and what exactly needs attention is yet to become clear.

2. *Gathering information.* Additional data on the problem is collected from a variety of sources. This can be factual and/or perceptual. As the team completes this step, a clear definition of the problem should emerge. A statement of the goal or result desired will determine the scope of the problem and what the team feels can be accomplished by its resolution.
3. *Identifying alternatives.* It is important to generate as many alternatives and have as much team participation as possible. This supports the broad worldview of team members and the creative options they can generate.
4. *Selecting a solution.* The choice of the solution itself is only one aspect of this step. While the goal is to make a decision to address the problem, there are additional factors to consider in this step. The team should also agree on *who* makes the decision, and *what method* will be used to make it.
5. *Implementing the solution.* The implementation plan must consider who will be affected by the solution, and if it is supported by the whole team. There should be agreement on the scope of the work and who will complete it.
6. *Evaluating the outcomes.* The solution should solve the identified problem. The team should agree when the evaluation should be conducted, using what criteria, and who will do it.

Decision-Making Steps in a Synergistic Model

In the introduction it was stated that there are occasions where the steps in decision making are made repetitively with no problem solving required. Decision making in these cases includes steps two (gathering information), three (identifying alternatives), and four (selecting a solution)—predominantly steps three and four. If the procedure is successful, the team can repeat this decision-making approach in future similar situations.

Who Makes the Decision on Self-managed Teams

As noted in Chapter 1, there are several categories of teams. For each of these teams the method employed for decision making is related to the purpose of the team. For instance, a task force may be formed with the expressed purpose of making a decision, or series of decisions, on a specific topic. In self-managed teams most decision-making responsibility is given to the team, which then works independently. In these well-defined instances the decision-making authority has been given to the team. How that team handles this responsibility among themselves is not always dictated.

Decision making on teams can be approached in a number of ways, varying in the degree of participation team members are allowed. Self-managed teams often have an internal leader to facilitate self-management of the team. In teams that are leader-led, the decision making can be *collaborative* or *participatory*, where the leader shares all pertinent information with the team and all team members participate fully in the decision; *consultative*, where the leader makes the decision on his or her own after consulting the team; or *autocratic*, where the leader makes the decision without input of the rest of the team.

Some self-managed teams have joint facilitation or shared leadership (see chapter 4). In these cases, decision making is more challenging. It is advisable for the team to discuss in advance how decision making will be handled. Will decision making always be collaborative? There might be certain types of decisions where other decision-making approaches would be more appropriate or where perhaps the decision-making authority should lie with one individual rather than being shared. Criteria for deciding how the decision should be made are: amount of time available, importance and impact of the decision, and who has the expertise.

Methods for Making Decisions

Once the approach has been decided upon, the team needs to decide how it will make the actual decision. The most common ways in which decisions get made on teams are listed below. *Which have you observed? How would you assess the outcomes of each?*

- *Consensus.* Consensus is a process that not only seeks the agreement of team members, but also seeks to resolve any objections of the minority to achieve the most agreeable decision. With consensus, each member should be able to state “I believe you understand my point of view; I believe that I understand your point of view; I may not prefer the decision that is being made, but I will support it because it has been made in an open and fair manner.”
- *Voting.* This is simply a tally of opinions for or against available choices. It can be unanimous and all must agree, or by majority (more than half).
- *Railroading.* A suggestion that was made in the team is acted on without discussion or a formal decision being made.
- *Default.* No decision is made, so the status quo remains.

Developing Consensus

Having shared leadership roles on a team and a decentralized communication network (see Chapter 7) will assist in all members developing a common understanding of team processes. As stated in Chapter 5, collaborative decision making reinforces normative change in the team and the commitment of the individuals on it. Using the consensus method can support development of a collaborative process and ownership of decisions made by the team. One useful set of guidelines for the consensus method was written by Hare (1982; Enayati 2001). They include:

- Participants are urged to seek a solution that incorporates all viewpoints.
- Participants must argue on a logical basis, giving their own opinion while seeking out difference.
- Participants are asked to address the group as a whole, while showing concern for each point of view, rather than confronting and criticizing individuals.
- A group coordinator is useful to help formulate consensus.
- It is essential not to press for agreement, but to hold more meetings if necessary and to share responsibility in the group for the implementation of the consensus.

Table 9.2 Work team problem solving and decision making: steps and tools

Traditional problem solving and decision making:	Appreciative inquiry	Cultural, societal, and individual variations	Implications of different perspectives	Synergistic model: tools/techniques to use in each step
1. Problem recognition There is a problem identified which should be resolved	1. Team reframes the central issue of their inquiry in a positive light	Some situations should be accepted as they are and no intervention is required The full understanding of the problem may be different among team members and can impact comfort level in discussing it in team	Level of change or improvement desired may be defined differently; will impact future steps in the model	1. Developing problem awareness Complete open dialogue on description of the situation and agreement on what the team wants to change or improve
2. Information search This can include relevant facts (soft and hard data)	2. Team gathers information on what works well and what could be	Who should be gathering ideas and possibilities Leaving outcome to chance may mean a need for less information, and might limit possible solutions Orientation to moving quickly may limit search There can be past-, present-, and future-oriented alternatives	Allows for a wider range of information to be collected Who, what, where, and when answered not only with hard data but information on perceptions and feelings of those involved	2. Gathering information Written and Internet search, surveying members on perceptions regarding the decision and what information should be considered
3. Identification of alternatives Select as many as possible	3. New, future-oriented alternatives are identified	How alternatives are identified can mean quick action, or systematic collection	A limitation of alternatives identified is possible if the worldview of the situation by team members differs radically	3. Identifying alternatives A variety of techniques to generate alternatives and increase participation. Some of these include: brainstorming, round robin, delphi method, mind mapping, role playing, simulations

