3.1 Description

Like the trait approach discussed in **Chapter 2** (http://content.thuzelearning.com/books/Northouse.2016.18.1/sections/navpoint-15#s9781506362359.i979), 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, 2008, 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 skills-based model of organizational leadership.

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 Skills

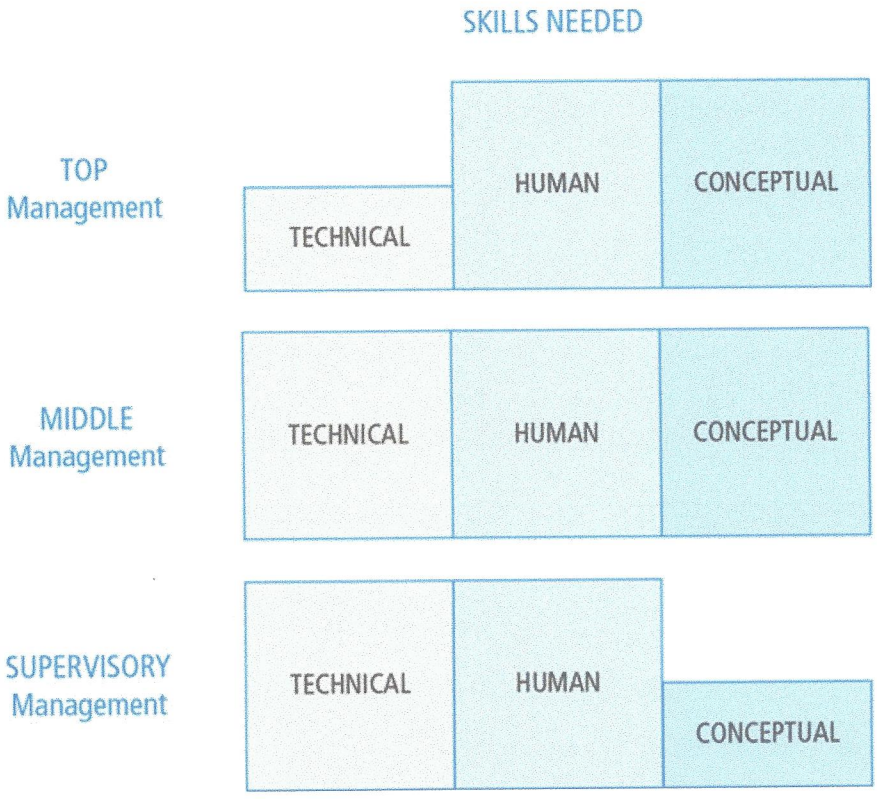
Technical skills are knowledge about and proficiency in a specific type of work or activity. They include competencies in a specialized area, analytical ability, and the ability to use appropriate tools and techniques (Katz, 1955). For example, in a computer software company, technical skills might include 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 skills 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 (http://content.thuzelearning.com/books/Northouse.2016.18.1/sections/navpoint-23#s9781506362359.i1092)** , technical skills are most important at lower and middle levels of management and less important in upper management. For leaders at the highest level, such as CEOs, presidents, and senior officers, technical competencies are not as essential. Individuals at the top level depend on skilled followers to handle technical issues of the physical operation.

Human Skills

Human skills are knowledge about and ability to work with *people.* They are quite different from technical skills, which have 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 followers, peers, and superiors 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 skills are the capacity to get along with others as you go about your work.

Figure 3.1 Management Skills Necessary at Various Levels of an Organization



Source: Adapted from "Skills of an Effective Administrator," by R. L. Katz, 1955, Harvard Business Review, 33(1), pp. 33–42.

Figure 3.1 (http://content.thuzelearning.com/books/Northouse.2016.18.1/sections/navpoint-23#s9781506362359.i1092) shows that human skills are important in all three levels of management. Although managers at lower levels may communicate with a far greater number of employees, human skills are equally important at middle and upper levels.

Conceptual Skills

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 skills 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 skills have 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.

As shown in **Figure 3.1** (http://content.thuzelearning.com/books/Northouse.2016.18.1/sections/navpoint-23#s9781506362359.i1092), conceptual skills are 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.

