THE SCIENCE OF LEADERSHIP

CAN LEADERSHIP BE LEARNED?

By

Joseph H. Boyett, Ph.D.
Boyett & Associates

Can leadership be learned? That sounds like a simple question with an obvious answer. Of course, leadership can be learned otherwise why would corporations and government agencies invest so much time and money each year in leadership training? Every year thousands undergo leadership development. They sit in classrooms and listen to lectures on effective leadership. They attend meetings, watch leadership videos and participate in discussion groups. Leadership guest speakers are brought in to tell leadership stories. "Star" leadership gurus appear in teleconferences that reach thousands at a time. Managers are assigned a "mentor" to improve their leadership skills. Executives get a leadership "coach." Outdoor leadership camps provide the opportunity for would-be leaders to test their meddle in Navy S.E.A.L.-type "survivor" camps. Managers and executives rappel down cliffs, sail tall ships, raft whitewater rapids, and even reenact Civil War battles, all in an attempt to understand their leadership strengths and weakness and become better leaders.

Finally, there is "action learning." It has become one of the most popular approaches to leadership training. Action learning takes a number of different forms but it generally incorporates the following elements: (1) participants work in teams to solve real-world problems, (2) they must make team decisions concerning actions to take, and (3) they must prepare and deliver formal presentations outlining their decisions.[1] As the name implies, the focus of action learning is on learning-by-doing.[2] A typical action-learning "experience" might proceed as follows:

> [A]fter receiving project assignments and reviewing background materials, action-learning teams travel to the headquarters of their assigned businesses—domestic or foreign—to perform further diagnostic research. They have access to key managers and can review essential financial and marketing information as well as visit the field and customers. As their findings and recommendations progress and materialize into drafts, these drafts are reviewed by outside consultants, who identify gaps in the analyses and assist in mapping out strategies for overcoming internal resistance to the team's recommendations. The conclusion of their efforts results in presentations to a senior group of executives from business units concerned. In follow-up sessions, participants also have opportunities to learn about the successes or problems their recommendations encountered as they were implemented by the businesses. In this way, participants learn first-hand about the implementation challenges facing their ideas and draw important post-project conclusions. Presumably, many of these situations demand and, in turn, develop leadership skills.[3]

THE INEFFECTIVENESS OF TRAINING

Does all of this "leadership training" do any good? No one really knows although there is reason to believe that most leadership training is ineffective. In 1996, Robert House and Ram Aditya summarized the state of management training and development at that time as follows: (emphasis ours)

> That management training and development efforts will result in improved management appears to be taken as an article of faith by many corporations, professional management associations, and consultants. **Yet, despite the immense amount of investment in management training on the part of corporations and government, there is little evidence that such training results in more effective management behavior.**[4]

House and Aditya cite a meta-analysis conducted of 70 studies of management training. The researchers found that most training resulted in only a moderate increase in knowledge and, in some cases, actually had **negative** results. The "trained" executives and managers were actually worse leaders after the training than before.

Speculating about the relative ineffectiveness of leadership training, House and Aditya offered several possibilities. First, they noted, transformational leadership requires certain cognitive, behavioral and motivational styles. However, what happens when a person's dominate style does not match the transformational model? To what extent can we expect adults to be able to readily change such a basic part of themselves? House and Aditya are skeptical. They write:

> …There is reason to believe that many individuals **are not able** to substantially vary their cognitive style or orientation, their dominant motives, or their global behavioral patterns….There is **no available evidence** that shows that individuals can substantially alter autocratic, participative, charismatic, task-oriented, or person-oriented behavior patterns. Yet, this is what is often taught in management training programs. [Consequently] there are undoubtedly limits to the effects that can be expected from management training and development efforts.[5]

In short, it might well be the case that only those managers and executives who are predisposed to engage in transformational leadership because of their cognitive, behavioral and motivational orientations are likely to benefit from the training. In addition, even if we assumed that everyone could benefit from the training regardless of their predispositions; people whose styles were already close to the transformational model would be likely to benefit the most.

