

MGM603

Managing People and Organizations

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Lecture 11

جامعة الجميع الذكية

تسعى لتكون الكيان الأول الذي يتبنى مبدأ المجتمع التعليمي
التعاوني ويقدم العلم مقابل العمل لتنمية وبناء المجتمعات.

Chapter 8. Decision Making and Problem Solving (Part2)



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Learning Outcomes

1. Describe the nature of decision making and distinguish it from problem solving.
2. Discuss the rational approach to decision making.
3. Identify and discuss the primary behavioral aspects of decision making.
4. Discuss group decision making in organizations.
5. Discuss the nature of creativity and relate it to decision making and problem solving.

Sequence of the chapter

- This chapter describes many different perspectives of decision making.
- We start by examining the nature of decision making and distinguishing it from problem solving.
- **Next**, we describe several different approaches to understanding the decision-making process. We then identify and discuss related behavioral aspects of decision making.
- Next we discuss the major elements of group decision making.
- Finally, we discuss creativity, a key ingredient in many effective decisions..

An Integrated Approach to Decision Making

An Integrated Approach to Decision Making

- Because of the **unrealistic demands of the rational approach and the limited, short-term orientation of the behavioral approach**, neither is entirely satisfactory. However, the worthwhile features of each can be combined into a practical approach to decision making, shown in **Figure 8.4**.
- The steps in this process are the same as in the rational approach; however, the conditions recognized by the behavioral approach are added to provide a more realistic process.
- **For example**, the integrated approach suggests that rather than generating all alternatives, the decision maker should try to go beyond rules of thumb and satisficing limitations and generate as many alternatives as time, money, and other practicalities of the situation allow. In this synthesis of the two other approaches, the rational approach provides an analytical framework for making decisions, whereas the behavioral approach provides a moderating influence.