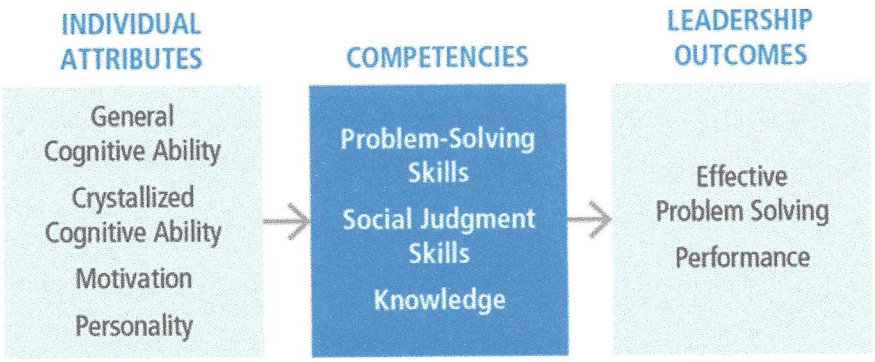
Katz's work in the mid-1950s set the stage for conceptualizing leadership in terms of skills, but it was not until the mid-1990s that an empirically based skills approach received recognition in leadership research. In the **next section** (http://content.thuzelearning.com/books/Northouse.2016.18.1/sections/navpoint-23#s9781506362359.i1099), 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.

Figure 3.2 Three Components of the Skills Model



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, The Leadership Quarterly, 11(1), p. 23. Copyright 2000 by Elsevier. Adapted with permission.

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 **Chapter 2 (http://content.thuzelearning.com/books/Northouse.2016.18.1/sections/navpoint-15#s9781506362359.i979)** of this text), 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).

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 (http://content.thuzelearning.com/books/Northouse.2016.18.1/sections/navpoint-23#s9781506362359.i1100)**. This portion of the model is essential to understanding the overall skill-based leadership model.

Competencies

As can be observed in the middle box of **Figure 3.2** (http://content.thuzelearning.com/books/Northouse.2016.18.1/sections/navpoint-23#s9781506362359.i1100), 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 (Mumford et al., 2012).

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. Mumford, Todd, Higgs, and McIntosh (2017, p. 28) identified nine key problem-solving skills leaders employ to address problems:

