3

Skills Approach

DESCRIPTION

Like the trait approach we discussed in Chapter 2, the skills approach takes a leader-centered perspective on leadership. However, in the skills approach we shift our thinking from a focus on personality characteristics, which usually are viewed as innate and largely fixed, to an emphasis on skills and abilities that can be learned and developed. Although personality certainly plays an integral role in leadership, the skills approach suggests that knowledge and abilities are needed for effective leadership.

Researchers have studied leadership skills directly or indirectly for a number of years (see Bass, 1990, pp. 97–109). However, the impetus for research on skills was a classic article published by Robert Katz in the *Harvard Business Review* in 1955, titled "Skills of an Effective Administrator." Katz's article appeared at a time when researchers were trying to identify a definitive set of leadership traits. Katz's approach was an attempt to transcend the trait problem by addressing leadership as a set of developable *skills*. More recently, a revitalized interest in the skills approach has emerged. Beginning in the early 1990s, a multitude of studies have been published that contend that a leader's effectiveness depends on the leader's ability to solve complex organizational problems. This research has resulted in a comprehensive skill-based model of leadership that was advanced by Mumford and his colleagues (Mumford, Zaccaro, Harding, Jacobs, & Fleishman, 2000; Yammarino, 2000).

In this chapter, our discussion of the skills approach is divided into two parts. First, we discuss the general ideas set forth by Katz regarding three basic administrative skills: technical, human, and conceptual. Second, we discuss the recent work of Mumford and colleagues that has resulted in a new skills-based model of organizational leadership.

▶ **3.1** Skills Approach

Three-Skill Approach

Based on field research in administration and his own firsthand observations of executives in the workplace, Katz (1955, p. 34) suggested that effective administration (i.e., leadership) depends on three basic personal skills: technical, human, and conceptual. Katz argued that these skills are quite different from traits or qualities of leaders. *Skills* are what leaders *can accomplish*, whereas *traits* are who leaders *are* (i.e., their innate characteristics). Leadership skills are defined in this chapter as the ability to use one's knowledge and competencies to accomplish a set of goals or objectives. This chapter shows that these leadership skills can be acquired and leaders can be trained to develop them.

Technical Skill

Technical skill is knowledge about and proficiency in a specific type of work or activity. It includes competencies in a specialized area, analytical ability, and the ability to use appropriate tools and techniques (Katz, 1955). For example, in a computer software company, technical skill might include knowing software language and programming, the company's software products, and how to make these products function for clients. Similarly, in an accounting firm, technical skill might include understanding and having the ability to apply generally accepted accounting principles to a client's audit. In both these examples, technical skills involve a hands-on activity with a basic product or process within an organization. Technical skills play an essential role in producing the actual products a company is designed to produce.

As illustrated in Figure 3.1, technical skill is most important at lower and middle levels of management and less important in upper management. For leaders at the highest level, such as chief executive officers (CEOs), presidents, and senior officers, technical competencies are not as essential. Individuals at the top level depend on skilled subordinates to handle technical issues of the physical operation.
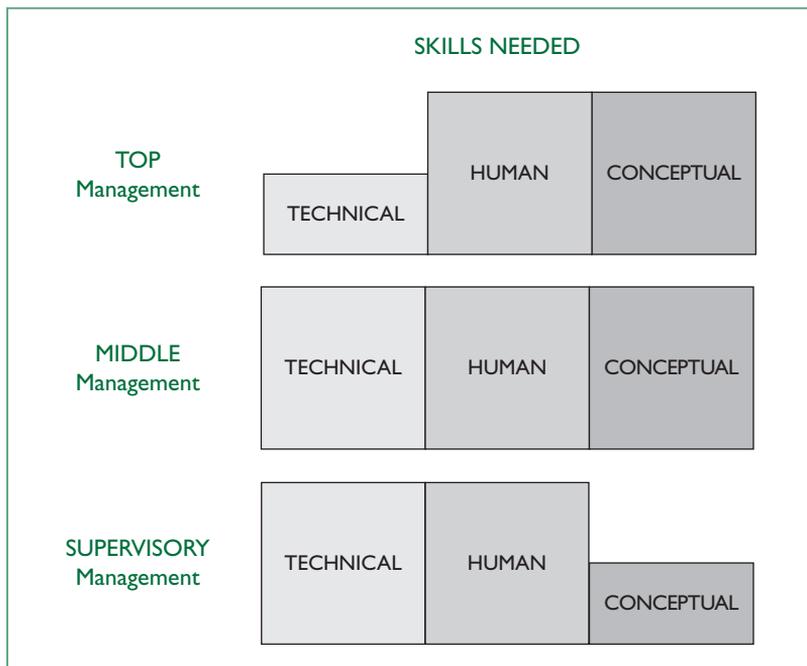
Human Skill

Human skill is knowledge about and ability to work with *people*. It is quite different from technical skill, which has to do with working with *things* (Katz, 1955). Human skills are "people skills." They are the abilities that help a leader to work effectively with subordinates, peers, and superiors

3.1 Evidence-Based Practice   **3.2** Colin Powell

to accomplish the organization's goals. Human skills allow a leader to assist group members in working cooperatively as a group to achieve common goals. For Katz, it means being aware of one's own perspective on issues and, at the same time, being aware of the perspective of others. Leaders with human skills adapt their own ideas to those of others. Furthermore, they create an atmosphere of trust where employees can feel comfortable and secure and where they can feel encouraged to become involved in the planning of things that will affect them. Being a leader with human skills means being sensitive to the needs and motivations of others and taking into account others' needs in one's decision making. In short, human skill is the capacity to get along with others as you go about your work.

In Figure 3.1, human skills are important in all three levels of management. Although managers at lower levels may communicate with a far

Figure 3.1   Management Skills Necessary at Various Levels of an Organization

greater number of employees, human skills are equally important at middle and upper levels.

Conceptual Skill

Broadly speaking, conceptual skills are the ability to work with ideas and concepts. Whereas technical skills deal with *things* and human skills deal with *people*, conceptual skills involve the ability to work with *ideas*. A leader with conceptual skills is comfortable talking about the ideas that shape an organization and the intricacies involved. He or she is good at putting the company's goals into words and can understand and express the economic principles that affect the company. A leader with conceptual skills works easily with abstractions and hypothetical notions.

Conceptual skills are central to creating a vision and strategic plan for an organization. For example, it would take conceptual skills for a CEO in a struggling manufacturing company to articulate a vision for a line of new products that would steer the company into profitability. Similarly, it would take conceptual skill for the director of a nonprofit health organization to create a strategic plan that could compete successfully with for-profit health organizations in a market with scarce resources. The point of these examples is that conceptual skill has to do with the mental work of shaping the meaning of organizational or policy issues—understanding what a company stands for and where it is or should be going.

