WICS: A Model of Educational Leadership

by Robert J. Sternberg

What are the ingredients of successful educational leadership? One possible answer is the WICS model. According to this paradigm, to be a highly effective leader, an individual must possess three key attributes: **W**isdom, **I**ntelligence, and **C**reativity—working in harmony or **S**ynthesized. (Sternberg 2003; Sternberg and Vroom 2002). The skills necessary for successful leadership are not innate, but may be developed. Wisdom, intelligence, and creativity, with intelligence at the base, to some extent, are forms of developing expertise (Sternberg 1998; 1999a).

INTELLIGENCE

Intelligence, as conceived of here, is not just intelligence in its conventional narrow sense—some kind of scientific factor (Jensen 1998; Spearman 1927) or as IQ (Wechsler 1939). If the conventional intelligence of a leader is significantly higher than that of the people he or she leads, the leader may not connect with those people and, therefore, become ineffective (Williams and Sternberg 1988). Accordingly, intelligence should be evaluated in terms of the theory of successful intelligence (Sternberg 1999c; 2002c). Successful intelligence is the ability to succeed in life, given one's own conception of success, within one's sociocultural environment. Two aspects of this theory are particularly relevant: academic intelligence and practical intelligence (Neisser 1979). A third aspect of the theory of successful intelligence—creative intelligence—is discussed in the section on creativity. These abilities are important for leaders because they need to be able to retrieve information relevant to their decisions (memory abilities) and analyze and evaluate different courses of action, whether proposed by themselves or others (analytical abilities).

Academic Intelligence

Academic intelligence refers to the coalescence of memory and analytical abilities to constitute the conventional notion of intelligence—the abilities needed to recall and recognize, and analyze, evaluate, and judge information. These abilities are typically measured by quintessential standardized tests. Research on the relationship between these abilities and leadership, which goes back as far as Stogdill (1948), produces ambiguous results. Though a modest correlation seems to exist between these abilities and leadership effectiveness (Stogdill 1948), the correlation is affected by the leader's stress and other factors (Fiedler 2002; Fiedler and Link 1994). Intelligence seems to have a positive correlation with leadership effectiveness during low stress conditions, but a negative correlation when stress is high.

Practical Intelligence

Past literature has focused on *academic* intelligence (IQ) in relation to leadership.

Some recent theorists have emphasized other aspects of intelligence, such as emotional intelligence (Caruso, Mayer, and Salovey 2002; Goleman 1998) or multiple intelligences (Gardner 1995). Here, the emphasis is on practical intelligence, which has a somewhat different focus than emotional intelligence. Practical intelligence is part of successful intelligence and a core component of leadership.

Practical intelligence is the ability to solve everyday problems by utilizing knowledge gained from experience to purposefully change oneself to suit the environment (adaptation), change the environment to suit oneself (shaping), or find a new environment in which to work (selection). A leader uses these skills to manage oneself, manage others, and manage tasks.

Effectiveness in "transactional leadership" (Avolio, Bass, and Jung 1999; Bass 1998; Bass 2002) is derived, in large part, from the adaptive function of practical intelligence. Transactional leaders are generally adapters, working with their followers toward the mutual fulfillment of essential contractual obligations. These leaders typically specify role and task requirements and provide rewards based on desired performance. They also may manage by exception, monitoring standards and intervening when standards are not met.

Different combinations of intellectual skills engender different types of leadership. Leaders vary in their memory skills, analytical skills, and practical skills. A leader particularly strong in memory skills, but not other types of skills, may have vast amounts of knowledge at his or her disposal, but be unable to use this wisdom effectively. A leader particularly strong in analytical skills as well as memory skills may be able to retrieve information and analyze it effectively, but may lack practical skills needed to convince others that his or her analysis is correct. A leader strong in memory, analytical, and practical skills is most likely to be effective in influencing others. A leader strong in practical skills, but not memory and analytical skills—in conventional terms, "shrewd," but not "smart"—may be effective in getting others to go along, but may end up leading them astray.