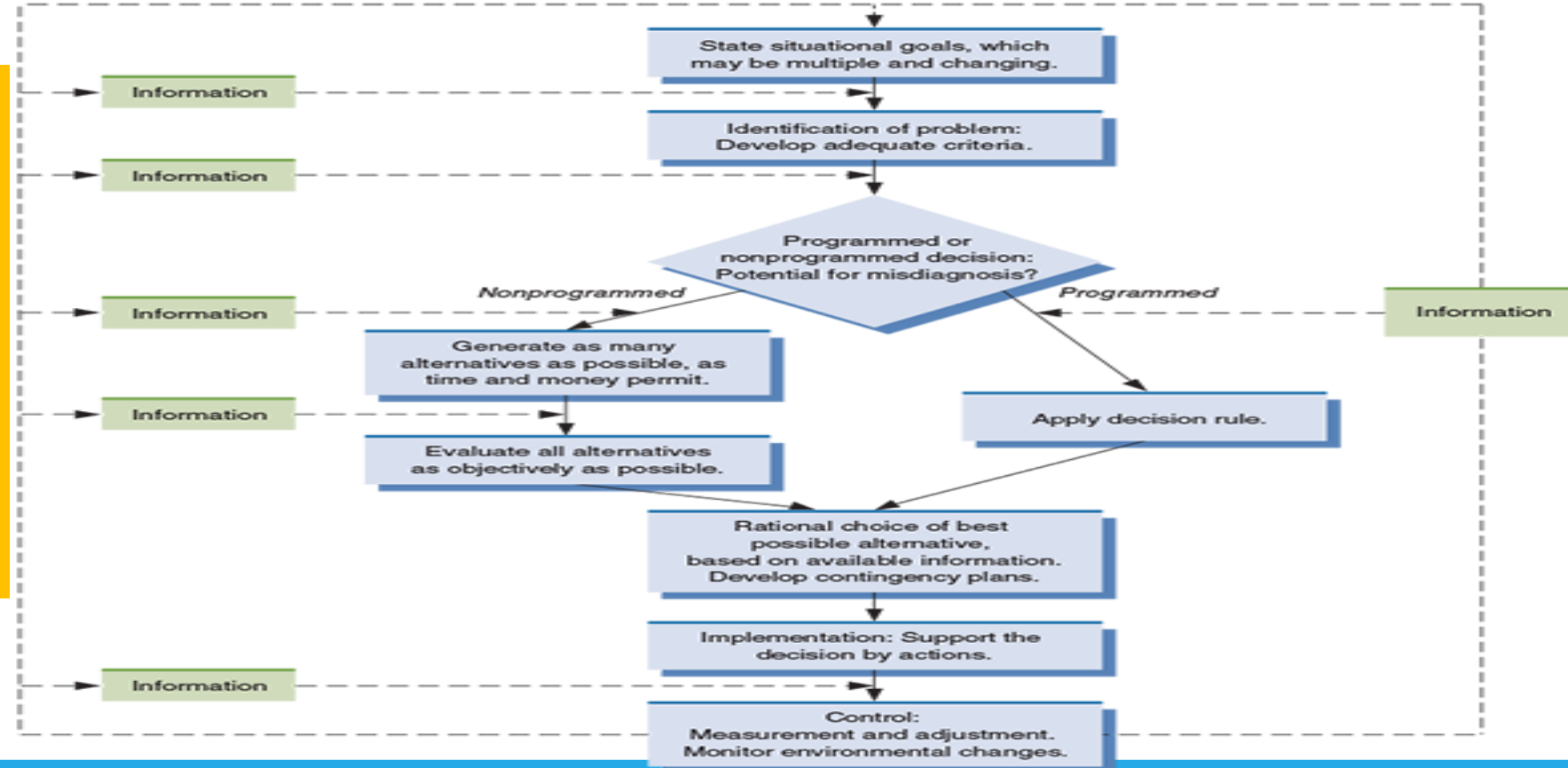


Chapter 8

Decision Making and Problem Solving

An Integrated Approach to Decision Making

The practical model applies some of the conditions recognized by the behavioral approach to the rational approach to decision making. Although similar to the rational model, the practical approach recognizes personal limitations at each point (or step) in the process.



An Integrated Approach to Decision Making

An Integrated Approach to Decision Making

- In practice, **decision makers use some hybrid of the rational, behavioral, and integrated approaches** to make the tough day-to-day decisions in running organizations.
- Some decision makers use **a methodical process of gathering as much information as possible, developing and evaluating alternatives, and seeking advice from knowledgeable people before making a decision.**
- Others fly from one decision to another, **making seemingly hasty decisions and barking out orders to subordinates.**
- The second group would seem not to use much information or a rational approach to making decisions.
- Recent research, however, has shown that managers who make decisions very quickly probably are using just as much, or more, information and generating and evaluating as many alternatives as slower, more methodical decision makers.

Group Decision Making in Organizations

Group Decision Making in Organizations

- As we discussed in Chapter 7, people in organizations work in a variety of groups—formal and informal, permanent and temporary, various kinds of teams. Most of these groups make decisions that affect the welfare of the organization and the people in it.
- Therefore, we need to consider group decision making.
- The primary elements we will discuss are group polarization, groupthink, and group problem-solving methods.

Group Decision Making in Organizations - Group Polarization

Group Polarization

Group Polarization:

- **Members' attitudes and opinions** with respect to an issue or a solution may change during group discussion.
- Some studies of **this tendency have showed the change to be a fairly consistent movement toward a more risky solution**, called “**risky shift**.”
- Other studies and analyses have revealed that the group-induced shift is not always toward more risk; the group is just as likely to move toward a more conservative view.
- Generally, group polarization occurs when the average of the group members' post-discussion attitudes tends to be more extreme than average pre-discussion attitudes.

Group Decision Making in Organizations - Group Polarization

Group Polarization

Group Polarization: The tendency for a group's average post-discussion attitudes to be more extreme than its average pre-discussion attitudes.

- Several features of group discussion contribute to polarization.
- When individuals discover during group discussion that others share their opinions, they may become **more confident about their opinions**, resulting in a **more extreme view**.
- **Persuasive arguments** also can **encourage polarization**. If members who strongly support a particular position are able to express themselves **cogently in the discussion**, less avid supporters of the position may become convinced that it is correct.

Group Decision Making in Organizations - Group Polarization

Group Polarization

Group Polarization:

- **In addition**, members may believe that because the group is deciding, they are not individually responsible for the decision or its outcomes.
- This diffusion of responsibility may enable them to accept and support a decision more radical than those they would make as individuals.
- **Polarization can profoundly affect group decision making.** If group members are known to **lean toward a particular decision before a discussion**, it may be expected that their post-decision position will be even more extreme. Understanding this phenomenon may be useful for one who seeks to affect his or her decision.