In Figure 3.1, conceptual skill is most important at the top management levels. In fact, when upper-level managers do not have strong conceptual skills, they can jeopardize the whole organization. Conceptual skills are also important in middle management; as we move down to lower management levels, conceptual skills become less important.

Summary of the Three-Skill Approach

To summarize, the three-skill approach includes technical, human, and conceptual skills. It is important for leaders to have all three skills; depending on where they are in the management structure, however, some skills are more important than others are.

Katz's work in the mid-1950s set the stage for conceptualizing leadership in terms of skills, but it was not until the mid-1990s that an

empirically-based skills approach received recognition in leadership research. In the next section, the comprehensive skill-based model of leadership is presented.

Skills Model

Beginning in the early 1990s, a group of researchers, with funding from the U.S. Army and Department of Defense, set out to test and develop a comprehensive theory of leadership based on problem-solving skills in organizations. The studies were conducted over a number of years using a sample of more than 1,800 Army officers, representing six grade levels, from second lieutenant to colonel. The project used a variety of new measures and tools to assess the skills of these officers, their experiences, and the situations in which they worked.
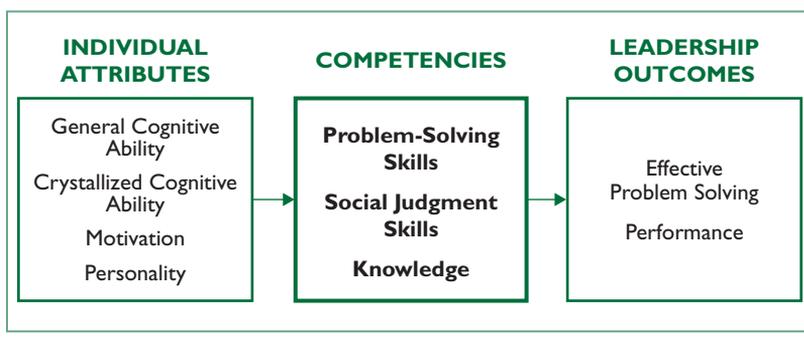
The researchers' main goal was to explain the underlying elements of effective performance. They addressed questions such as these: What accounts for why some leaders are good problem solvers and others are not? What specific skills do high-performing leaders exhibit? How do leaders' individual characteristics, career experiences, and environmental influences affect their job performance? As a whole, researchers wanted to identify the leadership factors that create exemplary job performance in an actual organization.

Based on the extensive findings from the project, Mumford and colleagues formulated a skill-based model of leadership. The model is characterized as a *capability* model because it examines the relationship between a leader's knowledge and skills (i.e., capabilities) and the leader's performance (Mumford, Zaccaro, Harding, et al., 2000, p. 12). Leadership capabilities can be developed over time through education and experience. Unlike the "great man" approach (discussed in this text, Chapter 2), which implies that leadership is reserved for only the gifted few, the skills approach suggests that many people have the potential for leadership. If people are capable of learning from their experiences, they can acquire leadership. The skills approach can also be distinguished from the leadership approaches we will discuss in subsequent chapters, which focus on behavioral patterns of leaders (e.g., the style approach, transformational leadership, or leader–member exchange theory). Rather than emphasizing *what leaders do*, the skills approach frames leadership as *the capabilities* (*knowledge and skills*) *that make effective leadership possible* (Mumford, Zaccaro, Harding, et al., 2000, p. 12).

3.1 Conceptualizations of Skill   **3.2** Leadership Development

The skill-based model of Mumford's group has five components: competencies, individual attributes, leadership outcomes, career experiences, and environmental influences. A portion of the model, illustrating three of these components, appears in Figure 3.2. This portion of the model is essential to understanding the overall skill-based leadership model.

Figure 3.2   Three Components of the Skills Model

INDIVIDUAL ATTRIBUTES	**COMPETENCIES**	**LEADERSHIP OUTCOMES**
General Cognitive Ability Crystallized Cognitive Ability Motivation Personality	**Problem-Solving Skills** **Social Judgment Skills** **Knowledge**	Effective Problem Solving Performance

SOURCE: Adapted from "Leadership Skills for a Changing World: Solving Complex Social Problems," by M. D. Mumford, S. J. Zaccaro, F. D. Harding, T. O. Jacobs, and E. A. Fleishman, 2000, *Leadership Quarterly, 11*(1), 23.

Competencies

As can be observed in the middle box in Figure 3.2, problem-solving skills, social judgment skills, and knowledge are at the heart of the skills model. These three competencies are the key factors that account for effective performance.

Problem-Solving Skills. What are problem-solving skills? According to Mumford, Zaccaro, Harding, et al. (2000), problem-solving skills are a leader's creative ability to solve new and unusual, ill-defined organizational problems. The skills include being able to define significant problems, gather problem information, formulate new understandings about the problem, and generate prototype plans for problem solutions. These skills do not function in a vacuum, but are carried out in an organizational context. Problem-solving skills demand that leaders understand their own leadership capacities as they apply possible solutions to the unique problems in their organization (Mumford, Zaccaro, Connelly, & Marks, 2000).

3.2 Problem-Solving Approaches   **3.3** Decision Making

Being able to construct solutions plays a special role in problem solving. In considering solutions to organizational problems, skilled leaders need to attend to the time frame for constructing and implementing a solution, short-term and long-term goals, career goals and organizational goals, and external issues, all of which could influence the solution (Mumford, Zaccaro, Harding, et al., 2000, p. 15).

To clarify what is meant by problem-solving skills, consider the following hypothetical situation. Imagine that you are the director of human resources for a medium-sized company and you have been informed by the president that you have to develop a plan to reduce the company's health care costs. In deciding what you will do, you could demonstrate problem-solving skills in the following ways. First, you identify the full ramifications for employees of changing their health insurance coverage. What is the impact going to be? Second, you gather information about how benefits can be scaled back. What other companies have attempted a similar change, and what were their results? Third, you find a way to teach and inform the employees about the needed change. How can you frame the change in such a way that it is clearly understood? Fourth, you create possible scenarios for how the changes will be instituted. How will the plan be described? Fifth, you look closely at the solution itself. How will implementing this change affect the company's mission and your own career? Last, are there issues in the organization (e.g., union rules) that may affect the implementation of these changes?

As illustrated by this example, the process of dealing with novel, ill-defined organizational problems is complex and demanding for leaders. In many ways, it is like a puzzle to be solved. For leaders to solve such puzzles, the skill-based model suggests that problem-solving skills are essential.