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| <p>4. Choice of solution or course of action</p> | <p>4. There is more confidence to journey into the future when they carry forward the best parts of the past</p> | <p>Individual or team decision making methods can vary
Decisions are made at a different pace or speed
Individual styles can mean let others choose; agonize over options; need systems/reasons for making choices</p> | <p>Certain members of work teams may be reluctant to engage in a group process, or comment on a course of action they do not feel is in their area of responsibility</p> | <p>4. Selecting the most appropriate solution
Must decide if team wants a collaborative or majority-voting outcome, and whether discussion on alternatives happens inside or outside of formal meeting setting. Possible techniques: nominal group, voting, consensus, force field analysis</p> |
| <p>5. Implementation</p> | <p>5. All assist in constructing the new scenario</p> | <p>Implementation can involve the whole team or responsibilities can be delegated depending on expertise, or role
The time needed for implementation should be considered
The necessity for a detailed plan should be considered</p> | <p>A different commitment of time for implementation can mean less time in the process to monitor or make adjustments to the decision, or the level of buy-in from those who must do the work associated with the decision</p> | <p>5. Implementing the solution
Discuss and agree on scope, time estimates for completing work, and who (individual, team, other) will be responsible, for each step</p> |
| <p>6. Evaluation</p> | <p>6. Continual improvement through repetition of the process</p> | <p>The time period for evaluation, determination if change has occurred; if it's positive
There may be a need to be systematic or to be right</p> | <p>Different assumptions may affect team's perception of success</p> | <p>6. Evaluating the outcomes
Discuss methods and possible outcomes before beginning the evaluation</p> |

Cultural Considerations in Decision Making

Different cultural values and assumptions about decision-making can impact how a work team views their responsibilities to each other and within the organization. The understanding of which decisions are within the purview of the team, and their approach to making them will vary across cultures. Chapter 2 presented an integrated cultural framework for working in multicultural teams. Such dimensions as time orientation, achievement-ascription, individualism-collectivism, gender egalitarianism, and intellectual autonomy all impact how problems are solved, decisions are made and who makes them. The dynamics of each team will be different and some aspects of this framework will play more of a role than others. This happens because each team member brings her/his own unique cultural and individual imprint to the team.

A cross-cultural analysis of participatory decision-making processes was conducted that provides some current examples of the impact of culture on work teams. Using Hofstede's dimensions of individualism/collectivism, and low/high power distance (achievement-ascription in the integrated framework in Chapter 2), the study looked at participatory decision-making (PDM), and examples of where they are found (Sagie and Aycan 2003). The authors contend culture plays a role in the meaning managers and subordinates give to participatory decision making at the national, organizational, and work team levels; and approaches vary by country, culture, subcultures within a region, and within organizations. This study was conducted on teams whose decisions were of an operational nature, and not at the strategic level. They analyzed how the cultural dimensions of individualism and power distance affect human *cognitive processes* (sharing knowledge and expertise of all participants), and *motivational processes* (identification with the team or organization) in different settings around the world. The cognitive processes help improve the quality of the decisions, while motivational processes increase acceptance of and commitment to the jointly made decisions.

Some of the ways in which they found participatory decision making being used that most impact work groups or teams are noted here:

- *Face-to-face participatory decision making (PDM)*. In individualistic cultures this is direct leader-member interaction, usually more cognitive-based. It tends to focus more on the task than on the relationships between superiors and subordinates, or team members. This is more common in English-speaking countries that share the US American individualism/collectivism and power distance patterns (Hofstede 1980).
- *Collective PDM*. This combines low or medium individualistic orientation with low or medium power distance. Another way to say this is an orientation to working in groups rather than individuals and a sharing of power between management and the workers. It can be seen in pockets of the USA (trade unions), and countries in Western Europe such as Germany, Sweden, and Norway (Hofstede 1991). It is considered to be more motivational than cognitive, and more egalitarian than face-to-face PDM.
- *Paternalistic PDM*. This category combines low individualism and high power distance, and is frequently observed in countries such as Korea, India, Turkey, and Mexico. In these situations the management does not really transfer power, and the

employees do not really seek it. The role of the superior is to provide guidance, nurturance, and care to the subordinates. On the employee side, the leader/representative has the role of consulting with the subordinates and communicating the final decision with them. The main mediating process is motivational (i.e., employee acceptance of and commitment to the decisions) rather than cognitive (improvement of joint decisions). Although the Japanese system has low individualism and high power distance the Japanese managers do delegate authority to team members, making it different than paternalistic PDM. The practices of *nemawashi* (prior consultation) and *ringi* (“bottom-up” approval before management sign-off), described below, demonstrate this variation on paternalistic PDM.

- *Nemawashi*, translated as “tend to the roots”, is an important aspect of consensus building, problem solving and decision making in Japanese organizations. It suggests that once the roots are stable the tree will grow, and ideas will flourish on a solid foundation. If they do not, then there are some difficulties with the roots of that idea. *Nemawashi* is “a tactic implemented by the Japanese to bring about consensus through various pre-meeting consultations, where a strong foundation is being built so that the result will create a general agreement amongst those involved in the decision” (Tomlinson 1999).
- *Ringi*, or bottom-up decision making, is the practice wherein a proposal is commented upon before the meeting, so that people can have the opportunity to think about the proposal and add ideas. It is used in conjunction with *nemawashi*, while the preliminary meetings of the *nemawashi* process are not in session. The proposal is reviewed at each stage, and improvements and adjustments added on, so when it reaches the ultimate decision makers every team and person involved has had the opportunity to comment, and share concerns and support with others.

Self-Managed Teams PDM

Many multicultural teams are self-managed and employ participatory approaches. These teams are autonomous or semi-autonomous, and blend low power distance and high individualistic needs. In the interest of achieving more independence in their work, more interesting work, and more responsibilities, the team members contain their personal ambitions for the sake of the team and the benefits they will get as a work team. This form of PDM is currently flourishing in many, mostly Western countries—Australia, Canada, Sweden, the UK, and the USA (Salem and Banner 1992 in Sagie and Akcan 2003).

All of these PDM styles demonstrate the balance of the *cognitive* and *motivational* aspects of the team’s work. Even in situations where the cognitive aspects dominate, the cultural context will influence what each team member brings to and expects from the work team in terms of participation in decision making. As discussed in Chapter 4, the team should consider cultural differences when establishing norms.