Chapter 8

Decision Making and Problem Solving

Group Decision Making in Organizations - Group Polarization

Many decisions in organizations are made by groups. While group decision making has several advantages, it also has certain risks, including group polarization. These colleagues, for instance, are involved in making a decision. They should strive to make sure that their decision is not too risky or too conservative as a result of excessive polarization.



Group Decision Making in Organizations - Groupthink

Group Polarization

Groupthink: A mode of thinking that occurs when members of a group are deeply involved in a cohesive in-group, and the desire for unanimity offsets their motivation to appraise alternative courses of action

- As discussed in Chapter 7, highly cohesive groups and teams often are very successful at meeting their goals, although they sometimes have serious difficulties as well. One problem that can occur is groupthink.
- According to Irving L. Janis, groupthink is “a mode of thinking that people engage in when they are deeply involved in a cohesive in-group, when the members’ strivings for unanimity override their motivation to realistically appraise alternative courses of action.”
- When groupthink occurs, then, the group unknowingly makes unanimity rather than the best decision its goal. Individual members may perceive that raising objections is not appropriate. Groupthink can occur in many decision-making situations in organizations. The current trend toward increasing use of teams in organizations may increase instances of groupthink because of the susceptibility of self-managing teams to this type of thought



Group Decision Making in Organizations - Groupthink

Groupthink

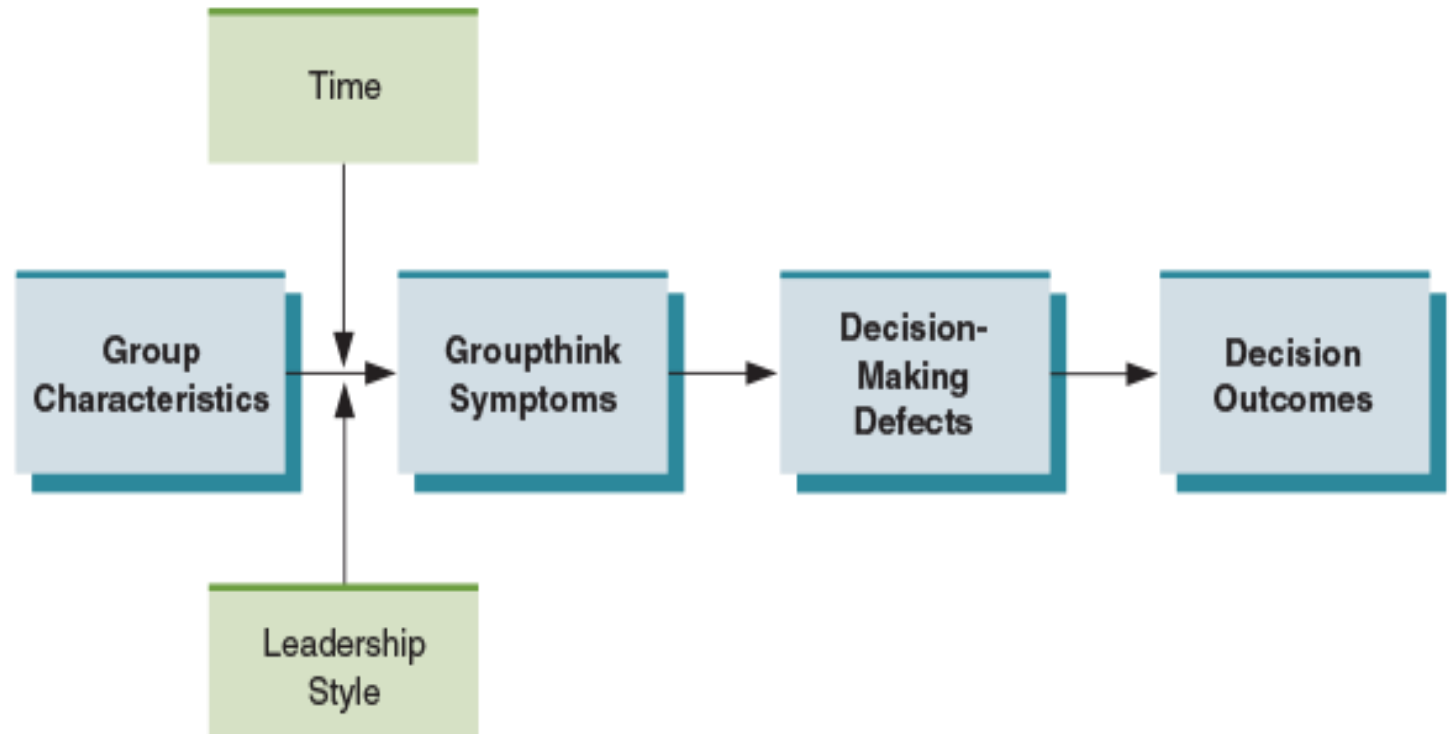
Symptoms of Groupthink

- The **three primary conditions** that foster the development of groupthink are **cohesiveness, the leader's promotion of his or her preferred solution, and insulation of the group from experts' opinions.**
- Based on analysis of the disaster associated with the explosion of the space shuttle *Challenger* in 1986, the original idea of groupthink symptoms was enhanced to include the effects of **increased time pressure and the role of the leader in not stimulating critical** thinking in developing the symptoms of groupthink.
- Figure 8.5 outlines the revised groupthink process.

Group Decision Making in Organizations - Groupthink

Figure 8.5.
The Groupthink Process

Groupthink can occur when a highly cohesive group with a directive leader is under time pressure; it can result in a defective decision-making process and low probability of successful outcomes.



Group Decision Making in Organizations - Groupthink

Groupthink

A group in which groupthink has taken hold exhibits eight well-defined symptoms:

- 1. An illusion of invulnerability**, shared by most or all members, that creates excessive optimism and encourages extreme risk taking
- 2. Collective efforts to rationalize** or discount warnings that might lead members to reconsider assumptions before recommitting themselves to past policy decisions