Social Judgment Skills. In addition to problem-solving skills, effective leadership performance also requires social judgment skills (see Figure 3.2). In general, social judgment skills are the capacity to understand people and social systems (Zaccaro, Mumford, Connelly, Marks, & Gilbert, 2000, p. 46). They enable leaders to *work with others* to solve problems and to marshal support to implement change within an organization. Social judgment skills are the people skills that are necessary to solve unique organizational problems.

Conceptually, social judgment skills are similar to Katz's (1955) early work on the role of human skills in management. In contrast to Katz's work, Mumford and colleagues have delineated social judgment skills into

▶ **3.4** Flexibility

the following: perspective taking, social perceptiveness, behavioral flexibility, and social performance.

Perspective taking means understanding the attitudes that *others* have toward a particular problem or solution. It is empathy applied to problem solving. Perspective taking means being sensitive to other people's perspectives and goals—being able to understand their point of view on different issues. Included in perspective taking is knowing how different constituencies in an organization view a problem and possible solutions. According to Zaccaro, Gilbert, Thor, and Mumford (1991), perspective-taking skills can be likened to *social intelligence*. These skills are concerned with knowledge about people, the social fabric of organizations, and the interrelatedness of each of them.

Social perceptiveness is insight and awareness into how others in the organization function. What is important to others? What motivates them? What problems do they face, and how do they react to change? Social perceptiveness means understanding the unique needs, goals, and demands of different organizational constituencies (Zaccaro et al., 1991). A leader with social perceptiveness has a keen sense of how employees will respond to any proposed change in the organization. In a sense, you could say it allows the leader to know the pulse of employees on any issue at any time.

In addition to understanding others accurately, social judgment skills also involve reacting to others with flexibility. *Behavioral flexibility* is the capacity to change and adapt one's behavior in light of an understanding of others' perspectives in the organization. Being flexible means one is not locked into a singular approach to a problem. One is not dogmatic but rather maintains an openness and willingness to change. As the circumstances of a situation change, a flexible leader changes to meet the new demands.

Social performance includes a wide range of leadership competencies. Based on an understanding of employees' perspectives, leaders need to be able to communicate their own vision to others. Skill in persuasion and communicating change is essential to do this. When there is resistance to change or interpersonal conflict about change, leaders need to function as mediators. To this end, skill in conflict resolution is an important aspect of social performance competency. In addition, social performance sometimes requires that leaders coach subordinates, giving them direction and support as they move toward selected organizational goals. In all, social performance includes many related skills that may come under the umbrella of communication.

3.3 Managerial Leadership

To review, social judgment skills are about being sensitive to how your ideas fit in with others. Can you understand others' perspectives and their unique needs and motivations? Are you flexible, and can you adapt your own ideas to others? Can you work with others even when there is resistance and conflict? Social judgment skills are the people skills needed to advance change in an organization.

Knowledge. As shown in the model (see Figure 3.2), the third aspect of competencies is knowledge. Knowledge is inextricably related to the application and implementation of problem-solving skills in organizations. It directly influences a leader's capacity to define complex organizational problems and to attempt to solve them (Mumford, Zaccaro, Harding, et al., 2000). *Knowledge* is the accumulation of information and the mental structures used to organize that information. Such a mental structure is called a *schema* (a summary, a diagrammatic representation, or an outline). Knowledge results from having developed an assortment of complex schemata for learning and organizing data.

For example, all of us take various kinds of facts and information into our minds. As we organize that information into categories or schemata, the information becomes more meaningful. Knowledge emerges from the facts *and* the organizational structures we apply to them. People with a lot of knowledge have more complex organizing structures than those with less knowledge. These knowledgeable people are called *experts*.

Consider the following baseball example. A baseball expert knows a lot of facts about the game; the expert knows the rules, strategies, equipment, players, and much, much more. The expert's knowledge about baseball includes the facts, but it also includes the complex mental structures used in organizing and structuring those facts. That person knows not only the season and lifetime statistics for each player, but also that player's quirks and injuries, the personality of the manager, the strengths and weaknesses of available substitutes, and so on. The expert knows baseball because she or he comprehends the complexities and nuances of the game. The same is true for leadership in organizations. Leaders with knowledge know much about the products, the tasks, the people, the organization, and all the different ways these elements are related to each other. A knowledgeable leader has many mental structures with which to organize the facts of organizational life.

Knowledge has a positive impact on how leaders engage in problem solving. It is knowledge and expertise that make it possible for people to

▶ **3.5** Motivation and Leadership Styles

think about complex system issues and identify possible strategies for appropriate change. Furthermore, this capacity allows people to use prior cases and incidents in order to plan for needed change. It is knowledge that allows people to use the past to constructively confront the future.

To summarize, the skills model consists of three competencies: problem-solving skills, social judgment skills, and knowledge. Collectively, these three components are positively related to effective leadership performance (see Figure 3.2).

Individual Attributes

Returning to Figure 3.2, the box on the left identifies four individual attributes that have an impact on leadership skills and knowledge: general cognitive ability, crystallized cognitive ability, motivation, and personality. These attributes play important roles in the skills model. Complex problem solving is a very difficult process and becomes more difficult as people move up in the organization. These attributes support people as they apply their leadership competencies.

General Cognitive Ability. General cognitive ability can be thought of as a person's intelligence. It includes perceptual processing, information processing, general reasoning skills, creative and divergent thinking capacities, and memory skills. General cognitive ability is linked to biology, not to experience.

General cognitive ability is sometimes described as fluid intelligence, a type of intelligence that usually grows and expands up through early adulthood and then declines with age. In the skills model, intelligence is described as having a positive impact on the leader's acquisition of complex problem-solving skills and the leader's knowledge.

Crystallized Cognitive Ability. Crystallized cognitive ability is intellectual ability that is learned or acquired over time. It is the store of knowledge we acquire through experience. We learn and increase our capacities over a lifetime, increasing our leadership potential (e.g., problem-solving skills, conceptual ability, and social judgment skills). In normally functioning adults, this type of cognitive ability grows continuously and typically does not fall off in adulthood. It includes being able to comprehend complex information and learn new skills and information, as well as being able to communicate to others in oral and written forms (Connelly

3.1 Global Leaders

et al., 2000, p. 71). Stated another way, crystallized cognitive ability is acquired intelligence: the ideas and mental abilities people learn through experience. Because it stays fairly stable over time, this type of intelligence is not diminished as people get older.