It is useful here to return to the difference between work groups and work teams as outlined in Chapter 1. In groups there is an identified leader, individual accountability, and the group's purpose is the same as the larger organizational mission. In a team there are *shared* leadership roles. Within work teams the individual members may be practicing different forms of participatory decision making, and this will influence their participation in the process. There will be cultural variations in how team members view who has the authority *within* the team to make a decision *for* the team. Whether these variations are based on cultural background or experience in social identity groups is not as important to remember as is the fact that they exist. Using the synergistic approach described above will help to bring these variations in assumptions to the entire team's attention.

Individual and Social Identity Considerations in Decision Making

Individual personality characteristics and preferences also impact the functioning of a work team in decision making. A quick review of Chapter 3, including the Five Factor/Big 5 personality models, the Myers-Briggs Type Indicator, and Howard Gardner's Multiple Intelligences, will demonstrate how an individual's personal preferences surface quickly in a work team environment. As previously stated, the factor of openness/intellect is linked to problem solving and decision making.

In each work team there are infinite combinations of approaches to the decision-making possibilities that arise. It is useful to look at how these will present themselves in decision making in actual work team situations. Psychological blocks based on personal characteristics can make it difficult for individual members of a team to allow the openness needed for a creative problem-solving approach, which contains making decisions, to evolve within the team. Examples of this might be a preference for predictability, or orderly approach to the problem; a need to decide each issue as it arises without allowing it to remain open for additional thought, rather than considering several different options at once; or a difficulty tolerating ambiguity. Environmental blocks related to the actual work environment, such as distractions in the workplace, or the method in which success and/or failure are dealt with in the workplace and on the team, can also be factors in developing effective decision-making procedures for a team. Individuals have different preferences or needs in their workspace, and if not apparent can hinder the team's ability to problem solve or make routine decisions (Gardenswartz and Rowe 2003).

Gardenswartz and Rowe (2003) have also identified seven style preferences for how individuals approach decision making. Though these ideas have not been fully tested for their validity and reliability, they provide a starting point for team discussion on what individuals consider to be their dominant style when making decisions. These include: (1) leaving outcomes to chance, (2) agonizing over decisions and options, (3) procrastinating, (4) being paralyzed by having to make a decision, (5) plunging quickly into making decisions, (6) methodically weighing alternatives, and (7) leaving the decision making to others so you don't need to accept responsibil-

ity for it. The authors are quick to point out that all individuals use all styles, but usually have a preferred style. They suggest team members discuss the styles represented on the team and how that may influence the team's work. The Myers Briggs Type Indicator is also often used to help team members identify their individual characteristics and preferences, and may also be a useful tool in that discussion.

Devising a truly synergistic approach to decision making involves using a broader definition of diversity, not solely the cultural considerations discussed previously. As Table 3.1 in Chapter 3 suggests, identifying who is in one-up/one-down social identity groups may help us to keep our unconscious assumptions from interfering with team processes. When specifically discussing decision making, this dimension may influence who team members think can make decisions on the team, and how members see themselves in relationship to others in the team. This will impact their contributions or willingness to take risks on the team. In Chapter 5, research (Enayati 2001) was presented on how social influence can privilege the ideas and suggestions of more powerful members of a team. Having formal procedures to equalize participation and share all information relevant to the problem at hand can decrease this factor.

Working with the individual and social identity factors that impact the team dynamics can put quite a burden on a team while it is in the midst of completing its tasks. But the ability to do so guarantees it will have the widest range of options available to it for the tasks that require creative problem solving and decision making. The case below illustrates these points.

Case Study: Individual and Social Identity Considerations—Community Nonprofit Housing Program

As you read the case exercise below, consider the following questions:

- *What factors might be at work here?*
- *Using the cultural, societal, and individual frameworks studied, what assumptions should be discussed in the team?*
- *How might the team move forward?*

The core work team of the community nonprofit organization decided to design a training program to be submitted as part of a grant proposal. The timeline for completion of the proposal was short. Although they had worked together previously, they had never completed a team task such as this before. In previous projects, each had had their own teams and would complete the work prior to coming together in this iteration. In an activity to introduce themselves more fully to each other before beginning the task at hand, the members described their own backgrounds as follows:

- *Esteban, a homosexual male in his early 30s, from Miami, with a Cuban mother and Venezuelan father*

- *Jeanine, a 27-year-old female who grew up in Detroit; her mother was from the Philippines and father from Puerto Rico*
- *Anna, 24 years old from Ukraine, has been in the U.S. for one year; English is not her first language but she is fluent and works in it quite well*
- *Joanie is in her early 40s, a mother of two, and grew up on a dairy farm in New England*
- *Bill, a Euro-American male in his 50s, from California*

In the beginning of their time together on this proposal the decision-making process was somewhat undefined. It appeared they would reach consensus with a collective nod. Shortly into the time together, they realized this was too ambiguous for most of the team, and each person had a different understanding of prior decisions that had been made. They next moved to a “thumbs-up/thumbs down” vote. Although this worked for a while, the team realized that members tended to give a thumbs-up even if they didn’t really always agree. They were better off than before, but there was still room for improvement.

Additional Factors That Impact the Decision-Making Process

There are several factors in addition to cultural and individual preferences that influence the decision(s) to be made by a work team (Maier in Kayser 1994), These are the quality of the decision, acceptance of the decision, time pressure, and influence of the organization.

Quality of the decision refers to the technical quality required of a decision. When a decision is viewed in a totally objective fashion, there is clearly one option that fits best with a particular decision. *Acceptance of the decision* refers to the commitment to, and emotional support for, the decision that is required by those who must execute it. These two factors are measured against each other in the decision-making process.

There are four possibilities, called the quality/acceptance grid, which can be produced when measuring these two factors:

1. *Neither quality nor acceptance is important.* The alternatives are equally good so quality is not an issue, and the final choice makes little difference to those who have to execute it.
2. *Quality is important but acceptance is not.* The decision doesn’t require a commitment from all to execute it, and/or certain technical expertise is required to make the decision.
3. *Acceptance is important and quality is not.* The differences in choices is not significant, but buy-in from the team is, such as taking on additional tasks or committing the team to additional work.
4. *Quality and acceptance are both important.* The decision requires high quality and commitment from the team. These decisions must draw upon the team’s

expertise to make them, and at the end must have the full commitment of the team to the decision.