- 3. An unquestioned belief in the group's inherent morality**, inclining members to ignore the ethical and moral consequences of their decisions
- 4. Stereotyped views of "enemy" leaders** as too evil to warrant genuine attempts to negotiate or as too weak or stupid to counter whatever risky attempts are made to defeat their purposes
- 5. Direct pressure on a member who expresses** strong arguments against any of the group's stereotypes, illusions, or commitments, making clear that such dissent is contrary to what is expected of loyal members



Group Decision Making in Organizations - Groupthink

Groupthink

A group in which groupthink has taken hold exhibits eight well-defined symptoms:

6. **Self-censorship of deviations from the apparent group consensus**, reflecting each member's inclination to minimize the importance of his or her doubts and counterarguments
7. **A shared illusion of unanimity**, resulting partly from self-censorship of deviations, augmented by the false assumption that silence means consent
8. **The emergence of self-appointed "mindguards,"** members who protect the group from adverse information that might shatter their shared complacency about the effectiveness and morality of their decisions

Group Decision Making in Organizations - Groupthink

Decision-Making Defects and Decision Quality

Decision-Making Defects and Decision Quality

- **When groupthink dominates group deliberations**, the likelihood increases that decision-making defects will occur.
- **The group is less likely to survey a full range of alternatives** and may focus on only a few (often one or two). In discussing a preferred alternative, the group may fail to examine it for nonobvious risks and drawbacks.
- **The group may not reexamine previously rejected alternatives for nonobvious gains** or some means of reducing apparent costs, even when it receives new information. The group may reject expert opinions that run counter to its own views and may choose to consider only information that supports its preferred solution.
- **The decision to launch the space shuttle *Challenger*** in January 1986 may have been a product of groupthink because, due to the increased time pressure to make a decision and the leaders' style, negative information was ignored by the group that made the decision.



Chapter 8

Decision Making and Problem Solving

Group Decision Making in Organizations - Groupthink

Explosions destroyed the space shuttles Challenger (in 1986) and the Columbia (in 2003), killing everyone on board. Detailed study of decisions about each shuttle mission suggest that groupthink likely played a role in each disaster.



Group Decision Making in Organizations - Groupthink

Prevention of Groupthink

- Several suggestions have been offered to help managers **reduce the probability of groupthink in group decision making.**
- Summarized in **Table 8.2**, these prescriptions fall into four categories, depending on whether they apply to **the leader, the organization, the individual, or the process.**
- All are designed to **facilitate the critical evaluation** of alternatives and discourage the single-minded pursuit of unanimity.