Finally, said House and Aditya, there was the issue of how supportive the trained manager's organization was of transformational leadership. There were studies dating back to the 1950s that showed that leadership training could result in increased stress and even turnover among managers when there was a mis-match, as often happened, between the leadership practices taught in the training and what was rewarded on the job. Managers who were taught transformational leadership but found themselves returning to organizations that only rewarded transactional leader behaviors were not very likely to put their new-found knowledge to use. If they did, they would likely find themselves punished so severely that they had to leave the organization.

Perhaps the biggest problem with most leadership training is that there is very little in the way of evaluation of its usefulness. Most training programs do not even measure their effectiveness with anything other than "feel good" attendee surveys that are essentially meaningless. They get good ratings but, as researcher Fred Fiedler has noted, "only a very

ungrateful or jaded manager would say that a week of management training, especially in Hawaii or some other delightful resort, turned out to be unpleasant and a waste of time."[6]

As we said, action learning has become one of the most popular approaches to leadership training. It has a sizable number of proponents who view it as having some distinctive advantages over traditional training. First, they argue, action learning offers at least some guarantee that companies will get a return on their investment in education. Even if the participants do not enhance their leadership skills, at least the company will benefit from the project they worked on. Additionally, action learning is seen as being consistent with evidence from research on adult learning that suggests that adults are more motivated to learn if the educational experience is directly relevant to their daily lives. Action learning projects obviously meet that requirement.

While action learning has its proponents, it also has its detractors. For example, Jay Conger and Ginka Toegel argue that many action learning experiences are seriously flawed when it comes to leadership development. First, they say, for most managers and executives the action learning experience is a single experience and does not lead to related follow-on real-world assignments where the participants apply what they learned. Consequently, there is little opportunity to build upon or reinforce the leadership lessons that are learned.

Second, the connection between the action learning project and leadership in many cases is tenuous at best. Designers of the learning experience too often assume that the leadership lessons will simply emerge as a part of the experience and make no or little effort to make the leadership learning explicit. Conger and Toegel argue for much closer links between the action learning project and leadership lessons. For example they suggest that "…in an action-learning project designed to explore new venture opportunities, there [should] be classroom sessions about entrepreneurial or new venture leadership capabilities, feedback to participants about their own capabilities in this regard, and then project recommendations which identify the specific leadership challenges of the venture and suggested actions."[7]

Finally, most action-learning projects do not provide adequate time for feedback to participants on their leadership behaviors. Too often reflection on group process issues, team dynamics, and leadership experiences comes only at the end of the action-learning experience. Conger and Toegel think it should be ongoing.

> There are several approaches…One is to pair team members up with one another to provide one-on-one feedback. Each participant might be asked to give the other a single behavioral change, say around leadership, that they wish to have made as an outcome of the programme.
>
> Another device is to have participants write observations about each other on Post-it notes and then place them on a wall for all to read. Their observations are shaped by the question posed: "Describe what you think your team member should do more of, less of, or continue as is." Names are not attached to the Post-its, but members choose the one that they feel most applies to them. In turn, participants ask for examples of their behavior and its effects and solicit general feedback. Journals or daily diaries can also be used as sources of reflection and learning. Finally, it is helpful at regular intervals to schedule team meetings where time is devoted solely to providing group process feedback around leadership and team dynamics. Ideally, a facilitator should moderate these sessions to ensure maximum impact.[8]

SOME ENCOURAGING NEWS

Since Fiedler, House, Aditya and others made their gloomy assessments of the status of leadership training, a number of researchers have come forward to offer more encouraging news. These researchers have been able to provide at least some evidence that certain approaches to leadership training produce measurable results. Here are some examples:

Training Bank Managers

At about the same time House and Aditya were writing their article, Canadian researchers Julian Barling, Tow Weber and Kevin Kelloway were reporting significant results from a leadership training program they conducted for a group of branch managers in one of Canada's largest banks.[9] The training involved one day of classroom training followed by four individual coaching sessions.