When *time pressure* is involved, most teams will move to a decision-making method that is less time-consuming than consensus. For example, when faced with many decisions or a quick deadline, a team may decide to forego obtaining full consensus on a decision and determine a stance of not actively working against a decision, or voting by majority to carry a decision forward. The time pressure is related to total understanding of the decision at hand. Not all decisions require total understanding of all the options by all those on the team. Because all may not be needed to help execute the decision, engaging the entire team in the decision-making process may not be the best use of their time.

The *organization influences* teams. Work teams operate within an organization that has structures and systems that dictate how it conducts its business. Parameters set by the organization because of resources, congruence with the mission, or strategic direction can influence the decisions made by its work teams. Knowing what these parameters are will allow the team to be more efficient in their work, and may dictate which decisions require the most time and thought be spent on them.

Because most teams are faced with multiple decisions at any given point in time, the importance of these factors will be constantly changing with each decision faced by the team.

Creating Shared Mental Models

The idea of having an agreed-upon approach for problem solving and decision making in a work team is not new. Research dating back 20 years supports the importance of developing cognitive models, more recently termed mental modeling, to enhance decision making (Jeffery et al. 2005). A *mental model* is a mechanism by which an individual can put order or structure to reality. It provides a system for understanding purpose or meaning to something. This can be extremely useful in the actual decision making, providing a structure or example of how the team will approach making a decision.

A shared mental model is one that is held by a team as a way to inform their work together. The model, or knowledge structure (Jeffery et al. 2005), is used by the whole team, and becomes a guide for obtaining goal congruence and task completion. There are three elements that are part of a shared mental model:

- *Knowledge*: how the team organizes and structures task-relevant information
- *Attitude*: the individual interpretation of the team environment and activities
- *Behavior*: shared expectations team members have of each other

For example, if the members of a team all began on a project they would have discussions about how each member envisioned the task in front of them. They will discuss what the finished product should look like, how they might approach

completing it, how much time each step might take to complete, even what work environment or tools they might need for the task. The team might also consider the skill set of each member as it relates to the project at hand, what decisions could be made by individual members of the team and what needed to be a group decision. What would emerge is a shared mental model of the project and the team and its processes. If the team took on new projects, or new membership, all the prior conversations would need to be transferred or revisited.

Team processes are more effective, and performance is higher, among teams that share goal congruence, and high quality mental models. If done well, shared mental modeling can be very synergistic—allowing team members to share new information, process ideas, overlap knowledge, and communicate effectively. With shared mental modeling, all team members need not be skilled in every aspect of the work of the team, and they have a common language from which to integrate new information and make efficient use of individual contributions.

The literature also supports the idea that shared mental models can evolve over time and become more efficient and developed. As a work team gains experience, they are able to refine the model they use, expand on their communication within the team, and be responsive to new information as the external organizational environment changes. With a shared mental model, it becomes easier to orient new team members, and internalize as a team the contributions of existing or departing members.

Groupthink

The only cautionary note about the use of shared mental models is the need to protect against the development of a phenomenon termed *groupthink*, introduced in Chapter 5, in the discussion about conformity versus consensus. Groupthink is a concept that was identified by Irving Janis (1972) and refers to faulty decision making in a team. The concept of groupthink is that once a group, or team, becomes highly functioning, its members can become reticent to voice a dissenting opinion. Usually there is an outside pressure being exerted on the group that causes groupthink to occur. Examples of outside pressures are: the time in which to make a decision is limited, the decision is a particularly important one, other organizational stresses enter that do not allow the team to use their established processes, or the established communication and decision-making processes are in need of adjustment but the team, or individuals within it, do not trust that the team can make these adjustments successfully.

Some of the symptoms of groupthink are:

- Having illusions of invulnerability and believing the team is invincible in its actions and decisions
- Being dismissive of critical thinking and ignoring alternatives that have adverse solutions

- Exerting direct pressure on a team member who disagrees with the direction the group is taking
- Stereotyping the opposition negatively
- Mindguarding by making little or no effort to gather opinions or advice from outside the team that might change its course of action

Methods for counteracting groupthink include:

- Inviting outsiders or content experts to team meetings.
- Asking all team members to be critical evaluators of the work the team’s doing. This can be done in each session or at the point of critical decision making. Sometimes dividing into smaller groups or dyads will allow more critical thinking about an idea to emerge.
- Encouraging open discussion on factors influencing critical decisions in the team. Silence doesn’t always mean consent. Open discussion can be encouraged by setting aside time in meetings for discussion, or asking the person who brought the information on the decision to step out of the discussion until all other members have been able to share their perspectives with the team.
- Protecting the team from making premature decisions by double-checking time frames and postponing decisions if more time is needed.

Table 9.3 McFadzean’s levels of team development (McFadzean 2002)

Attention steps	Problem-solving and decision-making responsibilities
Level 1: The task	Concerned with getting the task done, the task is simple or routine, or it is a period of crisis and the job must be completed quickly. At this level the team must have a focused goal in mind, as sticking to the task at hand is most important.
Level 2: Meeting process	There is a compromise between time and the depth of analysis or discussion that can occur on agenda items, making congruence in the process used as important as congruence in the goal of the team’s tasks.
Level 3: Team structure	There is an understanding of the characteristics of the particular team members and the roles and responsibilities that fit each, what the knowledge and skill areas are within the team, and what information must come from outside the team to solve the problem at hand.
Level 4: Team dynamics	The team members strive for equal participation, conflict is understood as being beneficial to the team when handled constructively, and the team is able to examine and manage its behavior in order to enhance creativity and effectiveness.
Level 5: Team trust	Members are truly committed to the growth and success of each individual member of the team. If this commitment is not shared by all members of the team, there will be hesitance to communicate ideas, or to participate in problem-solving activities that require that level of shared trust or belief that all contributions of knowledge and ideas will be considered equally or without undue criticism.