Robert J. Sternberg *is IBM Professor of Psychology and Education in the Department of Psychology at Yale University and Director of the Yale PACE Center. He also is the 2003 President of the American Psychological Association (APA), as well as Editor of* The APA Review of Books: Contemporary Psychology.

Tacit Knowledge

Much of the knowledge associated with successful problem solving can be characterized as tacit—not openly expressed or stated. Individuals typically acquire this type of knowledge through their own experiences, though it can be acquired through formal training. Individuals draw on this broad base of knowledge in solving practical problems. Research on expert knowledge is consistent with this concept; experts draw on a well-developed repertoire of knowledge in responding to problems in their respective domains (Scribner 1986). That knowledge tends to be procedural in nature and to operate outside of focal awareness (Chi, Glaser, and Farr 1988), as well as to reflect the structure of the situation more closely than it does the structure of formal, disciplinary knowledge (Groen and Patel 1988).

The term "tacit knowledge" has roots in works on the philosophy of science (Polanyi 1966), ecological psychology (Neisser 1976), and organizational behavior (Schön 1983), and has been used to characterize knowledge that has an implicit, unarticulated quality and that has been acquired from everyday experiences. This knowledge is necessary to succeed in a job, but is not explicitly taught. The role of tacit knowledge in everyday problem

solving is often reflected in the common language of the workplace as people attribute successful performance to "learning by doing," "professional intuition," or "instinct."

Tacit knowledge is an aspect of practical intelligence that enables individuals to adapt to, select, and shape real-world environments (Sternberg and Horvath 1999; Sternberg, Forsythe, Hedlund, Horvath, Snook, Williams, Wagner, and Grigorenko 2000; Wagner and Sternberg 1985). It is knowledge learned from experience and applied in the pursuit of personally valued goals. Research by Sternberg and his colleagues (Sternberg, Wagner, and Okagaki 1993; Sternberg, Wagner, Williams, and Horvath 1995) showed that tacit knowledge has relevance in understanding successful performance in a variety of domains and tends to:

- increase with experience—though what matters is not necessarily the amount of experience but rather how well one takes advantage of it;
- correlate only modestly, if at all, with traditional measures of intelligence and personality;
- predict job performance as well as or better than conventional tests of intelligence; and
- predict job performance incrementally over conventional tests—that is, provide significant prediction beyond what can be obtained from such tests.

CREATIVITY

Creativity refers to skill in generating ideas and products that are relatively novel, high in quality, and appropriate to the task at hand. Because creativity generates ideas that others will follow, it is an important component for leadership. A leader who is practically intelligent may get people to go along with ideas, but those ideas may be inferior or stale. Many leaders who are intelligent academically and even practically—but are uncreative—essentially lead people by their ability to influence rather than their agenda.

A confluence model of creativity (Sternberg and Lubart 1996) suggests that creative leaders show a variety of characteristics. These characteristics represent not innate abilities, but, largely, a decision to be creative (Sternberg 2000). These leaders exhibit a creative attitude toward life, and among their attributes, they often:

- are willing to defy the crowd;
- are courageous and stand up for their convictions;
- redefine problems;
- recognize how knowledge can both help and hinder creative thinking (Frensch and Sternberg 1989; Sternberg 1985);
- take sensible risks;
- surmount obstacles;
- believe in their ability to accomplish the task at hand (self-efficacy) (Bandura 1997);
- tolerate ambiguity;
- find extrinsic rewards for things they are intrinsically motivated to do; and
- continue to grow intellectually rather than stagnate.

The creative leadership one exercises can be of different kinds (Sternberg 1999b, Sternberg 2002a; Sternberg, Kaufman, and Pretz 2002), as described in the following paragraphs.

Replications. Leaders who are replicators basically work from someone else's script. They recycle existing ideas, largely in their original form, and adapt them to new situations. They imitate someone or otherwise do what has been done in the past. A university administrator, for example, might simply decide to continue the policies of his or her predecessor with as little modification as possible.