The 1-day training session began with a lecture/ discussion on transformational leadership and the research supporting its effectiveness. The participants then role-played transformational leadership behaviors and engaged in small group discussions concerning how these behaviors supported the bank's purpose and mission. Immediately following the training, each participant met with one of the instructors to receive individual feedback on his scores on the Multifactor Leadership Questionnaire and to develop a personal action plan for improvement. This was followed with three additional monthly coaching sessions during which each participant discussed his progress in implementing his action plan with a coach/instructor and adjusted his plan as needed.

At the end of five months, Barling, et. al., compared the performance of the participants in the training with that of a control group of branch managers who had not be trained. Managers who received the training and follow-up coaching sessions scored higher than managers who had not received such training on measures of intellectual stimulation, charisma, and individual consideration. In addition, subordinates of the trained managers reported significantly higher organizational commitment at the end of the five months than did subordinates of the managers who had not been trained. Finally, the researchers reported some modest but positive improvement in the financial results of the branches of the trained versus untrained managers on measures such as credit card and personal loan sales.

The Center for Leadership Studies

Bernard Bass and researchers at the Center for Leadership Studies have obtained similar results from leadership training that combines classroom training, goal setting and feedback. In a 1999 article, Bass reported that he and his colleagues had collected data from 200 executives and 500 community leaders who had attended their "Full Range of Leadership Development" training program.[10] (See Exhibit 25-1 for the key features of this training.) Bass says follow-ups with training participants and peers six months and two years after training generally indicated positive results with "modest" improvements in transformational leadership behaviors and a decrease in use of management-by-exception by the executive and community leaders who were trained.

Exhibit 25-1
Full Range of Leadership Development Training
Key Features

- Two workshops—basic and advanced—are offered three months apart.
- The workshops are designed to move from individual focus to organizational focus and to conclude with each participant developing an action plan for his own unit.
- Participants receive individual feedback on how their subordinates rate them on the Multifactor Leadership Questionnaire (MLQ) and how their rating compares to the ratings received by others in the workshop and others inside and outside their organization.
- Participants identify strengths and weaknesses they see in their personal MLQ leadership profile and what they think might have contributed to their scores.
- Working with a coach/facilitator, participants use a "Leadership Planning Guide" to develop an individual plan to improve their leadership style with specific goals and objectives.
- After three months participants return for a second "advanced" workshop, where they report on their successes and failures in implementing their action plans and discuss common experiences and implementation problems with other participants.
- The second workshop concludes with a discussion of the organizational culture required for transformational leadership. Participants develop a two to five year plan for organizational change. Each participant develops a personal view or vision of their and their organization's future and is video taped presenting that vision to the group. Participants retain a copy of their videotape for future reference.

Sources: Bass, B., "Two decades of research and development in transformational leadership," *European Journal of Work and Organizational Psychology,* 1999, Vol. 8, No. 1, p. 15; Avolio, Bruce J. and Bernard M. Bass, "You Can Drag a Horse to Water but You Can't Make It Drink Unless It Is Thirsty," *Journal of Leadership Studies,* 1998, Vol. 4, No. 1, pp. 393-399; and Bass, B.M. and B.J. Avolio, "Training and development of transformational leadership: Looking to 1992 and Beyond," *European Journal of Industrial Training,* 1990, Vol. 14, pp. 21-27.

THE EXPERT PERFORMER RESEARCH

Research like that conducted by Barling, et. al. and Bass offer some hope that effective leadership training programs can be developed. However much remains to be done. Some researchers suggest that we might obtain additional insight about training leaders from research on the development of expert performers.

By expert performers, we mean people who display outstanding capabilities and perform at levels far beyond those obtained by the average person. Research into expert performers has focused on star athletes, champion chess players, extraordinarily "gifted" musicians and artists, genius physicists and writers, prodigies, and idiot savants who display remarkable ability in performing specific tasks but generally have low or limited intelligence.

Most of us assume that extraordinary performers are exceptionally gifted. Their breathtaking accomplishments must stem from inborn talent, a gift from God. How else can we explain the fact that many strive for success in any domain—athletics, art, music, knowledge, etc.—but only a select few reach the highest levels? How can we explain the boy who, according to his parents, started speaking at five months, developed a 50-word vocabulary at six months and could speak five languages and read in three by the age of three.[11] How else do we explain Stravinsky's self-described ability to imitate local singers at the age of two or Arthur Rubenstein's self-reported mastery of the piano before he could speak?