Developing Problem-Solving and Decision-Making Techniques in Teams

How does one develop creative problem solving and decision making teams? In Chapter 4, there were several different models of team development presented. I would like to add to these models by looking specifically at team development and its relationship to problem solving and decision making. McFadzean suggests that the most appropriate creative problem-solving techniques used by any team are directly linked to the level of team development and facilitation present. Using techniques that do not fit the team's current level of development will compromise the creativity of current solutions, and could jeopardize the future productivity of the team. This correlates to the stages discussed in Chapter 4, which suggest that certain processes can be done better at different stages in the team's development.

McFadzean calls these levels *attention steps*, and believes team development to be a sequential process (see Table 9.3). As teams develop and move up the levels, they devote attention to different aspects of their development. I suggest this sequential process is somewhat different than the Tuckman or Gersick models, which focus more broadly on the stage of group development in relationship to the tasks as a whole, not just problem solving and decision making performed by the team. It is important to keep in mind that teams have different tasks assigned to them, and that not all tasks require the same level of team development in order to be performed well.

McFadzean believes that techniques will produce the most creative and useful ideas if they are selected for use based on the level of trust on the team, its level of development, and facilitator skills used. She divides problem-solving techniques into three categories: *paradigm preserving*, *paradigm stretching*, and *paradigm breaking*. What follows are her definitions of these categories and when they might be used. I have then selected representative techniques for each category and described how they can be used.

Paradigm-Preserving Techniques

Paradigm-preserving techniques do not redefine the boundaries of the problem; rather, they explore the best approach to be taken with the existing problem. They use free association but use less imagination. For this reason they can be more comfortable for team members to use. *These techniques can be used by all levels of teams, 1 through 5.*

Brainstorming

In this method, any alternative is considered, no criticism is allowed on any alternative until all team members have presented alternatives they perceive as valuable. No contribution can be edited, but can be added upon by any team member. The

object is to generate a quantity of ideas, and narrow down the list later using filtering. This method tries to encourage wild, exaggerated, and humorous ideas. Filters, or criteria for selection, are then used to help narrow down the list. Possibilities for filters are cost, time, availability, fit with the philosophy of the team or organization, resistance/acceptance of the idea, and/or practicality. Apply all filters to each idea to edit out or in some of the ideas. A variation of this is the *round robin* or freewheeling method of generating ideas in which one person at a time gives out an idea, and the rounds continue until all ideas are out for discussion. Anyone can pass on any turn and all ideas are listed as they are offered. The strength of this approach is that it can help determine possible causes of issues, and generate solutions. It is a good method when the team wants inclusiveness, for planning implementation steps, and for non-routine decisions that require more creativity.

Consensus Card Method

This *consensus card method* is used to help move teams to consensus more quickly, and to get a commitment from all to a decision that has been made. It uses a visual aid to indicate positions of team members in relation to any decision being made. The issue is first defined and presented, the ideas are discussed fully by the team, questions are asked by any member, preliminary judgments made by individuals, and when the facilitator believes all conversation is done, then members are asked to display the color card that represents how they feel about the topic. Once the decision is reached, it is recorded.

Variations

Fist-to-Five—State what is believed to be what the team has decided upon and ask for a fist-to-five finger demonstration. 5 fingers up = I support this and will take a leadership role, 4 = I support this, 3 = I am neutral, 2 = I am not comfortable with this and need to talk, and 1 = I am against this, and fist up = I am against it and will block it. Any fists, 1s, or 2s means a consensus has not been reached and the question should then be asked what will people need to change their position.

Red-Yellow-Green Cards—Used in two ways: one for discussion and the other for decisions. For the discussion, the group member who wishes to speak, holds up a card. A *green card* means “I have something to say” or “I have a question.” When several group members hold up a green card, they are noted and placed in a queue of people waiting to speak. Each person speaks in turn. A *yellow card* means “I can clarify” or “I need clarification (on what was just said).” The *red card* is for process. A red card might say: “Are we getting off track, here?” or “What is our objective in doing this?” It gives all members an equal chance to be facilitator. When it is time to make a decision, a green card means “I agree with the decision and will support it.” A yellow card signifies “I can live with the decision and commit to supporting it.” The red card is disagreement with the decision at hand, “I don’t agree, but am willing

to work to find a better way, taking into account what has been said by all group members.” A red card does not block progress; the person who displays it will work with others on the issue and bring it back to a subsequent meeting. The team must have all yellows and greens for the decision to have been made by consensus. The strength of this method is that it will get many opinions voiced in a face-to-face environment by allowing discussion and disagreement or support on complex issues. This method also allows for identification of new options through the discussion and participants know right away about potential disagreements or roadblocks to the issue at hand.

Nominal Group Process

The *nominal group process* allows more time for individual thought, and ensures that all of the team’s opinions will be included. In the initial team discussion or prior to the use of this technique the team must define the problem to be solved, then in silence generate and record ideas, state them to the team, clarify if needed, then tally responses. This method is appropriate for sensitive issues that might have contrary opinions and many details that may paralyze the discussion. It ensures equal participation by all team members. Nominal group process is also good in situations where the cause of the problem has been identified and agreed upon, but determining the course of action is problematic.

Multi-voting

Team members vote for as many ideas as they like, and the ideas with the most votes are circled. The ideas with the least votes are clustered where possible, then each person votes again but for half the number of ideas left. This process is repeated until there are three to five ideas left in total. This becomes the list of possibilities from which to work.

Force Field Analysis

Force Field Analysis is a useful technique for looking at all the forces for and against a decision. It is a method of weighing pros and cons. By conducting the analysis one can plan to strengthen the forces supporting a decision, and reduce the impact of opposition to it. Describe the plan or proposal in writing on a chart for all to see. List all forces for change in one column, and all forces against change in another column. Assign a score to each force, from 1 (weak) to 5 (strong). Once the analysis is completed, you can decide whether your project is viable. When the decision to carry out a project has already been made, Force Field Analysis can help you to work out how to improve its success rate. Here you

have two choices: (1) reduce the strength of the forces opposing the project, or (2) increase the forces pushing a project. By assigning a “weight” to each force there is a more thorough consideration of how powerful each is in reality; discussion and assigning value will allow the team to test their own assumptions of each force.