Redefinitions. This type of leader uses existing ideas in a new form or way. Redefiners typically accept the status quo, but may give it a new name or description. They also may view existing ideas differently than others.

Redefiners are sometimes described as people who present old wine in new bottles, because their ideas are repackaging of already existing concepts. A university administrator, for example, might give a new name to an existing program, or continue the program for reasons different from those for which the program was initiated.

Forward incrementations. This type of leadership involves moving things the next step in the direction in which things have been moving. Leaders who use forward incrementations adhere to old patterns, but do not necessarily replicate them. A university administrator, for example, might lead people toward the next step in the reform policies set by a predecessor.

Advance forward incrementations. This involves moving things forward in the current direction, but also advancing several steps forward—often beyond where others are ready to follow. Leaders who use advance forward incrementations try moving so far, very fast, so quickly that they sometimes lose their followers in the process. For example, a university administrator might decide to increase drastically research productivity expectations from faculty members who are inadequately trained or constrained by time.

Redirections. Redirectors are unhappy with where things are going, so they attempt to steer followers in another direction. A university administrator, for example, might decide at any given point to eliminate a competitive intramural athletics program, or to begin weighing teaching experience more seriously in tenure consideration where only research mattered previously.

Regressive redirection. This involves changing the direction in which things are going, but beginning at a point that most people had long ago abandoned. Regressive redirectors argue that a past system of management or government was superior to the present one, and lead on the basis of that earlier system. A college administrator might decide, for example, that the more traditional curriculum formerly offered by his or her college is superior to the modern offerings, and revert to former educational programs.

Practical intelligence is part of successful intelligence and a core component of leadership.

Reinitiation. A leader who reinitiates starts from a point beyond where things are presently, and moves forward in a different direction. Reinitiators do not accept the current direction, nor the current starting point or basic assumptions. Such leaders accept practically nothing from the past and tend to shake things up as they move in a direction they alone have set. A university administrator might decide, for example, to try to privatize a public institution.

Syntheses. Synthesizers put together ideas from different paradigms or ways of thinking that previously have not been integrated. These leaders see value in integrating multiple existing procedures or techniques of other leaders to generate new approaches. A university administrator might decide for instance, to combine aspects of traditional and modern curricula rather than emphasize one or the other.

While some leaders transform an organization through their creative contributions, others do not. Though transformation is not necessary in every leadership situation, leaders who are long remembered, in most cases, are those who transformed organizations or ways of thinking.

A transformational leader always will be creative to some degree, but may or may not be particularly wise. Transformational leaders who are low or lacking in wisdom are not in any sense "pseudo-transformational" as opposed to "authentically transformational." They genuinely may effect transformations, but not wise ones. For example, some African leaders in the latter half of the 20th century adopted Marxist-Leninist ideas that, poorly implemented, drove economically marginal countries into profound impoverishment. These leaders authentically transformed their countries, but for the worse, as have many unwise corporate leaders in the United States. Wise transformational leaders are rare. Nelson Mandela, one such uncommon leader, implemented a largely successful policy of forgiveness and reconciliation that is practically unique among modern heads of state.

Wise leaders do not look out just for their own interests, nor do they ignore those interests.

Research on creativity (Lubart and Sternberg 1995) has yielded several conclusions. First, creativity often involves defying the crowd. Creative leaders are good investors, buying low and selling high in the world of ideas. Second, creativity is relatively domain specific. Third, creativity is weakly related to academic intelligence, but is not the same thing. In general, there appears to be a threshold of IQ for creativity, but it is probably about 120 or even lower (Sternberg and O'Hara 2000).

WISDOM

A leader can have intelligence and creativity and still lack arguably the most important, but perhaps the rarest, leadership quality—wisdom. According to a proposed balance theory of wisdom (Sternberg 1998; 2000), an individual is wise to the extent he or she uses successful intelligence and experience, moderated by values, to (a) seek to reach a common good; (b) balance intrapersonal (one's own), interpersonal (others'), and extrapersonal (organizational/institutional/spiritual) interests over the short and long term; and (c) adapt to, shape, and select environments.