How do we explain the extraordinary achievements of idiot savants such as Nadia? At four, she was slow, clumsy, and hardly spoke to anyone. Much of the time at school she was unresponsive choosing to spend her time staring into space or simply wandering around aimlessly. Yet, Nadia could draw beautiful pictures of horses, birds, and other animals. Not only were the pictures exceptionally beautiful but also researchers reported they displayed "…the use of techniques to represent perspective and proportion, foreshortening and the illusion of movement. [that contrasted sharply] with the schematic, rigid, and stereotyped drawings that are almost universal in children of Nadia's age."[12]

How else but from talent do we explain the amazing musical accomplishments of a five-year-old autistic boy by the name of Stephen. Researchers observed that Stephen was "…largely unresponsive to his physical environment and very severely retarded in language development, with practically no speech. However, when confronted with a piano keyboard he could not only reproduce a heard melody but also transform the piece by transposing it to a different key, incorporating new elements, such as minor thirds which he introduced to replace the major thirds of the original. In other words, he could improvise in ways that conformed to the conventions of musical composition."[13]

How can we explain the fact that children in certain parts of Africa such as parts of Kenya are able to stand and walk much earlier than children in other parts of the world? Why is it that Australian aboriginal children who live in the dessert perform so much better on tasks involving visual memory than do other Australian children? Why do children in certain cultures demonstrate early on extraordinary abilities in swimming, canoeing, land navigation, and water navigation compared to children in other parts of the world?

Are these extraordinary achievements the result of talent or is there another explanation? A vocal and often controversial group of researchers led by K. Anders Ericsson, a professor of psychology at Florida State University, argue that extraordinary individual achievements such as we just describe are essentially the result of one simple thing—deliberate and sustained practice. That is right—practice.

The reports of amazing accomplishments of children at young ages such as the boy who could speak five languages at the tender age of three are usually from parents and recorded by researchers years after they occur. "While the parents of these children portray themselves as "…having made no contribution to their child's abilities, simply looking on in wonder," researchers note that " their professed passivity is often belied by the fact that their descriptions contain detailed information about the child's achievements which could never have been obtained without a substantial investment of time and considerable planning."[14] For example, one researcher investigated the reports of a girl by the name of Heidi, who according to her parents began reading at the age of four. The parents insisted that Heidi had learned to read all on her own with no assistance from them. They even produced elaborate records showing the dates at which Heidi had achieved various levels of reading ability such as, the specific dates she mastered different letters. The researcher was skeptical noting that "it is hard to see how parents who have devoted as much time as these people did to making detailed records of their child's progress could have possibly avoided becoming actively involved in the child's early learning."[15]

In respect to reports of extraordinary early musical accomplishment such as those of Stravinsky and Rubenstein, researchers are skeptical of whether the reports are anywhere near reliable. Even if they are, the researchers suspect more than talent was involved. For example, commenting on the reports of early accomplishments of famous composers and musicians, researchers Michael Howe, University of Exeter; Jane Davidson, University of Sheffield; and John Sloboda, Keele University, England write:

> It is…apparent that from a very early age these children were given special opportunities and considerable encouragement. In many cases, the emergence of skills that were at all remarkable followed rather than preceded a period of sometime during which not only were unusual opportunities provided, but there was firm expectation that the child would do well. An examination of biographical evidence concerning the early lives of prominent composers revealed that there were invariable opportunities for the child to have had supervised practice sessions.[16]

With regard to idiot savants and the mentally handicapped such as Nadia and Stephen who show remarkable talent, researchers speculate that practice may be as important, if not more important, than any special gift. They note that while some innate abilities may be involved, the achievements of these people are equally likely to be the result of "…an obsessional motivation to engage in a particular activity, probably resulting in large amounts of attention to or practice at the relevant skills."[17]

Finally, when it comes to the children who demonstrate special skills early on in such things as swimming, canoeing, land navigation, and so on; researchers suspect that the early accomplishments may have much to do with practice and parenting. Howe, et.al. write:

> …Charles Super…who studied infants in a Kenyan tribe confirmed that they did indeed gain motor capacities such as walking, standing and sitting without support a month or so earlier than children in other continents, but he also discovered that the only skills that these infants acquired earlier than others were ones that their mothers deliberately taught them. When genetically similar infants from the same tribe were brought up in an urban environment where parents did not provide the special training given in traditional villages, the infants displayed no precocity at all at those motor skills at which the traditionally-raised infants excelled.[18]

The Importance of Deliberate Practice

As we have seen, Anders Ericsson and others argue that expert performers become expert performers primarily because of many years of practice. When Ericsson and others refer to "practice," they mean "deliberate practice" which they define as "…effortful activity motivated by the goal of improving performance."

[19] Deliberate practice is not play and is not work. Deliberate practice is not fun and it is not pursued for some short-term external social or financial reward. Deliberate practice is an activity a person engages in for the sole purpose of improving their performance. It requires large amounts of effort and concentration. Typically, the practice sessions are designed by teachers or coaches to ensure that the activities undertaken are of an appropriate level of difficulty for the individual being trained and provide plenty of opportunity for feedback, repetition, and error correction. Think of a person practicing a musical instrument or an athlete in training.

How long does the normal person have to engage in deliberate practice to become an expert? In most cases, it takes ten years. The so-called "10 year rule" was first proposed based upon research on the amount of deliberate practice it took someone to become a chess master. Later the 10-year rule was found to apply to many, if not most, fields of endeavor as Ericsson notes:

> [T]he 10-year rule is remarkably accurate, although there are at least some exceptions. However, even those exceptions, such as Bobby Fischer, who started playing chess very early and attained an international level at age 15, are only about a year shy of the 10-year requirement. Winning international competitions in sports, arts, and science appears to require at least 10 years of preparation and typically substantially longer. In the sciences and some of the arts, such as literature, the necessary preparation overlaps so much with regular education that it is often difficult to determine a precise starting point. However, when the time interval between scientists' and authors' first accepted publication and their most valued publication is measured, it averages more than- 10 years and implies an even longer preparation period … Even for the most successful ("talented") individuals, the major domains of expertise are sufficiently complex that mastery of them requires approximately 10 years of essentially full-time preparation.[20]

Ten years of deliberate practice translates into thousands of hours of grueling effort expended for the sole purpose of mastering a craft or activity. By age twenty the best violinists are estimated to have engaged in deliberate practice for at least 10,000 hours. Expert performers arrange their lives around a commitment to daily practice. For example, expert musicians have been found to engage in deliberate practice approximately four hours per day, seven days a week, and 365 days a year. In fact, there appears to be a 4-hour rule. That is about the amount of time in deliberate practice experts in most fields report spending per day.

How do expert performers become expert performers? Ericsson summarizes much of the expert performer research this way.

> [I]nter-national-level performers in several domains start out as children by engaging in playful activities in the domain…. After a period of playful and enjoyable experience, they reveal "talent" or promise. At this point parents typically suggest that their children take lessons from a teacher and engage in limited amounts of deliberate practice. The parents help their children acquire regular habits of practice and teach them that this activity has instrumental value by noticing improvements in performance. The next phase…is an extended period of preparation

> and ends with the individual's commitment to pursue activities in the domain on a full-time basis. During this period, the daily amounts of deliberate practice are increased, and more advanced teachers and training facilities are sought out. Occasionally parents even move to a different region of the country to provide their children with the best training environment. In the next phase, the individual makes a full-time commitment to improving performance. This phase ends when the individual either can make a living as a professional performer in the domain or terminates full-time engagement in the activity… [D]uring this phase nearly all of the individuals who ultimately reach an international level performance work with master teachers who either themselves had reached that level or had previously trained other individuals to that level. All through their development, international-level performers are provided with the best teachers for their current level of performance and engage in a great amount of deliberate practice.[21]

LESSONS FOR LEADERS

Leadership training programs that teach specific transformational leadership skills, provide for role playing and practice in using the skills, and incorporate some degree of individual feedback, coaching and follow-up such as the Barling and Bass programs do seem to result in some moderate improvements in leadership over at least a short period. Action learning with its real world, hands-on approach does have some promise but as Conger and Toegel argue, is flawed in many respects. What we need is a new approach or significant modification in the way we train and develop leaders. The research on expert performers offers some guidance.