Group Decision Making in Organizations - Groupthink

Table 8.2. Prescriptions for Preventing Groupthink

1. Leader prescriptions

1. Assign everyone the role of critical evaluator.
2. Be impartial; do not state preferences.
3. Assign the devil's advocate role to at least one group member.
4. Use outside experts to challenge the group.
5. Be open to dissenting points of view.

2. Organizational prescriptions

1. Set up several independent groups to study the same issue.
2. Train managers and group leaders in groupthink prevention techniques.

3. Individual prescriptions

1. Be a critical thinker.
2. Discuss group deliberations with a trusted outsider; report back to the group.

4. Process prescriptions

1. Periodically break the group into subgroups to discuss the issues.
2. Take time to study external factors.
3. Hold second-chance meetings to rethink issues before making a commitment.

Participation in Decision Making

Participation in Decision Making

Participation in Decision Making

- An important question in group decision making is the degree to which employees should participate in the process.
- Early management theories, such as those of the scientific management school, advocated a clear separation between the duties of managers and workers: **Management was to make the decisions, and employees were to implement them.**
- Other approaches have urged that employees be allowed to participate in decisions to increase their ego involvement, motivation, and satisfaction.
- Numerous research studies have shown that whereas employees who seek responsibility and challenge on the job may find participation in the decision-making process to be both motivating and enriching, other employees may regard such participation as a waste of time and a management imposition.



Participation in Decision Making

Participation in Decision Making

Participation in Decision Making

- Whether employee participation in decision making is appropriate depends on the situation. In tasks that require an **estimation, a prediction, or a judgment of accuracy—usually referred to as “judgmental tasks”**—groups typically are superior to individuals simply because more people contribute to the decision-making process. However, one especially capable individual may make a better judgment than a group.
- **In problem-solving tasks**, groups generally produce more and better solutions than do individuals. But groups generally take far longer than individuals to develop solutions and make decisions. An individual or very small group may be able to accomplish some things much faster than a large, unwieldy group or organization.
- **In addition, individual decision making avoids the special problems of group decision making such as groupthink or group polarization.**
- **If the problem to be solved is fairly straightforward**, it may be more appropriate to have a single capable individual concentrate on solving it. On the other hand, complex problems are more appropriate for groups.



Group Problem Solving

Group Problem Solving

Group Problem Solving

- A typical interacting group may have difficulty with any of several steps in the decision-making process. One common problem arises in the generation-of-alternatives phase: The search may be arbitrarily ended before all plausible alternatives have been identified.
- **Several types of group interactions can have this effect.** If members immediately express their reactions to the alternatives as they are **first proposed, potential contributors may** begin to **censor their ideas to avoid embarrassing criticism from the group.** Less-confident group members, intimidated by members who have more experience, higher status, or more power, also may censor their ideas for fear of embarrassment or punishment.
- In addition, **the group leader may limit idea generation by enforcing requirements concerning time, appropriateness, cost, feasibility, and the like.** To improve the generation of alternatives, managers may employ any of three techniques to stimulate the group's problem-solving capabilities: **brainstorming, the nominal group technique, or the Delphi technique.**



Group Problem Solving

Group Problem Solving

1- Brainstorming

- **Brainstorming** is most often used in the idea-generation phase of decision making and is intended to solve problems that are new to the organization and have major consequences. In brainstorming, the group convenes specifically to generate alternatives. The members present ideas and clarify them with brief explanations.
- Each idea is recorded in full view of all **members, usually on a flip chart**. To avoid **self-censoring**, no attempts to evaluate the ideas are allowed. Group members are encouraged to offer any ideas that occur to them, even those that seem too risky or impossible to implement.
- (The absence of such ideas, in fact, is evidence that group members are engaging in self-censorship.) In a subsequent session, after the ideas have been recorded and distributed to members for review, the alternatives are evaluated.
- The intent of brainstorming is to produce totally new ideas and solutions by stimulating the creativity of group members and encouraging them to build on the contributions of others.