Mind Mapping

Mind Mapping provides a structure that encourages creative problem solving, and then holds information in a format that is easy to remember and quick to review. Mind Maps abandon the list format of conventional note taking in favor of a two-dimensional structure. They are more compact than conventional notes, often taking up only one side of a sheet of paper. To make notes on a subject using a Mind Map, write the title of the subject in the center of the page, and draw a circle around it. For the major subject subheadings, draw lines out from this circle. Label these lines with the subheadings. If there is another level of information belonging to the subheadings above, draw these and link them to the subheading lines. Finally, for individual facts or ideas, draw lines out from the appropriate heading line and label them. As you come across new information, link it in to the map appropriately. Maps can use simple phrases, colors, and symbols for ideas, making language differences less problematic and allowing different concepts to be linked together easily.

Delphi Technique

This technique refers to the solicitation in writing of ideas and anonymous comments from team members, summarization of the comments, and dissemination back to the team for further comment. The team should reach consensus in a predetermined number of rounds, usually three to four. This technique generates input from all team members without bias and requires that all team members support the decision. It works well when the team is not all in the same location. The technique can also remove some of the impact of dominant members of the team, or mitigate pressure to commit to certain ideas.

Paradigm-Stretching Techniques

Paradigm-stretching techniques are designed to develop new ideas or ways to look at the problem. Examples of these methods are connecting two unrelated aspects of the problem at hand, or looking outside of the problem to stimulate new ideas, connections, and humor. The teams with the widest variety of skills and diverse composition will produce some of the most creative solutions. Because they require a significant level of trust within the team, *these techniques will be most successful with teams at levels 3, 4, and 5 of development.*

Paired-Choice Matrix

Working from a list of alternatives that the team has generated, pair together those that are most opposite from each other and generate decisions that will make use of both alternatives. This will provide the team with more alternatives, but the team will have either more unique decisions, or will be able to determine some alternatives to be eliminated. Make sure all alternatives are considered, tally responses, and keep those that are most likely to succeed. Repeat the process until there is only one choice left.

Variation: Pair together those alternatives that are most similar to each other. The first method allows for more creative decisions that challenge assumptions of the team about what “fits” together, the variation is more methodical. Both allow a complex problem to be broken down into smaller discussion points and eliminate options by limiting how many items it is considered with at one point in time.

Six Thinking Hats Technique

Six Thinking Hats is a technique used to look at decisions from a number of important perspectives. This forces team members to move outside habitual thinking patterns, and helps to get a more rounded view of a problem. This tool was created by Edward de Bono in his book *Six Thinking Hats*. If you look at a problem with the Six Thinking Hats technique, then you will solve it using all approaches. Six Thinking Hats can be used in meetings or individually. Each thinking hat represents a different style of thinking. Team members don one of the “hats” and look at the problem from the perspective of that color hat. In meetings it has the benefit of blocking the confrontations that happen when people with different thinking styles discuss the same problem. It is a good technique for looking at the effects of a decision from a number of different points of view. It allows necessary emotion and skepticism to be brought into what would otherwise be purely rational decisions.

- *White hat*: This thinking hat focuses on the data available. Look at the information and see what can be learned from it. Look for gaps in knowledge, analyze past trends, and try to extrapolate from historical data.
- *Red hat*: Look at problems using intuition, gut reaction, and emotion. Also try to think how other people will react emotionally. Try to understand the responses of people who do not fully know your reasoning.
- *Black hat*: Look at all the bad points of the decision. Look at it cautiously and defensively. Try to see why it might not work. This highlights the weak points in a plan. It allows them to be eliminated, altered, or to prepare contingency plans to counter them.
- *Yellow hat*: The yellow hat helps to think positively. It is the optimistic viewpoint that helps to see all the benefits of the decision.
- *Green hat*: This hat stands for creativity. This develops creative solutions to a problem. It is a freewheeling way of thinking, in which there is little criticism of ideas.

- *Blue hat*: The Blue Hat stands for process control. This is the hat worn by people chairing meetings. When running into difficulties because ideas are running dry, they may direct activity into different “hat” thinking.

Paradigm-Breaking Techniques

Paradigm-breaking techniques can produce the most creative ideas. These methods use unrelated stimuli and forced association in methods such as wishful thinking, drawing, and role playing to communicate different ideas about the problem at hand. Because these methods can be considered “alternative” forms of expression, they should be used with teams that have developed a high level of trust in each other, and the work they do together. *These techniques can be used with teams at level 5 of development.*

Role Playing

Role playing is acting, as a character that you either create or pick from a spectrum of pre-created characters. You set your mind into this character, and play it out by improvising the characters’ moves. The action of role playing goes beyond games and plays, and can be used to “play out” different decisions. Role playing is often used in training and/or teaching situations. Team members are required to assume the role of the appropriate individual where they are tested upon their ability to react appropriately to a hypothetical situation.

The Right Answer

In the *Right Answer* activity, each team member looks at the problem and generates what he/she believes is the right answer. These are shared, and the team adopts one right answer, or combines aspects of several.

The power of McFadzean’s is twofold: (1) it links appropriate techniques and tools to levels of team development; and (2) it offers a number of techniques to choose among within each category. The relationship between team, facilitation of the process, and creativity techniques used must be considered in order to get the best results. In self-managed teams the responsibilities of the facilitator are assigned to a team member or shared by the team as a whole. As a team develops and moves to the next level in the hierarchy of team development, they have a wider range of problem-solving techniques available to them.

As stated before the problem-solving and decision-making techniques mentioned here can be used with other models of team development. The key is to use techniques that (1) are the most creative, (2) cause the least apprehension in the members, and (3) use various modes of communication and expression so all team members can contribute.

The following case study illustrates these techniques as well.