Motivation. Motivation is listed as the third attribute in the model. Although the model does not purport to explain the many ways in which motivation may affect leadership, it does suggest three aspects of motivation that are essential to developing leadership skills (Mumford, Zaccaro, Harding, et al., 2000, p. 22): First, leaders must be *willing* to tackle complex organizational problems. This first step is critical. For leadership to occur, a person wants to lead. Second, leaders must be willing to express *dominance*—to exert their influence, as we discussed in Chapter 2. In influencing others, the leader must take on the responsibility of dominance because the influence component of leadership is inextricably bound to dominance. Third, leaders must be committed to the *social good* of the organization. The *social good* is a broad term that can refer to a host of outcomes. However, in the skills model it refers to the leader's willingness to take on the responsibility of trying to advance the overall human good and value of the organization. Taken together, these three aspects of motivation (willingness, dominance, and social good) prepare people to become leaders.

Personality. Personality is the fourth individual attribute in the skills model. Placed where it is in the model, this attribute reminds us that our personality has an impact on the development of our leadership skills. For example, openness, tolerance for ambiguity, and curiosity may affect a leader's motivation to try to solve some organizational problem. Or, in conflict situations, traits such as confidence and adaptability may be beneficial to a leader's performance. The skills model hypothesizes that any personality characteristic that helps people to cope with complex organizational situations probably is related to leader performance (Mumford, Zaccaro, Harding, et al., 2000).

Leadership Outcomes

In the right-hand box in Figure 3.2, effective problem solving and performance are the outcomes of leadership. These outcomes are strongly influenced by the leader's competencies (i.e., problem-solving skills, social judgment skills, and knowledge). When leaders exhibit these competencies, they increase their chances of problem solving and overall performance.

3.3 Mentoring and Coaching

Effective Problem Solving. As we discussed earlier, the skills model is a *capability model*, designed to explain why some leaders are good problem solvers and others are not. Problem solving is the keystone in the skills approach. In the model (see Figure 3.2), problem-solving skills, as competencies, lead to effective problem solving as a leadership outcome. The criteria for good problem solving are determined by the originality and the quality of expressed solutions to problems. Good problem solving involves creating solutions that are logical, effective, and unique, and that go beyond given information (Zaccaro et al., 2000).

Performance. In the model, performance outcomes reflect how well the leader has done her or his job. To measure performance, standard external criteria are used. If the leader has done well and been successful, the leader's evaluations will be positive. Leaders who are effective receive good annual performance reviews, get merit raises, and are recognized by superiors and subordinates as competent leaders. In the end, performance is the degree to which a leader has successfully performed the assigned duties.
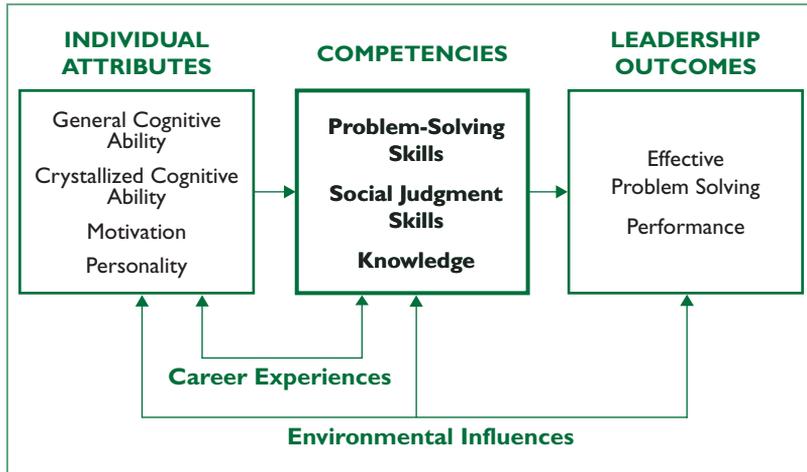
Taken together, effective problem solving and performance are the two ways to assess leadership effectiveness using the skills model. Furthermore, good problem solving and good performance go hand in hand. A full depiction of the comprehensive skills model appears in Figure 3.3. It contains two other components, not depicted in Figure 3.2, that contribute to overall leadership performance: career experiences and environmental influences.

Career Experiences

As you can see in Figure 3.3, career experiences have an impact on the characteristics and competencies of leaders. The skills model suggests that the experiences acquired in the course of leaders' careers influence their knowledge and skills to solve complex problems. Mumford, Zaccaro, Harding, et al. (2000, p. 24) pointed out that leaders can be helped through challenging job assignments, mentoring, appropriate training, and hands-on experience in solving new and unusual problems. In addition, the authors think that career experiences can positively affect the individual characteristics of leaders. For example, certain on-the-job assignments could enhance a leader's motivation or intellectual ability.

In the first section of this chapter, we discussed Katz's (1955) work, which notes that conceptual skills are essential for upper-level administrators. This

3.4 Role of Emotions

Figure 3.3 Skills Model of Leadership

SOURCE: Adapted from "Leadership Skills for a Changing World: Solving Complex Social Problems," by M. D. Mumford, S. J. Zaccaro, F. D. Harding, T. O. Jacobs, and E. A. Fleishman, 2000, *Leadership Quarterly, 11*(1), 23.

is consistent with Mumford, Zaccaro, Harding, et al.'s (2000) skills model, which contends that leaders develop competencies over time. Career experience helps leaders to improve their skills and knowledge over time. Leaders learn and develop higher levels of conceptual capacity if the kinds of problems they confront are progressively more complex and more long term as they ascend the organizational hierarchy (Mumford, Zaccaro, Connelly, et al., 2000). Similarly, upper-level leaders, as opposed to first-line supervisors, develop new competencies because they are required to address problems that are more novel, that are more poorly defined, and that demand more human interaction. As these people move through their careers, higher levels of problem-solving and social judgment skills become increasingly important (Mumford & Connelly, 1991).

So the skills and knowledge of leaders are shaped by their career experiences as they address increasingly complex problems in the organization. This notion of developing leadership skills is unique and quite different from other leadership perspectives. If we say, "Leaders are shaped by their experiences," then it means leaders are not born to be leaders (Mumford, Zaccaro, Harding, et al., 2000). Leaders can develop their abilities through experience, according to the skills model.

Environmental Influences

The final component of the skills model is environmental influences, which is illustrated at the bottom of Figure 3.3. Environmental influences represent factors that lie outside the leader's competencies, characteristics, and experiences. These environmental influences can be *internal* and *external*.

Internal environmental influences affecting leadership performance can include such factors as technology, facilities, expertise of subordinates, and communication. For example, an aging factory or one lacking in high-speed technology could have a major impact on the nature of problem-solving activities. Another example might be the skill levels of subordinates: If a leader's subordinates are highly competent, they will definitely improve the group's problem solving and performance. Similarly, if a task is particularly complex or a group's communication poor, the leader's performance will be affected.