Group Problem Solving-The Nominal Group Technique

The Nominal Group Technique

2- The Nominal Group Technique

- The **nominal group technique** is another means of improving group decision making. Whereas brainstorming is used primarily to generate alternatives, this technique may be used in other phases of decision making, such as **identification of the problem and of appropriate criteria for evaluating alternatives**.
- To use this technique, a group of individuals convenes to address an issue. The issue is described to the group, and each **individual writes a list of ideas; no discussion among the members is permitted**. Following the **five- to ten-minute idea-generation period**, **individual members take turns reporting their ideas**, one at a time, to the group. The ideas are recorded where everyone can see them (for instance, on a **flip chart or document camera**) and members are encouraged to add to the list by building on the ideas of others.
- After all ideas have been presented, the members may discuss them and continue to build on them or proceed to the next phase. This part of the process can also be carried out without a “live” meeting or by phone or digital media.



Chapter 8

Decision Making and Problem Solving

Group Problem Solving-The Nominal Group Technique

Brainstorming is used to generate ideas and alternatives. These individuals are brainstorming color palettes and designs for a new advertising campaign. At this point in the process their focus is on identifying multiple alternatives. Later in the decision-making process they will narrow the set down until they have made a final selection.



Group Problem Solving-The Nominal Group Technique

The Delphi Technique

The Delphi Technique

- The **Delphi technique** was originally developed by Rand Corporation as a method of systematically gathering the judgments of experts for use in developing forecasts.
- It is designed for groups that **do not meet face-to-face**. For instance, the product development manager of a major toy manufacturer might **use the Delphi technique** to probe the views of industry experts to forecast developments in the dynamic toy market.
- The manager who wants the input of a group is the central figure in the process. After recruiting participants, the manager develops a questionnaire for them to complete.
- The questionnaire is relatively simple in that it **contains straightforward questions that deal with the issue, trends in the area, new technological developments, and other factors the manager is interested in**.
- The manager summarizes **the responses and reports back to the experts with another questionnaire**. This cycle may be repeated as many times as necessary to generate the information the manager needs.

Group Problem Solving-The Nominal Group Technique

The Delphi Technique

The Delphi Technique

- The Delphi technique is useful when experts are **physically dispersed, anonymity is desired**, or the participants are known to have trouble communicating with one another because of extreme differences of opinion.
- This method also avoids the intimidation problems that may exist in decision-making groups.
- On the other hand, the technique eliminates the often-fruitful results of direct interaction among group members.

Creativity, Problem Solving, and Decision Making

The Delphi Technique

Creativity, Problem Solving, and Decision Making

- Creativity is an important individual difference variable that exists in everyone. However, rather than discuss it with other individual-level concepts in **Chapters 3** and **4**, we describe it here because it plays such a central role in both decision making and problem solving.
- **Creativity** is the ability of an individual to generate new ideas or to conceive of new perspectives on existing ideas. Hence, creativity can play a role in how a problem or decision situation is defined, what alternatives are identified, and how each is evaluated. Creativity can also enable a manager to identify a new way of looking at things.
- Our Improve Your Skills feature will help you better see the connections between creativity and decision making.
- What makes a person creative? How does the creative process work? Although psychologists have not yet discovered complete answers to these questions, examining a few general patterns can help us understand the sources of individual creativity within organizations and the processes through which creativity emerges.



The Creative Individual

The Creative Individual

- Numerous researchers have focused their efforts on attempting to describe the common attributes of creative individuals. These attributes generally fall into three categories: **background experiences, personal traits, and cognitive abilities.**

Background Experiences and Creativity

- Researchers have observed that many creative individuals were raised in an environment in which creativity was nurtured.
- Mozart was raised in a family of musicians and began composing and performing music at age of six. Pierre and Marie Curie, great scientists in their own right, also raised a daughter, Irene, who won the Nobel Prize in Chemistry.
- Thomas Edison's creativity was nurtured by his mother. However, people with background experiences very different from theirs have also been creative. The African American abolitionist and writer Frederick Douglass was born into slavery in Tuckahoe, Maryland, and had very limited opportunities for education.
- Nonetheless, his powerful oratory and creative thinking helped lead to the Emancipation Proclamation, which outlawed slavery in the United States.



Chapter 8

Decision Making and Problem Solving

The Creative Individual

Creativity is sometimes associated with being raised in an environment that nurtures creativity and fosters curiosity. Thomas Edison's creativity was nurtured by his mother. Edison went on to become one of the greatest inventors in history.



The Creative Individual

The Creative Individual

Personal Traits and Creativity

- Certain personal traits have also been linked to creativity in individuals. The traits shared by most creative people are openness, an attraction to complexity, high levels of energy, independence and autonomy, strong self-confidence, and a strong belief that one is, in fact, creative.
- Individuals who possess these traits are more likely to be creative than are those who do not have them.