Wise leaders do not look out just for their own interests, nor do they ignore those interests. Rather, they skillfully balance interests of varying kinds, including their own, those of their followers, and those of the organization for which they are responsible. They also recognize the need to align the interests of their group or organization with those of other groups or organizations because no group operates within a vacuum. Further, wise leaders realize that what may appear to be a prudent course of action over the short term does not necessarily appear so over the long term.

Less successful leaders often have ignored another set of interests. For example, Richard Nixon and Bill Clinton, in their respective cover-ups, not only failed to fulfill the interests of their country, but also failed to fulfill their own interests. Their cover-ups bogged down their administrations in scandals and stood in the way of positive accomplishments. Freud was a leader in the fields of psychiatry and psychology, but lost the support of his disciples by insisting they conform to his own system of psychoanalysis. Motivated more by hubris than by France's need to have Russia in its empire, Napoleon's invasion of Russia partially destroyed his reputation as a successful military leader and paved the way for his later downfall.

Indeed, relatively few leaders at any level are particularly wise. Yet, the few leaders who are notably so—Nelson Mandela, Martin Luther King, Jr., Mahatma Gandhi, and Winston Churchill—left an indelible mark on the people they led and on history. It is important to note that wise leaders usually are charismatic, but charismatic leaders are not necessarily wise as demonstrated by Hitler, Stalin, and certain other charismatic leaders.

Unsuccessful leaders often display stereotypical fallacies in their thinking; five such flaws (Sternberg 2002b) should be considered. The first, unrealistic-optimism fallacy, occurs when leaders think they are so smart and effective that they can do whatever they please. The second, "egocentrism fallacy," describes successful leaders who think that only they matter, not the people who rely on them. The third, "omniscience fallacy," occurs when leaders think they know everything, and lose sight of their own limitations. The fourth, "omnipotence fallacy," portrays leaders who think they are all-powerful and can do whatever they want. And the fifth, "invulnerability fallacy," happens when leaders think they can get away with anything, consider themselves too clever to be caught, and even if caught, figure they can get away with it because of who they imagine themselves to be.

A leader can have intelligence and creativity and still have arguably the most important but perhaps the rarest leadership quality—wisdom.

SYNTHESIS

The elements of the WICS model work together. A successful leader, according to the model, needs creativity to generate good ideas, academic intelligence to ascertain whether those ideas are good, practical intelligence to know how to persuade other people, and wisdom to make the ideas work for everyone's benefit. If even one of these ingredients is lacking, the leader diminishes his or her favorable position to lead effectively. Leaders who do not have high levels of all these skills need to capitalize on their strengths and find ways to compensate for their weaknesses, usually through the assistance of able advisors.

FINAL THOUGHTS

No model of leadership fully captures all the many facets—both internal and external to the individual—that make for a successful leader. The WICS model may come close, however, in capturing important dimensions.

The WICS model, which is related to many other models, incorporates elements of transformational as well as transactional leadership (Bass 1998; Bass and Avolio 1994), emotionally intelligent leadership (Goleman 1998), visionary leadership (Sashkin 1988), and charismatic leadership (Conger and Kanungo 1998; Weber 1968). Eventually a model of leadership will emerge that integrates all the strengths of these various models. In the meantime, the WICS model seems like a starting place.

The preparation of this article was supported by Contract MDA 903-92-K-0125 from the U.S. Army Research Institute. Correspondence about the article should be sent to Robert J. Sternberg, PACE Center, Yale University, Box 208358, New Haven, Conn. 06520-8358. All work done at the PACE Center represents the cumulative input of many people over a period of many years. I am grateful to all my colleagues for their collaborations.

REFERENCES

Avolio, B. J., B. M. Bass, and D. I. Jung. 1999. Reexamining the components of transformational and transactional leadership using the Multifactor Leadership Questionnaire. *Journal of Occupational and Organizational Psychology* 72(4): 441–62.

Bandura, A. 1997. *Self-efficacy: The exercise of control.* New York: W. H. Freeman Company.