Case Study: Choosing Tools and Techniques—Community Nonprofit Housing Program

As you read the case study below, consider the following questions:

- *What level of team development was the team in?*
- *What problem-solving and decision-making techniques might be available to yield the best results for the decisions at hand, and increasing the overall effectiveness of the team?*

Let us return to the team faced with the increased demand for affordable housing. They were using a “thumbs up/thumbs down” method of making decisions with some limited success.

In the words of one team member:

“There were many different factors impacting our problem-solving and decision-making process. We did not communicate the same way, and did not respect the perceived stubbornness to each other’s ideas. Added to that, many on the team were extremely sensitive to feedback. People on the team simply could not come together very easily to complete the task in front of us when we had to make decisions as our own work team. This was due mostly to a lack of comfort, openness, and willingness to communicate. Personality differences, cultural differences, and radically different work styles further augmented these difficulties.”

“All of our meetings generated amazing ideas, but a lack of a decision-making process, coupled with a desire to incorporate every idea, was a hindrance. When we finally stepped back from the task to look at where we were stuck, it was clear choosing one solution and generating the implementation to follow through on that choice was our own ‘problem’ to solve.

“With that understanding we began using fist-to-five to reach consensus, the technique we all valued most. This allowed us to make the actual decisions and move on to getting the proposal finished. If we still had choices that were difficult to make, we would use fist-to-five consensus in conjunction with nominal group process. This would allow us to remove alternatives that we really weren’t attached to. When forced to remove the alternatives that were the least likely to succeed, we could focus in on one or two choices we really liked and talk each through more fully. We agreed to use a written timetable with action steps to be taken at each marker for the implementation. This approach also gave us the opportunity to be more creative and willing to take more risks with new ideas in the earlier stages of problem solving. All of our team now had a way to share their own knowledge and expertise, in an environment that was more comfortable in which to work.”

And the proposal was finished.

Virtual Teams

Many times new organizational structures include virtual teams, where certain team members must interact through technology, or in a limited face-to-face environment. In these situations, there must be a clear understanding of the alternatives for problem-solving and decision-making methods. Can all members participate equally in all activities? If the answer to this question is “no,” then other methods must be selected. Virtual teams also must discuss the affect of the quality/acceptance grid and time pressure on the methods by which they make their decisions and solve problems faced by the team. Inability to change and develop new communication patterns as membership and expertise change will adversely affect the work of the team. When these changes occur, the team must repeat some of the steps they have taken in their team development and check to make sure they are still inclusive and that they integrate the expertise of the new membership.

Case Study: Virtual and Blended Teams—Faculty Exchange Program

As you read the case example below, consider the following question:

- *Given what you discussed about the team and the task in front of them when you were introduced to them earlier in the chapter, what else might you suggest they consider?*

The earlier case of the faculty exchange work team provides a good example of a mixed format face-to-face (f2f) and virtual team. Once they return to their home institutions, each will need to report back to their supervisors, and continue to build the exchange program.

- *How often will they meet and how?*
- *Must their electronic meetings be synchronous, or is asynchronous satisfactory?*
- *Are conference phone calls or video conferencing necessary, and if so, how often?*
- *Are there certain decisions they must all participate in, or can tasks be delegated to individuals within the team?*
- *Are the techniques that had been agreed upon in the f2f planning session still the best to use in a virtual meeting?*

The work team found that a monthly telephone conference call that all attended was a must. They found all agendas and notes needed to be distributed at least two days in advance so they can think about materials and ask questions in advance of the meeting. Problem-solving sessions that required questions and discussion were the best topics for conference calls.

Follow-up actions and decisions and implementation-related issues could all be handled by electronic meetings. Work to be done was separated into clusters, and smaller teams took on cluster topics and reported back virtually to the group.

The team was able to continue meetings, but needed to review the norms that had been established while in the f2f environment. Meeting processes and procedures were reviewed to make sure that all were able to participate. Two members felt their contributions were more creative because they needed to write more specifically about their ideas.

Having problem-solving and decision-making procedures that work seamlessly in mixed formats will be increasingly important in the years to come. The realization that cultural, societal, and individual factors will continue to influence how work teams function is important as these factors may not be “visible” in the same way in electronic formats.

Relevant Competencies

- Be able to recognize different approaches to problem solving as a team process and make use of traditional problem solving and appreciative inquiry in an integrated way
- Know the six steps of problem solving and decision making, what occurs in each step, and the appropriate tools and techniques to use to be successful at each step
- Be aware of internal and external factors that influence the team’s ability at problem solving and decision making in their work
- Understand how the culture, social identity and individual factors of members impact a particular team and its method of problem solving and decision-making
- Select and use the most effective problem-solving and decision-making techniques for the work team at its stage of team development

Summary

In this chapter there is a distinction made between problem solving and decision making. It is quite possible for decision making to be a routine procedure, without becoming a problem to be solved. However, problem solving always involves one or more decisions being made. Problem solving and decision making are necessary team processes that must be mastered by work teams. This happens by developing a synergistic approach to problem solving, which includes aspects of the traditional problem-solving and appreciative inquiry approaches. By combining these approaches, work teams will

be able to involve all team members and better understand their worldview. Discussions among team members to better understand the perspectives of each of the members, before beginning to problem solve or make decisions, are recommended.

Although there are several models of problem solving and decision making, a six-step model is adopted and described in this chapter. Team members need to learn the steps in a synergistic problem solving model, and use some of the tools and techniques suggested in each. These steps are: (1) developing problem awareness, (2) gathering information, (3) identifying alternatives, (4) selecting a solution, (5) implementing the solution, and (6) evaluating the outcome. Decision making uses steps two, three, and four regularly. The team must be understand who will make decisions on the team and what method will be used for making them.

Teams need to understand the factors that impact the decision-making process. External factors are the quality/acceptance grid, time pressure, and organizational culture. Internal factors are cultural, societal, and individual considerations.

Developing shared mental models and using a wide variety of appropriate tools and techniques will assist work teams in creative problem solving and effective decision making processes.