External environmental influences, including economic, political, and social issues, as well as natural disasters, can provide unique challenges to leaders. In March 2011, a massive earthquake and tsunami devastated large parts of Japan, crippling that nation's automobile manufacturing industry. Toyota Motor Corp. alone had more than 650 of its suppliers and component manufacturers wiped out, halting worldwide production of Toyota vehicles and devastating the company's sales. At the same time, this disaster was a boon to American carmakers who increased shipments and began outselling Toyota, which had dominated the market. Leaders of these automobile companies, both Japanese and American, had to respond to unique challenges posed by external forces completely beyond their control.

The skills model does not provide an inventory of specific environmental influences. Instead, it acknowledges the existence of these factors and recognizes that they are indeed influences that can affect a leader's performance. In other words, environmental influences are a part of the skills model but not usually under the control of the leader.

Summary of the Skills Model

In summary, the skills model frames leadership by describing five components of leader performance. At the heart of the model are three

competencies: *problem-solving skills*, *social judgment skills*, and *knowledge*. These three competencies are the central determinants of effective problem solving and performance, although individual attributes, career experiences, and environmental influences all have impacts on leader competencies. Through job experience and training, leaders can become better problem solvers and more effective leaders.

HOW DOES THE SKILLS APPROACH WORK?

The skills approach is primarily descriptive: It *describes* leadership from a skills perspective. Rather than providing prescriptions for success in leadership, the skills approach provides a structure for understanding the nature of effective leadership. In the previous sections, we discussed the skills perspective based on the work of Katz (1955) and Mumford, Zaccaro, Harding, et al. (2000). What does each of these bodies of work suggest about the structure and functions of leadership?

The three-skill approach of Katz suggests that the importance of certain leadership skills varies depending on where leaders are in a management hierarchy. For leaders operating at lower levels of management, technical and human skills are most important. When leaders move into middle management, it becomes important that they have all three skills: technical, human, and conceptual. At the upper management levels, it is paramount for leaders to exhibit conceptual and human skills.

This approach was reinforced in a 2007 study that examined the skills needed by executives at different levels of management. The researchers used a four-skill model, similar to Katz's approach, to assess cognitive skills, interpersonal skills, business skills, and strategic skills of 1,000 managers at the junior, middle, and senior levels of an organization. The results showed that interpersonal and cognitive skills were required more than business and strategic skills for those on the lower levels of management. As one climbed the career ladder, however, the execution of higher levels of all four of these leadership skills became necessary (Mumford, Campion, & Morgeson, 2007).

In their skills model, Mumford, Zaccaro, Harding, et al. (2000) provided a more complex picture of how skills relate to the manifestation of effective leadership. Their skills model contends that leadership outcomes are the direct result of a leader's competencies in problem-solving skills, social

judgment skills, and knowledge. Each of these competencies includes a large repertoire of abilities, and each can be learned and developed. In addition, the model illustrates how individual attributes such as general cognitive ability, crystallized cognitive ability, motivation, and personality influence the leader's competencies. And finally, the model describes how career experiences and environmental influences play a direct or indirect role in leadership performance.

The skills approach works by providing a *map* for how to reach effective leadership in an organization: Leaders need to have problem-solving skills, social judgment skills, and knowledge. Workers can improve their capabilities in these areas through training and experience. Although each leader's personal attributes affect his or her skills, it is the leader's *skills* themselves that are most important in addressing organizational problems.

STRENGTHS

In several ways, the skills approach contributes positively to our understanding about leadership. First, it is a leader-centered model that stresses the importance of developing particular leadership skills. It is the first approach to conceptualize and create a structure of the process of leadership around *skills*. Whereas the early research on skills highlighted the importance of skills and the value of skills across different management levels, the later work placed learned skills at the center of effective leadership performance at *all* management levels.

Second, the skills approach is intuitively appealing. To describe leadership in terms of skills makes leadership available to everyone. Unlike personality traits, skills are competencies that people can learn or develop. It is like playing a sport such as tennis or golf. Even without natural ability in these sports, people can improve their games with practice and instruction. The same is true with leadership. When leadership is framed as a set of skills, it becomes a process that people can study and practice to become better at performing their jobs.

Third, the skills approach provides an expansive view of leadership that incorporates a wide variety of components, including problem-solving skills, social judgment skills, knowledge, individual attributes, career experiences, and environmental influences. Each of these components can

3.5 Leadership Skill Development

further be subdivided into several subcomponents. The result is a picture of leadership that encompasses a multitude of factors. Because it includes so many variables, the skills approach can capture many of the intricacies and complexities of leadership not found in other models.

Last, the skills approach provides a structure that is very consistent with the curricula of most leadership education programs. Leadership education programs throughout the country have traditionally taught classes in creative problem solving, conflict resolution, listening, and teamwork, to name a few. The content of these classes closely mirrors many of the components in the skills model. Clearly, the skills approach provides a structure that helps to frame the curricula of leadership education and development programs.

CRITICISMS

Like all other approaches to leadership, the skills approach also has certain weaknesses. First, the breadth of the skills approach seems to extend beyond the boundaries of leadership. For example, by including motivation, critical thinking, personality, and conflict resolution, the skills approach addresses more than just leadership. Another example of the model's breadth is its inclusion of two types of intelligence (i.e., general cognitive ability and crystallized cognitive ability). Although both areas are studied widely in the field of cognitive psychology, they are seldom addressed in leadership research. By including so many components, the skills model of Mumford and others becomes more general and less precise in explaining leadership performance.

Second, related to the first criticism, the skills model is weak in predictive value. It does not explain specifically how variations in social judgment skills and problem-solving skills affect performance. The model suggests that these components are related, but it does not describe with any precision just how that works. In short, the model can be faulted because it does not explain *how* skills lead to effective leadership performance.

In addition, the skills approach can be criticized for claiming *not* to be a trait model when, in fact, a major component in the model includes individual attributes, which are trait-like. Although Mumford and colleagues describe cognitive abilities, motivation, and personality variables

as factors contributing to competencies, these are also factors that are typically considered to be trait variables. The point is that the individual attributes component of the skills model is trait driven, and that shifts the model away from being strictly a skills approach to leadership.

The final criticism of the skills approach is that it may not be suitably or appropriately applied to other contexts of leadership. The skills model was constructed by using a large sample of military personnel and observing their performance in the armed services. This raises an obvious question: Can the results be generalized to other populations or organizational settings? Although some research suggests that these Army findings can be generalized to other groups (Mumford, Zaccaro, Connelly, et al., 2000), more research is needed to address this criticism.