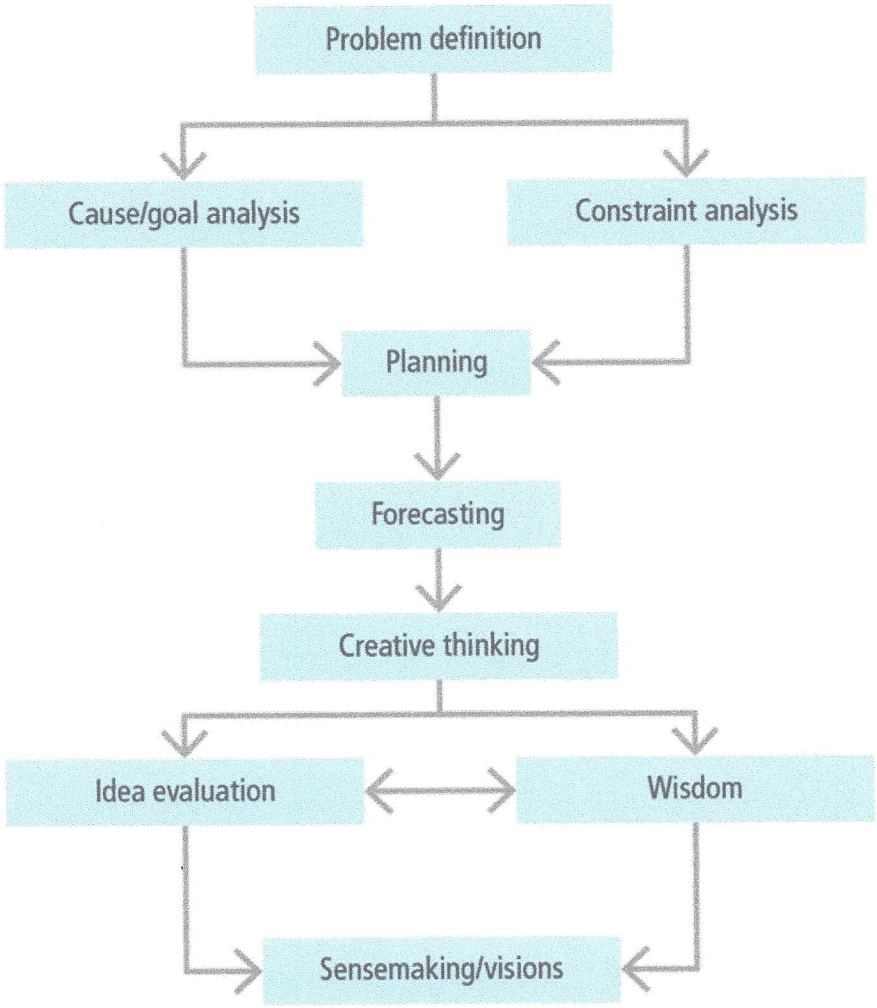
1. *problem definition*, the ability to define noteworthy issues or significant problems affecting the organization;
2. *cause/goal analysis*, the ability to analyze the causes and goals relevant to addressing problems;
3. *constraint analysis*, the ability to identify the constraints, or limiting factors, influencing any problem solution;
4. *planning*, the ability to formulate plans, mental simulations, and actions arising from cause/goal and constraint analysis;
5. *forecasting*, the ability to anticipate the implications of executing the plans;
6. *creative thinking*, the ability to develop alternative approaches and new ideas for addressing potential pitfalls of a plan identified in forecasting;
7. *idea evaluation*, the ability to evaluate these alternative approaches' viability in executing the plan;
8. *wisdom*, the ability to evaluate the appropriateness of these alternative approaches within the context, or setting, in which the leader acts; and
9. *sensemaking/visioning*, the ability to articulate a vision that will help followers understand, make sense of, and act on the problem.

Figure 3.3 (http://content.thuzelearning.com/books/Northouse.2016.18.1/sections/navpoint-23#s9781506362359.i1109) shows the relationship between these different skills as a developing process, where employment of one skill can lead to the next.

To clarify how these problem-solving skills work in conjunction with one another, 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 demonstrate problem-solving skills in the following ways. First, you identify the full ramifications for employees of changing their health insurance coverage (problem definition; forecasting). What is the impact going to be (cause/goal analysis)? Second, you gather information about how benefits can be scaled back (constraint analysis). What other companies have attempted a similar change, and what were their results (forecasting)? Third, you find a way to teach and inform the employees about the needed change (planning; creative thinking). How can you frame the change in such a way that it is clearly understood (planning; creative thinking; wisdom)? Fourth, you create possible scenarios for how the changes will be instituted (forecasting; idea

evaluation). How will the plan be described? Fifth, you look closely at the solution itself (idea evaluation). How will implementing this change affect the company's mission and your own career (sensemaking; vision)? Last, are there issues in the organization (e.g., union rules) that may affect the implementation of these changes (constraint analysis; forecasting)?

Figure 3.3 Hypothetical Relationships



Source: Reprinted from "Cognitive Skills and Leadership Performance: The Nine Critical Skills," by M. D. Mumford, E. M. Todd, C. Higgs, and T. McIntosh, The Leadership Quarterly, 28(1), p. 28. Copyright 2017 by Elsevier. Reprinted with permission.

Problem-solving skills also 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).

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).

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 requires social judgment skills (**Figure 3.2 (http://content.thuzelearning.com/books/Northouse.2016.18.1/sections/navpoint-23#s9781506362359.i1100)**). 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 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 (Gasiorek & Ebesu Hubbard, 2017). 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 followers will respond to any proposed change in the organization. In a sense, you could say it allows the leader to know the pulse of followers on any issue at any time.

In addition to understanding others accurately, social judgment skills 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 followers' 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 followers, 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.