Case Study: Selecting a New Teacher for a Community School in Latin America

As you read the case study below, consider the following questions:

- *Can you identify which steps in problem solving and decision making were followed fully and which were not?*
- *Can you articulate what tools and techniques might be used by the school committee to resolve the initial hiring problem and make the decision?*
- *How would you have advised them to approach this hiring problem, given what you have read in this chapter?*

I am a U.S. male and a Quaker who was a member of the school committee of a private school in a small, rural community in Costa Rica. The community was founded by Quakers who left the U.S. to find a simpler lifestyle in the 1950s, and now consists of Quakers and non-Quakers from the U.S., in addition to the indigenous Costa Ricans. The school was run by a committee overseen by the Quakers. The school committee consisted of three U.S. Quaker expatriates including myself, the chair, and the head teacher; two women of the original Quaker families, Mary and Jania, who were born in Costa Rica and married to Costa Ricans; and two Costa Ricans who were Catholic. The two Costa Ricans spoke English marginally. Meetings were held in English. The U.S. expatriates had the highest education, and pursued their own agendas much more than the Costa Ricans.

As we were looking for candidates for teaching grades 1 to 3, I had recommended Sara, who taught that level, was fluent in Spanish, and who was

lesbian. I knew she had been turned down by another private school in the area because, as she had been told, "We live in a Catholic country, and all of the parents would pull their children out of the school if they knew we'd hired a homosexual." I knew it would not be easy to gain approval of Sara, but no other good candidates turned up.

At the meeting to decide which teachers to hire for the next school year, we all arrived with much trepidation, ready for a long, difficult meeting, for we had to reach consensus. During the preceding weeks there was much discussion throughout the entire community, and the tension level was high. The chair began the round table discussion offering that Sara should be evaluated only on her educational merits, and that her personal life was none of our business. The head teacher and Jania echoed her views. Both of the Costa Ricans said that they had heard the views of homosexuality in the U.S., but that's not the way it was here. They could not accept hiring a homosexual teacher, in part because of the Bible's view of homosexuality, and they would expect most of the parents would pull their children out of the school. Mary later added that she, too, had heard the view that homosexuals should be treated the same as "normal" people, but deep inside she did not believe this to be true, and she could not accept her children being in the presence of a homosexual teacher.

I mentioned that I had spoken with Sara on the phone and that she described how both she and her partner had been in the Peace Corps in Central America, and later adopted their children and lived in South America. People in all of those places got to know and love them, and when they later found out about their living arrangement, they accepted it. I said that in the U.S. it took a long time, but people have accepted that is a natural occurrence such as being left-handed, and that research also supported this view. I said that I believed that, if given the chance, the community would eventually learn to accept Sara and homosexuality by actually getting to meet and live with her rather than reacting to what they have been told about homosexuality.

The meeting went on for four hours, when we broke without any hope of reaching consensus. There were many tears, accusations of immorality on both sides, and nobody had budged from their original positions. A few days later I received a note from Mary charging me with being arrogant and condescending. How dare I come from the U.S. and tell these "simple country folk" what is right and what is wrong, that the U.S. is the latest in moral advancement, and that if Costa Ricans just followed my advice they would also learn what is right. I wrote back and told her that I did not intend to be arrogant or condescending. I told her that I felt that everybody had different opinions, and that I respected hers. I admitted that I do believe that it is okay to believe that another person's beliefs are wrong not just different, based on one's own belief system. However, I told her I could not tell her that she was wrong; that I must accept that she believes what she believes, and that she may believe what I believe is wrong.

I got no response.

Problem-Solving and Decision-Making Assessment

Efficient problem solving and decision making in a work team is dependent upon shared communication between team members and an understanding of the individual styles and preferences of team members. This assessment is designed to elicit information about these preferences. Complete these questions individually and then discuss the answers with the team. Complete the exercise by identifying how the team’s responses will support and challenge the ongoing work of the team.

Look at the preferences listed below and check which represents your strongest preference when working with a team:

Work Environment	Very important	Neutral	Not at all important
Workplace considerations			
An organized, shared, consistent meeting space where I am physically comfortable			
A quiet private space with little or no distractions			
A shared team space with lots of creative distractions happening around us			
Regular breaks and interruptions so ideas can settle			
The opportunity to revisit decisions the team has made			
Organizational considerations			
The organization supports the work of the team by making time and resources available for us to work on projects			
The team works in a fast-paced environment, with outside pressures to keep the motivation and production levels high			
The organization allows the team to make some mistakes, we do not have to always have the right answer			
The organization gives ambiguous or loose parameters for projects to the team			

Team Problem Solving

When problem solving as a member of a team, I am most comfortable with my contributions to solutions to problems when (check all that apply):

- We are very orderly in working through the problem in front of us
- I am interested in the problem at hand, and highly motivated to achieve

- We do not take forever to get it done
- The problem is ambiguous and takes a lot of investigation, design, and discussion to sort through
- No idea team members contribute is too crazy
- We work on a lot of ideas at once

When problem solving as a member of a team, I am most satisfied with my contributions in the following steps:

Problem solving step	Where I am most satisfied with my contribution	Techniques I like to use most often when at this step
Problem recognition		
Information search		
Identifying alternatives		
Choosing solutions		
Implementing solutions		
Evaluating outcomes		

Individual Decision Making

When you think about your preference in making decisions, meaning what you do most often, please check the answer that best represents you:

Individual preference	In daily decisions	In professional decisions	I make my best individual decisions
Let the decision get made on its own, don't interfere with it			
Make lists, consider all the possible outcomes/options, and choose one			
Make lists and consider options, but vacillate when you have to choose			
Wait until the last possible opportunity to make the decision			
Make the decision quickly and move on to the next thing			
Let other people make the decision			

Team Decision Making

Think about your own work preferences first and make and mark YES for those items that are preferences you have as an individual; NO for those that are not. Then go through the list again and mark YES/NO if these hold true in team situations (check all that apply):

- Let someone else make the decision, I'd rather work with the concept or project after the decision's been made

- _____ Have input, but I do not need to make the final decision
- _____ I want to be part of all major decisions, but let other team members work out details
- _____ I want to work collaboratively on all decisions

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