APPLICATION

Despite its appeal to theorists and academics, the skills approach has not been widely used in applied leadership settings. For example, there are no training packages designed specifically to teach people leadership skills from this approach. Although many programs have been designed to teach leadership skills from a general self-help orientation, few of these programs are based on the conceptual frameworks set forth in this chapter.

Despite the lack of formal training programs, the skills approach offers valuable information about leadership. The approach provides a way to delineate the skills of the leader, and leaders at all levels in an organization can use it. In addition, this approach helps us to identify our strengths and weaknesses in regard to these technical, human, and conceptual skills. By taking a skills inventory such as the one provided at the end of this chapter, people can gain further insight into their own leadership competencies. Their scores allow them to learn about areas in which they may want to seek further training to enhance their overall contributions to their organization.

From a wider perspective, the skills approach may be used in the future as a template for the design of extensive leadership development programs. This approach provides the evidence for teaching leaders the important aspects of listening, creative problem solving, conflict resolution skills, and much more.

3.6 Skills and Business Intelligence

―――――――――― **CASE STUDIES** ――――――――――

The following three case studies (Cases 3.1, 3.2, and 3.3) describe leadership situations that can be analyzed and evaluated from the skills perspective. The first case involves the principal investigator of a federally funded research grant. The second case takes place in a military setting and describes how a lieutenant colonel handles the downsizing of a military base. In the third case, we learn about how the owner of an Italian restaurant has created his own recipe for success.

As you read each case, try to apply the principles of the skills approach to the leaders and their situations. At the end of each case are questions that will assist you in analyzing the case.

CASE 3.1

A Strained Research Team

Dr. Adam Wood is the principal investigator on a 3-year, $1 million federally funded research grant to study health education programs for older populations, called the Elder Care Project. Unlike previous projects, in which Dr. Wood worked alone or with one or two other investigators, on this project Dr. Wood has 11 colleagues. His project team is made up of two co-investigators (with PhDs), four intervention staff (with MAs), and five general staff members (with BAs). One year into the project, it has become apparent to Dr. Wood and the team that the project is underbudgeted and has too few resources. Team members are spending 20%–30% more time on the project than has been budgeted to pay them. Regardless of the resource strain, all team members are committed to the project; they believe in its goals and the importance of its outcomes. Dr. Wood is known throughout the country as the foremost scholar in this area of health education research. He is often asked to serve on national review and advisory boards. His publication record is second to none. In addition, his colleagues in the university know Dr. Wood as a very competent researcher. People come to Dr. Wood for advice on research design and methodology questions. They also come to him for questions about theoretical formulations. He has a reputation as someone who can see the big picture on research projects.

Despite his research competence, there are problems on Dr. Wood's research team. Dr. Wood worries there is a great deal of work to be

(Continued)

(Continued)

done but that the members of the team are not devoting sufficient time to the Elder Care Project. He is frustrated because many of the day-to-day research tasks of the project are falling into his lap. He enters a research meeting, throws his notebook down on the table, and says, "I wish I'd never taken this project on. It's taking way too much of my time. The rest of you aren't pulling your fair share." Team members feel exasperated at Dr. Wood's comments. Although they respect his competence, they find his leadership style frustrating. His negative comments at staff meetings are having a demoralizing effect on the research team. Despite their hard work and devotion to the project, Dr. Wood seldom compliments or praises their efforts. Team members believe that they have spent more time than anticipated on the project and have received less pay or credit than expected. The project is sucking away a lot of staff energy, yet Dr. Wood does not seem to understand the pressures confronting his staff.

The research staff is starting to feel burned out, but members realize they need to keep trying because they are under time constraints from the federal government to do the work promised. The team needs to develop a pamphlet for the participants in the Elder Care Project, but the pamphlet costs are significantly more than budgeted in the grant. Dr. Wood has been very adept at finding out where they might find small pockets of money to help cover those costs.

Although team members are pleased that he is able to obtain the money, they are sure he will use this as just another example of how he was the one doing most of the work on the project.

Questions

1. Based on the skills approach, how would you assess Dr. Wood's leadership and his relationship to the members of the Elder Care Project team? Will the project be successful?

2. Does Dr. Wood have the skills necessary to be an effective leader of this research team?

3. The skills model describes three important competencies for leaders: problem-solving skills, social judgment skills, and knowledge. If you were to coach Dr. Wood using this model, what competencies would you address with him? What changes would you suggest that he make in his leadership?

CASE 3.2

A Shift for Lieutenant Colonel Adams

Lt. Col. John Adams was an aeronautical engineer in the Air Force who was recognized as an accomplished officer; he rose quickly through the ranks of lieutenant, captain, and major. In addition, he successfully completed a number of professional development courses in the Air Force and received a master's degree in engineering. In the earlier part of his service, his career assignments required overseeing 15- to 20-person shifts that were responsible for routine maintenance schedules for squadron and base aircraft. As he progressed in rank, he moved to engineering projects, which were supported by small technical staffs.

Based on his strong performance, Major Adams was promoted to lieutenant colonel earlier than his peers. Instead of moving him into another engineering position, the personnel bureau and his assignment officer decided that Lieutenant Colonel Adams would benefit from a tour in which he could expand his professional background and experience. Consequently, he was assigned to Base X as the commanding officer of the administration branch. Base X was an airbase with approximately 5,000 military and civilian personnel.

As the administration officer, Adams was the senior human resource officer and the principal adviser to the base commander on all human resource issues. Adams and his staff of 135 civilian and military personnel were responsible for personnel issues, food services, recreation, family support, and medical services. In addition, Lieutenant Colonel Adams was assigned to chair the Labor–Management Relations Committee for the base.

At the end of the Cold War, as part of the declared peace dividend, the government decided to reduce its defense budget. In February, barely 6 months after Adams took over command of the administration branch, the federal government announced a significant reduction in the size of the military and the closure of many bases. Base X was to be closed as an air base and reassigned to the Army. The closure was to take place within 1 year, and the base was to be prepared for the arrival of the first Army troops in 2 years. As part of the reduction program, the federal government initiated voluntary retirement programs for civilian and military personnel. Those wanting to retire had until April 1 to decide.

(Continued)

(Continued)

Orders for the conversion of the airbase included the following:

- The base will continue normal operations for 6 months.
- The squadrons—complete with aircrews, equipment, and families (1,000)—must be relocated to their new bases and operational by August 1.
- The remaining base personnel strength, both civilian and military, must be reduced by 30%.
- The base must continue to provide personnel for operational missions.
- The reduction of personnel must be consistent with federal voluntary early-retirement programs.
- The base must be prepared with a support structure to accept 2,000 new soldiers, expected to arrive in 2 years.