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 (**Figure 3.2** (http://content.thuzelearning.com/books/Northouse.2016.18.1/sections/navpoint-23#s9781506362359.i1100)), 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 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 (**Figure 3.2** (http://content.thuzelearning.com/books/Northouse.2016.18.1/sections/navpoint-23#s9781506362359.i1100)).

Individual Attributes

Returning to **Figure 3.2** (http://content.thuzelearning.com/books/Northouse.2016.18.1/sections/navpoint-23#s9781506362359.i1100) , 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 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 (Rose & Gordon, 2015).

Motivation.

Motivation is listed as the third attribute in the model. While Kerns (2015) identified three categories of motivations (self-interest, career considerations, and higher purposes) that propel leaders, the skills model takes a different approach, instead suggesting there are three aspects of motivation—*willingness, dominance*, and *social good*—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 must want to lead. Second, leaders must be willing to express *dominance*—to exert their influence, as we discussed in **Chapter 2 (http://content.thuzelearning.com/books/Northouse.2016.18.1/sections/navpoint-15#s9781506362359.i979)**. 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. *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 problems. 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** (http://content.thuzelearning.com/books/Northouse.2016.18.1/sections/navpoint-23#s9781506362359.i1100), 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.

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 (**Figure 3.2** (http://content.thuzelearning.com/books/Northouse.2016.18.1/sections/navpoint-23#s9781506362359.i1100)), 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 followers 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 3.4** (http://content.thuzelearning.com/books/Northouse.2016.18.1/sections/navpoint-23#s9781506362359.i1135). It contains two other components, not depicted in **Figure 3.2** (http://content.thuzelearning.com/books/Northouse.2016.18.1/sections/navpoint-23#s9781506362359.i1100), that contribute to overall leadership performance: career experiences and environmental influences.

Career Experiences

As you can see in **Figure 3.4** (http://content.thuzelearning.com/books/Northouse.2016.18.1/sections/navpoint-23#s9781506362359.i1135), 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 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.

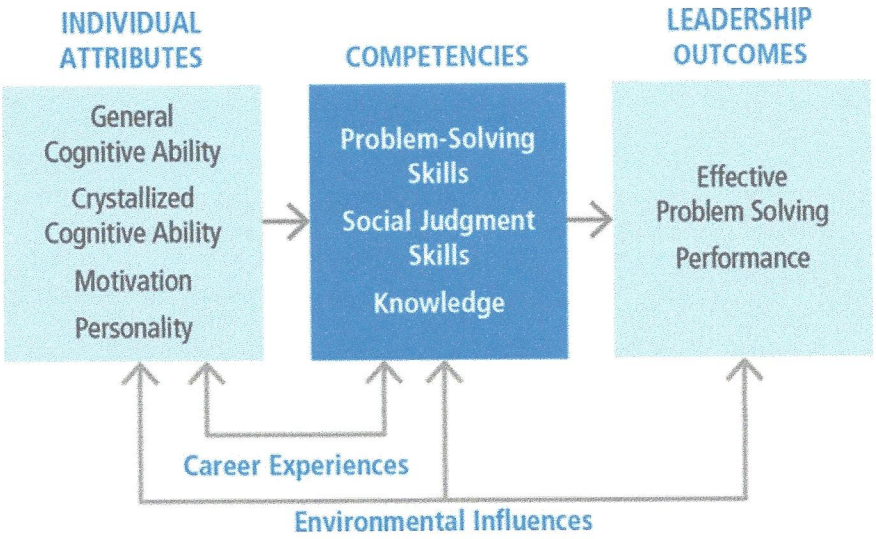
Environmental Influences

The final component of the skills model is environmental influences, which is illustrated at the bottom of **Figure 3.4 (http://content.thuzelearning.com/books/Northouse.2016.18.1/sections/navpoint-23#s9781506362359.i1135)** . 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 followers: If a leader's followers 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, which 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.

Figure 3.4 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, The Leadership Quarterly, 11(1), p. 23. Copyright 2000 by Elsevier. Adapted with permission.

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.

3.2 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.

3.3 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 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.

3.4 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.