The Creative Individual

The Creative Individual

Cognitive Abilities and Creativity

- Cognitive abilities are an individual's power to think intelligently and to analyze situations and data effectively. Intelligence may be a precondition for individual creativity—but, although most creative people are highly intelligent, not all intelligent people necessarily are creative.
- Creativity is also linked with the ability to think divergently and convergently. Divergent thinking is a skill that allows people to see differences between situations, phenomena, or events.
- Convergent thinking is a skill that allows people to see similarities between situations, phenomena, or events. Creative people are generally very skilled at both divergent and convergent thinking.

The Creative Individual

The Creative Individual

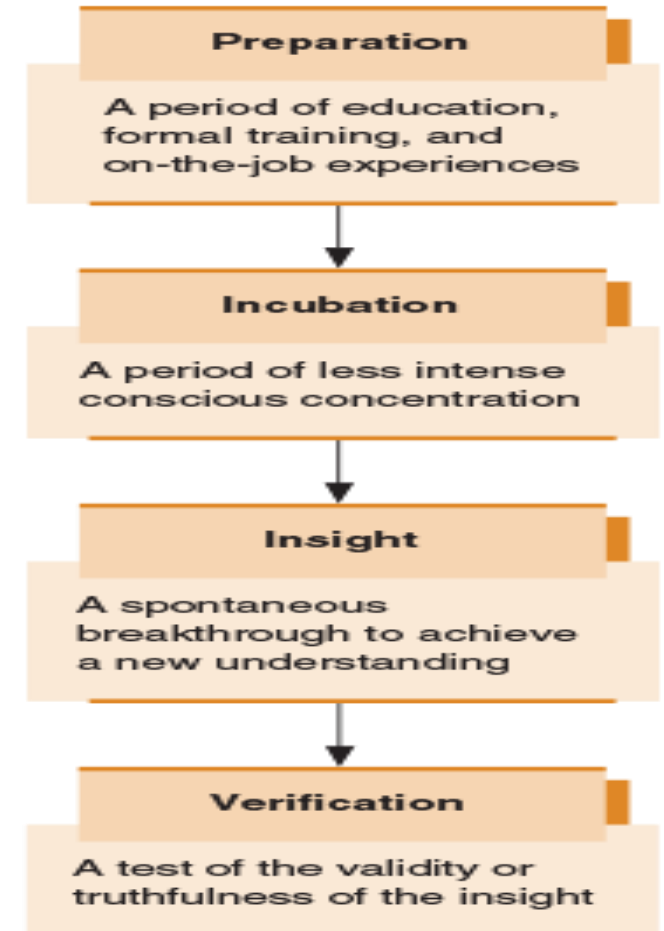
The Creative Process

Although creative people often report that ideas seem to come to them “in a flash,” individual creative activity actually tends to progress through a series of stages. **Figure 8.6** summarizes the major stages of the creative process.

Not all creative activity has to follow these four stages, but much of it does.

Figure 8.6. The Creative Process:

The creative process generally follows the four steps illustrated here. Of course, there are exceptions, and the process is occasionally different. In most cases, however, these steps capture the essence of the creative process.



The Creative Individual

Preparation

Preparation

- The creative process normally begins with a period of **preparation**. Formal education and training are usually the most efficient ways of becoming familiar with a vast amount of research and knowledge.
- To make a creative contribution to business management or business services, individuals must usually receive formal training and education in business or a related field like economics. This is one reason for the strong demand for undergraduate and master's level business education. Formal business education can be an effective way for an individual to get “up to speed” and begin making creative contributions quickly.

The Creative Individual

Preparation

Preparation

- Experiences that managers have on the job after their formal training has finished can also contribute to the creative process. In an important sense, the education and training of creative people never really ends.
- It continues as long as they remain interested in the world and curious about the way things work. One such individual is Bruce Roth, who earned a Ph.D. in chemistry and then spent years working in the pharmaceutical industry learning more and more about chemical compounds and how they work in human beings.