Adams was assigned to develop a human resource plan that would meet the imposed staff levels for the entire base while ensuring that the base was still able to perform the operational tasks it had been given. Faced with this daunting task, Adams conducted an extensive review of all of the relevant orders concerning the base transformation, and he familiarized himself with all of the rules concerning the early-retirement program. After a series of initial meetings with the other base branch chiefs, he laid out a plan that could be accomplished by the established deadlines. At the same time, he chaired a number of meetings with his own staff about how to meet the mandated reductions within his own branch.

After considering the target figures for the early-retirement program, it was clear that the mandated numbers could not be reached. Simply allowing everyone who had applied for early retirement to leave was not considered an option because doing so would devastate entire sections of the base. More job cuts were required, and choices had to be made as to who would stay, why, and in what areas. Adams met stiff resistance in the meetings to determine what sections would bear the brunt of the additional cutbacks.

Adams conducted his own independent analysis of his own branch before consulting with his staff. Based on his thorough examination of the data, he mandated further reductions in his sections. Specifically targeted were personnel in base housing, single-person accommodations, family services, and recreational sections. He also mandated a further 10% cut of military positions in his sections.

After meeting the mandated reduction targets, Lieutenant Colonel Adams was informed that the federal government would accept all personnel who applied for early retirement, which was an unexpected

decision. When superimposed on the already mandated reductions, this move caused critical shortages in key areas. Within weeks of implementation of the plan, the base commander was receiving mounting complaints from both civilian and military members over the implementation of the plan.

Incidents of stress, frustration, and discontent rose dramatically. Families trying to move found support services cut back or nonexistent. The transition staff was forced to work evenings and weekends. Family support services were swamped and asking for additional help.

Despite spending a large amount of overtime trying to address the diverse issues both basewide and within his branch, Adams found himself struggling to keep his head above water. To make matters worse, the base was having difficulty meeting its operational mission, and vital sections were critically understaffed. The base commander wanted answers. When pressed, Adams stated that his plan met all of the required deadlines and targets, and the plan conformed to all of the guidelines of the early retirement programs. "Maybe so," replied the base commander, "but you forgot about the bigger picture."

Questions

1. Based on the skills model, how would you assess Lt. Col. John Adams's ability to meet the challenges of the base administration position?

2. How would you assess his ability to meet the additional tasks he faced regarding the conversion of the base?

3. If you were to coach Adams on how he could improve his leadership, what would you tell him?

CASE 3.3

Andy's Recipe

Andy Garafallo owns an Italian restaurant that sits in the middle of a cornfield near a large Midwestern city. On the restaurant's far wall is an elaborate mural of the canals of Venice. A gondola hangs on the opposite wall, up by the ceiling. Along another wall is a row of real potted lemon

(Continued)

(Continued)

trees. "My ancestors are from Sicily," says Andy. "In fact, I can remember seeing my grandfather take a bite out of a lemon, just like the ones hanging on those trees."

Andy is very confident about his approach to this restaurant, and he should be, because the restaurant is celebrating its 25th anniversary. "I'm darned sure of what I want to do. I'm not trying different fads to get people to come here. People come here because they know they will get great food. They also want to support someone with whom they can connect. This is my approach. Nothing more, nothing less." Although other restaurants have folded, Andy seems to have found a recipe for success.

Since opening his restaurant, Andy has had a number of managers. Currently, he has three: Kelly, Danielle, and Patrick. Kelly is a kitchen (food prep) manager who is known as very honest and dependable. She loves her work, and is efficient, good with ordering, and good with preparation. Andy really likes Kelly but is frustrated with her because she has such difficulty getting along with the salespeople, delivery people, and waitstaff.

Danielle, who works out front in the restaurant, has been with Andy the longest, 6 years. Danielle likes working at Garafallo's—she lives and breathes the place. She fully buys into Andy's approach of putting customers first. In fact, Andy says she has a knack for knowing what customers need even before they ask. Although she is very hospitable, Andy says she is lousy with numbers. She just doesn't seem to catch on to that side of the business.

Patrick, who has been with Andy for 4 years, usually works out front but can work in the kitchen as well. Although Patrick has a strong work ethic and is great with numbers, he is weak on the people side. For some reason, Patrick treats customers as if they are faceless, coming across as very unemotional. In addition, Patrick tends to approach problems with an either–or perspective. This has gotten him into trouble on more than one occasion. Andy wishes that Patrick would learn to lighten up. "He's a good manager, but he needs to recognize that some things just aren't that important," says Andy.

Andy's approach to his managers is that of a teacher and coach. He is always trying to help them improve. He sees part of his responsibility as teaching them every aspect of the restaurant business. Andy's stated goal is that he wants his managers to be "A" players when they leave his business to take on jobs elsewhere. Helping people to become the best they can be is Andy's goal for his restaurant employees.

Although Andy works 12 hours a day, he spends little time analyzing the numbers. He does not think about ways to improve his profit margin by cutting corners, raising an item price here, or cutting quality there. Andy says, "It's like this: The other night I got a call from someone who said they wanted to come in with a group and wondered if they could bring along a cake. I said 'yes' with one stipulation....I get a piece! Well the people came and spent a lot of money. Then they told me that they had actually wanted to go to another restaurant but the other place would not allow them to bring in their own cake." Andy believes very strongly in his approach. "You get business by being what you should be." Compared with other restaurants, his restaurant is doing quite well. Although many places are happy to net 5%–7% profit, Andy's Italian restaurant nets 30% profit, year in and year out.

Questions

1. What accounts for Andy's success in the restaurant business?

2. From a skills perspective, how would you describe the three managers, Kelly, Danielle, and Patrick? What does each of them need to do to improve his or her skills?

3. How would you describe Andy's competencies? Does Andy's leadership suggest that one does not need all three skills in order to be effective?

LEADERSHIP INSTRUMENT

Many questionnaires assess an individual's skills for leadership. A quick search of the Internet provides a host of these questionnaires. Almost all of them are designed to be used in training and development to give people a feel for their leadership abilities. Surveys have been used for years to help people understand and improve their leadership style, but most questionnaires are not used in research because they have not been tested for reliability and validity. Nevertheless, they are useful as self-help instruments because they provide specific information to people about their leadership skills.

In this chapter, we present a comprehensive skills model that is based on many empirical studies of leaders' skills. Although the questionnaires used in these studies are highly reliable and are valid instruments, they are not suitable for our more pragmatic discussion of leadership in this

text. In essence, they are too complex and involved. For example, Mumford, Zaccaro, Harding, et al. (2000) used measures that included open-ended responses and very sophisticated scoring procedures. Though critically important for validating the model, these complicated measures are less valuable as self-instruction questionnaires.