Bass, B. M. 1998. *Transformational leadership: Industrial, military, and educational impact*. Mahwah, N.J.: Lawrence Erlbaum Associates.

Bass, B. M. 2002. Cognitive, social, and emotional intelligence of transformational leaders. In *Multiple intelligences and leadership*, ed. R. E. Riggio, S. E. Murphy, and F. J. Pirozzolo, 105–18. Mahwah, N.J.: Lawrence Erlbaum Associates.

Bass, B. M., and B. J. Avolio, eds. 1994. *Improving organizational effectiveness through transformational leadership.* Thousand Oaks, Calif.: Sage Publications.

Caruso, D. R., J. D. Mayer, and P. Salovey. 2002. Emotional intelligence and emotional leadership. In *Multiple intelligences and leadership*, ed. R. E. Riggio, S. E. Murphy, and F. J. Pirozzolo, 55–74. Mahwah, N.J.: Lawrence Erlbaum Associates.

Chi, M. T. H., R. Glaser, and M. J. Farr. ed. 1988. *The nature of expertise*. Hillsdale, N. J.: Lawrence Erlbaum Associates.

Conger, J. A., and R. N. Kanungo. 1998. *Charismatic leadership in organizations.* Thousand Oaks, Calif.: Sage Publications.

Fiedler, F. E. 2002. The curious role of cognitive resources in leadership. In *Multiple intelligences and leadership*, ed. R. E. Riggio, S. E. Murphy, and F. J. Pirozzolo, 91–104. Mahwah, N.J.: Lawrence Erlbaum Associates.

Fiedler**,** F. E., and T. G. Link. 1994. Leader intelligence, interpersonal stress, and task performance. In *Mind in context: Interactionist perspectives on human intelligence*, ed. R. J. Sternberg and R. K. Wagner, 152–67. New York: Cambridge University Press.

Frensch, P. A., and R. J. Sternberg. 1989. Expertise and intelligent thinking: When is it worse to know better? In *Advances in the psychology of human intelligence*, vol. 5, ed. R. J. Sternberg, 157–88, Hillsdale, N.J.: Erlbaum.

Gardner, H., and E. Laskin. 1995. *Leading minds.* New York: Basic Books.

Goleman, D. 1998. What makes a good leader? *Harvard Business Review* 76(6): 92–102.

Groen, G. J., and V. L. Patel. 1988. The relationship between comprehension and reasoning in medical expertise. In *The nature of expertise*, ed. M. T. H. Chi, R. Glaser, and M. J. Farr, 287–310. Hillsdale, N. J.: Lawrence Erlbaum Associates.

Jensen, A. R. 1998. *The g factor: The science of mental ability*. Westport, Conn.: Greenwood / Praeger.

Lubart, T. I., and R. J. Sternberg. 1995. An investment approach to creativity: Theory and data. In *The creative cognition approach*, ed. S. M. Smith, B. Ward, and R. A. Finke, 269–302. Cambridge, Mass.: MIT Press.

Neisser, U. 1976. General, academic, and artificial intelligence. In *The Nature of intelligence*, ed. L. Resnick, 135–44. Hillsdale, N.J.: Lawrence Erlbaum Associates.

Neisser, U. 1979. The concept of intelligence. In *Human intelligence: Perspectives on its theory and measurement*, ed. R. J. Sternberg and D. K. Detterman, 179–89. Norwood, N.J.: Ablex Publishing.

Polanyi, M. 1966. *Tacit dimensions.* Garden City, N.Y.: Doubleday.

Sashkin, M. 1988. The visionary leader. In *Charismatic leadership: The elusive factor in organizational effectiveness*, ed. J. A. Conger and R. N. Kanungo, 122–60. San Francisco: Jossey Bass.

Schön, D. A. 1983. *The reflective practitioner*. New York: Basic Books.

Scribner, S. 1986. Thinking in action: Some characteristics of practical thought. In *Practical intelligence: Nature and origins of competence in the everyday world*, ed. R. J. Sternberg and R. K. Wagner, 13–30. New York: Cambridge University Press.