No one equates the training and development of a leader with the training and development of a start athlete, master chess player, or world-class artist or musician but maybe we all should. Leadership without a doubt is as complex a domain of expertise as any of the others we have mentioned in this chapter. It definitely is as important, if not more important. Why then would we expect artists, athletes and other experts to invest tens of thousands of hours over many years learning their craft but expect leaders to learn their craft with little help and only a few hours of instruction? Expert leadership is not a "gift" any more than expertise is a gift in any other field. If we truly want to train and develop effective leaders, we should take our clues from the expert performer research.

- We should start early by identifying people with the motivation and capacities to lead and make sure that they are exposed to leadership training appropriate to their level of development.
- We should be prepared for a long period of leadership training and development. We should expect it to take ten years or longer to train a person to lead.
- We should arrange for would-be leaders to engage in lot of deliberate practice using role plays, simulations, and hands-on experience. This practice should not be part of their normal workday but should be specifically designed to enable them to hone their leadership skills. The practice sessions should be well designed and should provide large amounts of feedback and opportunities for repetition and correction.
- We should provide our leaders-in-training with access to the best leadership coaches and mentors available.
- Finally, we should make it possible for our leaders-in-training to learn from failure.

NOTES

[1] See Jay Conger and Ginga Toegel, "Action Learning and Multi-Rater Feedback as Leadership Development Interventions: Popular but Poorly Deployed," *Journal of Change Management*, 3, no. 4 (May 2003), p. 333.

[2] For reviews of the literature on action learning see Peter A. C. Smith and Judy O'Neal, "A Review of Action Learning Literature 1994-2000: Part 1: Bibliography and Comments, *Journal of Workplace Learning,* 15, no. 2 (2003), pp. 63-69 and Peter A. C. Smith and Judy O'Neal, "A Review of Action Learning Literature 1994-2000: Part 2: Signposts into the Literature, *Journal of Workplace Learning*, 15, no. 4 (2003), pp. 154-166.

[3] Conger and Toegel (2003), p. 334.

[4] Robert J. House and Ram N. Aditya, "The Social Scientific Study of Leadership: Quo Vadis?" *Journal of* Management, 23, no. 1 (1997), p. 459.

[5] House and Aditya, pp. 460-461.

[6] Fred E. Fiedler, "Research on Leadership Selection and Training: One View of the Future," *Administrative Science Quarterly*, 41, no.2 (June 1996), p. 244.

[7] Conger and Toegel (2003), p. 336.

[8] Conger and Toegel (2003), p. 337.

[9] See Julian Barling, Tom Webber, and E. Kevin Kelloway, "Effects of Transformational Leadership Training on Attitudinal and Financial Outcomes: A Field Experiment," *Journal of Applied Psychology*, 81, no. 6 (December 1996), pp. 827-832.

[10] See Bernard M. Bass, "Two Decades of Research and Development in Transformational Leadership," *European Journal of Work and Organizational Psychology*, 8, no. 1 (1999), pp. 9-32.

[11] The examples that follow are taken largely from L596.

[12] Michael J. A. Howe, Jane W. Davidson, and John A. Sloboda, *Innate Gifts and Talents: Reality or Myth*, available at http://www.zainea.com/innate.htm accessed March 20, 2008, p. 17.

[13] Howe, et.al. 17.

[14] Howe, et.al. p. 10.

[15] Howe, et.al. p. 10.

[16] Howe, et.al. p. 11.

[17] Howe, et.al. p. 17.

[18] Howe, et.al. p. 19.

[19] K. Anders Ericsson and Neil Charness, "Expert Performance: Its Structure and Acquisition," *American Psychologist*, 49, no. 8, p. 738.

[20] Ericsson and Charness, p. 738.

[21] Ericsson and Charness, pp. 739-740.