A skills inventory is provided in the next section to assist you in understanding how leadership skills are measured and what your own skills might be. Your scores on the inventory will give you a sense of your own leadership competencies. You may be strong in all three skills, or you may be stronger in some skills than in others. The questionnaire will give you a sense of your own skills profile. If you are stronger in one skill and weaker in another, this may help you determine where you want to improve in the future.

Skills Inventory

Instructions: Read each item carefully and decide whether the item describes you as a person. Indicate your response to each item by circling one of the five numbers to the right of each item.

Key: 1 = Not   2 = Seldom   3 = Occasionally   4 = Somewhat   5 = Very
         true   true   true   true   true

1. I enjoy getting into the details of how things work.	1	2	3	4	5
2. As a rule, adapting ideas to people's needs is easy for me.	1	2	3	4	5
3. I enjoy working with abstract ideas.	1	2	3	4	5
4. Technical things fascinate me.	1	2	3	4	5
5. Being able to understand others is the most important part of my work.	1	2	3	4	5
6. Seeing the big picture comes easy for me.	1	2	3	4	5
7. One of my skills is being good at making things work.	1	2	3	4	5
8. My main concern is to have a supportive communication climate.	1	2	3	4	5
9. I am intrigued by complex organizational problems.	1	2	3	4	5
10. Following directions and filling out forms comes easily for me.	1	2	3	4	5
11. Understanding the social fabric of the organization is important to me.	1	2	3	4	5
12. I would enjoy working out strategies for my organization's growth.	1	2	3	4	5
13. I am good at completing the things I've been assigned to do.	1	2	3	4	5
14. Getting all parties to work together is a challenge I enjoy.	1	2	3	4	5
15. Creating a mission statement is rewarding work.	1	2	3	4	5
16. I understand how to do the basic things required of me.	1	2	3	4	5
17. I am concerned with how my decisions affect the lives of others.	1	2	3	4	5
18. Thinking about organizational values and philosophy appeals to me.	1	2	3	4	5

Scoring

The skills inventory is designed to measure three broad types of leadership skills: technical, human, and conceptual. Score the questionnaire by doing the following. First, sum the responses on items 1, 4, 7, 10, 13, and 16. This is your technical skill score. Second, sum the responses on items 2, 5, 8, 11, 14, and 17. This is your human skill score. Third, sum the responses on items 3, 6, 9, 12, 15, and 18. This is your conceptual skill score.

Total scores: Technical skill _____ Human skill _____ Conceptual skill _____

Scoring Interpretation

23–30 High Range

14–22 Moderate Range

6–13 Low Range

The scores you received on the skills inventory provide information about your leadership skills in three areas. By comparing the differences between your scores, you can determine where you have leadership strengths and where you have leadership weaknesses. Your scores also point toward the level of management for which you might be most suited.

SUMMARY ─────────────────────────────────────

The skills approach is a leader-centered perspective that emphasizes the competencies of leaders. It is best represented in the early work of Katz (1955) on the *three-skill approach* and the more recent work of Mumford and his colleagues (Mumford, Zaccaro, Harding, et al., 2000), who initiated the development of a comprehensive *skills model of leadership.*

In the three-skill approach, effective leadership depends on three basic personal skills: technical, human, and conceptual. Although all three skills are important for leaders, the importance of each skill varies between management levels. At lower management levels, technical and human skills are most important. For middle managers, the three different skills are equally important. At upper management levels, conceptual and human skills are most important, and technical skills become less important. Leaders are more effective when their skills match their management level.

In the 1990s, the skills model was developed to explain the capabilities (knowledge and skills) that make effective leadership possible. Far more complex than Katz's paradigm, this model delineated five components of effective leader performance: competencies, individual attributes, leadership outcomes, career experiences, and environmental influences. The leader competencies at the heart of the model are problem-solving skills, social judgment skills, and knowledge. These competencies are directly affected by the leader's individual attributes, which include the leader's general cognitive ability, crystallized cognitive ability, motivation, and personality. The leader's competencies are also affected by his or her career experiences and the environment. The model postulates that effective problem solving and performance can be explained by the leader's basic competencies and that these competencies are in turn affected by the leader's attributes, experience, and environment.

There are several strengths in conceptualizing leadership from a skills perspective. First, it is a leader-centered model that stresses the importance of the leader's abilities, and it places learned skills at the center of effective leadership performance. Second, the skills approach describes leadership in such a way that it makes it available to everyone. Skills are competencies that we all can learn to develop and improve. Third, the skills approach provides a sophisticated map that explains how effective leadership performance can be achieved. Based on the

model, researchers can develop complex plans for studying the leadership process. Last, this approach provides a structure for leadership education and development programs that include creative problem solving, conflict resolution, listening, and teamwork.

In addition to the positive features, there are also some negative aspects to the skills approach. First, the breadth of the model seems to extend beyond the boundaries of leadership, including, for example, conflict management, critical thinking, motivation theory, and personality theory. Second, the skills model is weak in predictive value. It does not explain how a person's competencies lead to effective leadership performance.

Third, the skills model claims not to be a trait approach; nevertheless, individual traits such as cognitive abilities, motivation, and personality play a large role in the model. Finally, the skills model is weak in general application because it was constructed using data only from military personnel. Until the model has been tested with other populations, such as small and large organizations and businesses, its basic tenets must still be questioned.

Visit the Student Study Site at **www.sagepub.com/northouse6e** for web quizzes, leadership questionnaires, and media links represented by the icons.

REFERENCES

Bass, B. M. (1990). *Bass & Stogdill's handbook of leadership: Theory, research, and managerial application* (3rd ed.). New York: Free Press.

Connelly, M. S., Gilbert, J. A., Zaccaro, S. J., Threlfall, K. V., Marks, M. A., & Mumford, M. D. (2000). Exploring the relationship of leadership skills and knowledge to leader performance. *Leadership Quarterly, 11*(1), 65–86.

Katz, R. L. (1955). Skills of an effective administrator. *Harvard Business Review, 33*(1), 33–42.

Mumford, M. D., & Connelly, M. S. (1991). Leaders as creators: Leader performance and problem solving in ill-defined domains. *Leadership Quarterly, 2,* 289–315.

Mumford, M. D., Zaccaro, S. J., Connelly, M. S., & Marks, M. A. (2000). Leadership skills: Conclusions and future directions. *Leadership Quarterly, 11*(1), 155–170.