The Creative Individual

Incubation

Incubation

- The second phase of the creative process is **incubation**—a period of less-intense conscious concentration during which the knowledge and ideas acquired during preparation mature and develop. A curious aspect of incubation is that it is often helped along by pauses in concentrated rational thought.
- Some creative people rely on physical activity such as jogging or swimming to provide a “break” from thinking. Others may read or listen to music. Sometimes sleep may even supply the needed pause.
- Bruce Roth eventually joined Warner-Lambert, at the time an up-and-coming drug company, to help develop medication to lower cholesterol. In his spare time, Roth read mystery novels and hiked in the mountains. He later acknowledged that this time away from his lab work was actually when he did his best thinking.



The Creative Individual

Insight

Insight

- Usually occurring after preparation and incubation, **insight** is a spontaneous breakthrough in which the creative person achieves a new understanding of some problem or situation.
- Insight represents a coming together of all the scattered thoughts and ideas that were maturing during incubation. It may occur suddenly or develop slowly over time.
- Insight can be triggered by some external event—such as a new experience or an encounter with new data that forces the individual to think about old issues and problems in new ways—or it can be a completely internal event in which patterns of thought finally coalesce in ways that generate new understanding. One day Bruce Roth was reviewing some data from some earlier studies that had found the new drug under development to be no more effective than other drugs already available.



The Creative Individual

Insight

Verification

- Once an insight has occurred, **verification** determines the validity or truthfulness of the insight. For many creative ideas, verification includes scientific experiments to determine whether or not the insight actually leads to the results expected.
- Verification may also include the development of a product or service prototype. A prototype is one (or a very small number) of products built just to see whether the ideas behind this new product actually work.
- Product prototypes are rarely sold to the public but are very valuable in verifying the insights developed in the creative process.

The Creative Individual

Insight

Verification

- Once the new product or service is developed, verification in the marketplace is the ultimate test of the creative idea behind it.
- Bruce Roth and his colleagues set to work testing the new drug compound and eventually won FDA approval.
- The drug, named Lipitor, has become the largest selling pharmaceutical in history. And Pfizer, the firm that bought Warner-Lambert in a hostile takeover, earns more than \$10 billion a year on the drug.

Enhancing Creativity in Organizations

Enhancing Creativity in Organizations

Enhancing Creativity in Organizations

- Managers who wish to enhance and promote creativity in their organizations can do so in a variety of ways.
- One important method for enhancing creativity is to make it a part of the organization's culture, often through explicit goals.
- Firms that truly want to stress creativity, such as 3M and Rubbermaid, for example, state goals that some percent of future revenues are to be gained from new products. This clearly communicates that creativity and innovation are valued.
- Another important part of enhancing creativity is to reward creative successes, while being careful to not punish creative failures.
- Many ideas that seem worthwhile on paper fail to pan out in reality. If the first person to come up with an idea that fails is fired or otherwise punished, others in the organization will become more cautious in their own work. And as a result, fewer creative ideas will emerge.



Summary and Applications

- **Decision making** is the process of choosing one alternative from among several. Problem solving is finding the answer to a question.
- **The basic elements** of decision making include choosing a goal; considering alternative courses of action; assessing potential outcomes of the alternatives, each with its own value relative to the goal; and choosing one alternative based on an evaluation of the outcomes. Information is available regarding the alternatives, outcomes, and values.
- **Programmed decisions** are well-structured, recurring decisions made according to set decision rules. Nonprogrammed decisions involve nonroutine, poorly structured situations with unclear sources of information; these decisions cannot be made according to existing decision rules. Decision making may also be classified based on salient conditions that exist.
- **The classifications**—certainty, risk, and uncertainty—reflect the amount of information available regarding the outcomes of alternatives.
- **The rational approach** views decision making as a completely rational process in which goals are established, a problem is identified, alternatives are generated and evaluated, a choice is made and implemented, and control is exercised. Evidence-based decision making is a recent restatement of the need for rationality when making decisions.

Summary and Applications

- **The use of procedures** and rules of thumb, suboptimizing, and satisficing characterize the behavioral model.
- **A variety of other behavioral** processes also influences decision making in organizations. Political activities by coalitions, managerial intuition, and the tendency to become increasingly committed to a chosen course of action are all important.
- **Risk propensity** is also an important behavioral perspective on decision making. Ethics also affect how managers make decisions.
- **Prospect theory suggests** that people are more motivated to avoid losses than to make gains. The rational and behavioral views can be combined into an integrated model.

Thanks



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