Spearman, C. 1927. *The abilities of man*. London: Macmillan.

Sternberg, R. J. 1985. *Beyond IQ: Toward a triarchic theory of intelligence.* New York: Cambridge University Press.

Sternberg, R. J. 1998. A balance theory of wisdom. *Review of General Psychology* 2(4): 347–65.

Sternberg, R. J. 1999a. Intelligence as developing expertise. *Contemporary Educational Psychology* 24(4): 359–75.

Sternberg, R. J. 1999b. A propulsion model of types of creative contributions. *Review of General Psychology* 3(2): 83–100.

Sternberg, R. J. 1999c. The theory of successful intelligence. *Review of General Psychology* 3(4): 292–316.

Sternberg, R. J. 2000. Creativity is a decision. In *Teaching for intelligence II: A collection of articles*, ed. B. Z. Presseisen, 83–103. Arlington Heights, Ill.: Skylight Training and Publishing.

Sternberg, R. J. 2002a. Creativity as a decision. *American Psychologist* 57(5): 376.

Sternberg, R. J. 2002b. Successful intelligence: A new approach to leadership. In *Multiple intelligences and leadership*, ed. R. E. Riggio, S. E. Murphy, and F. J. Pirozzolo, 9–28. Mahwah, N.J.: Lawrence Erlbaum Associates.

Sternberg, R. J., ed. 2002c. *Why smart people can be so stupid.* New Haven, Conn.: Yale University Press.

Sternberg, R. J. 2003. *WICS: Wisdom, intelligence, and creativity, synthesized.* New York: Cambridge University Press.

Sternberg, R. J., and J. A. Horvath, ed. 1999. *Tacit knowledge in professional practice*. Mahwah, N.J.: Lawrence Erlbaum Associates.

Sternberg, R. J., and T. I. Lubart. 1996. Investing in creativity. *American Psychologist* 51(7): 677–88.

Sternberg, R. J., and L. A. O'Hara. 2000. Intelligence and creativity. In *Handbook of intelligence*, ed. R. J. Sternberg, 609–28. New York: Cambridge University Press.

Sternberg, R. J., and V. H. Vroom. 2002. The person versus the situation in leadership. *Leadership Quarterly* 13(3): 301–23.

Sternberg, R. J., J. C. Kaufman, and J. E. Pretz. 2002. *The creativity conundrum: A propulsion model of kinds of creative contributions.* Philadelphia, Pa.: Psychology Press.

Sternberg, R. J., R. K. Wagner, and L. Okagaki. 1993. Practical intelligence: The nature and role of tacit knowledge in work and at school. In *Advances in lifespan development*, ed. H. Reese and J. Puckett, 205–27. Hillsdale, N.J.: Lawrence Erlbaum Associates.

Sternberg, R. J., R. K. Wagner, W. M. Williams, and J. A. Horvath. 1995. Testing common sense. *American Psychologist* 50(11): 912–27.

Sternberg, R. J., G. B. Forsythe, J. Hedlund, J. Horvath, S. Snook, W. M. Williams, R. K. Wagner, and E. L. Grigorenko. 2000. *Practical intelligence in everyday life*. New York: Cambridge University Press.

Stogdill, R. M. 1948. Personal factors associated with leadership: A survey of the literature. *Journal of Psychology* 25: 35–71.

Wagner, R. K., and R. J. Sternberg. 1985. Practical intelligence in real-world pursuits: The role of tacit knowledge. *Journal of Personality and Social Psychology* 49(2): 436–58.

Weber, M. 1968. *Max Weber on charisma and institution building*, ed. S. N. Eisenstadt. Chicago: University of Chicago Press.

Wechsler, D. 1939. *The measurement of adult intelligence*. Baltimore: Williams & Wilkins.

Williams, W. M., and R. J. Sternberg. 1988. Group intelligence: Why some groups are better than others. *Intelligence* 12(4): 351–77.