

Motivating Performance Diagnosing and Solving Motivation Problems and Opportunities

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Published as: Clark, R. E. (1998) Motivating Performance: Part 1 - Diagnosing and Solving Motivation Problems. *Performance Improvement*, 37(8), 39-46.

A multi-national client recently asked for the solution to a performance problem that was causing over ten million dollars of loss each year. About 2,500 of the client's service technicians, located in various areas of the world, were responsible to service repair contracts on a variety of complex electronic devices. The technicians were delaying the completion of their service reports and were making many simple but very expensive mistakes on the reports. The reporting delays and errors were resulting in a huge inventory float since components used in repairs were not taken out of inventory until accurate service reports were received and logged electronically. Service staff were asked to submit complete and accurate reports on their calls by 10:00 on the next business morning following the call. Reports were being delayed an average of one week. Longer delays occurred during very busy periods. The problem was world wide. Reporting errors had to be corrected by hand in all countries. Errors were obvious in about 60 percent of all reports.

Prior to the request for help, two unsuccessful attempts had been made to solve the problem. A very senior manager had asked all regional service managers to "speed up and clean up" reporting. A very brief and unsatisfactory improvement lasted about one month and performance rapidly decayed again. Just after the problem reasserted itself, a computer based service reporting system replaced paper forms. Instead of training, well designed job aids for the new reporting system had been distributed to the computer savvy technicians. Again, errors decreased and form submission was timely (but not ideal) for about a month, then the system reverted again. Now the service technicians were becoming cynical, angry and resistant to future attempts to solve the problem. The client wanted a large scale, flashy, computer-based training program to teach the service technicians how to make timely and accurate reports. Was this a knowledge problem that could be solved by training? Or was something else going on?

Identifying and validating motivational problems

Solving performance problems requires a systematic approach to validating the problem at the front end of the process. Front end analysis requires a determination of at least four things: 1) do people have a clear and specific business goal?; 2) do they have adequate knowledge about how to reach the goal?; 3) are the necessary policies, procedures, equipment and materials available?, and 4) do they have enough motivation for a personal commitment to the goal and the investment of adequate effort in its pursuit? After a sample of technicians and line managers were interviewed by phone and in person, it quickly became obvious that the client's employees clearly understood the goal of making timely and accurate reports. Some areas of the world had equipment and software problems and were slow to implement the new computerized form system. It was clear that all of the technicians had the knowledge they needed to reach the goal. A very few new hires had not received all of the information they needed, but these new people were scheduled for on-the-job training with experts. Everyone had received a variety of well-designed job aids that contained all of the information they needed to fill in the new electronic version of the report forms with accurate codes and other required information. Nearly everyone had the equipment and materials necessary to achieve the goal. Complaints about policy and procedure focused on conflicts between form completion and the need to meet service response deadlines during rush periods. Technicians also complained that many of the errors on the service forms were caused by service telephone operators who took the initial calls from customers requesting repairs. Yet the key issue was the constant complaints about the need to complete the forms. This issue was the focus of a motivation issue

The Importance of Motivation in Performance

In general, we know a great deal about setting clear work goals (and objectives) and a considerable amount about knowledge because of our expertise in training and development. We have systematic and successful approaches to designing and aligning organizational policies and procedures that support performance goals, equipment and training. We have training departments in most organizations. Yet I've always thought it was very curious that we do not have "motivation departments" or systematic strategies for identifying and solving motivation problems. Like many of you, I notice that training is not the only solution required to solve many performance problems. Solving performance problems and realizing opportunities often requires an increase and focusing of motivation. In the case of the client described above, a motivation problem appears to be costing about

ten million dollars a year. This loss was in only one division of a very large organization.

Our lack of adequate emphasis on motivation at work has, in my view, retarded our attempt to maximize performance. In their review of leadership studies, Hogan Curphy and Hogan (1994) found that only about 30 percent of line managers are able to adequately motivate the people who report to them. They imply that in most circumstances, motivation accounts for about half of all performance results. The late Tom Gilbert, one of the clearest thinkers in performance improvement, was fond of saying that when two people had equal abilities, the enthusiastic member of the pair would achieve about 70 percent more than the unenthusiastic person. Even more troubling is that evidence that a majority of the published studies of organizational development strategies that report measured increases in motivation are fatally flawed (Newman, Edwards and Raju, 1989; Roberts and Robertson, 1992). Strategies that may not work as powerfully or as consistently as claimed include popular employee empowerment strategies, contests, job redesign, leaderless teams and various performance recognition techniques.

If you doubt the importance of motivation in performance, check your answers to the following questions. Why is enthusiastic commitment to work goals so difficult to achieve with many people, even when we pay people well? Why is it onerous, and sometimes impossible, to convince people at work to persist at vital work goals when they encounter interesting but much less important alternative goals? Why do employee reward programs and empowerment strategies sometimes fail or backfire? Do we have to pay people more to get them to work harder? Are people from different cultural backgrounds motivated differently? Is the motivation of “knowledge work” similar to the motivation of “physical work”? Is team motivation different than individual motivation? Why is it that committed people often fail to invest enough effort to fully achieve work goals even though they believe the goals to be important to them and to their organizations? These are some of the questions that trouble human performance consultants.

The purpose of this article

The purpose of this article is to provide a way to diagnose and solve motivation at work by describing a motivation model based on the most recent “cognitive” performance motivation research. Along with many of the students in the doctoral program on Human Performance in the School of Education at the University of Southern California, I have reviewed most of the current research on motivated performance. We found more than 40 research-based theories of motivation, many of them very similar. We have attempted to develop one theory that incorporates the important components of the best and most current research and practice in this area. My goal is to provide an accurate account of the motivation of people who perform knowledge work. I reviewed many individual studies and tried to select those experiments that reflected typical adult work environments. The result was something I call the CANE model (Commitment and Necessary Effort). I applied the model to solve the problem confronted by the client described above. An explanation of the model and the solution to the client’s problem follows. The first step in understanding motivation is to contrast it with the role knowledge plays in performance. Separating Motivation and Knowledge in Performance

The two most important, internal performance processes in all human beings are our knowledge system and our motivation system. These two systems must cooperate successfully for effective work to be accomplished. Knowledge functions like the engine and transmission in a car. It provides the direction, strategies and tactics for achieving goals. Motivation functions like the gas and battery in a car. It provides the energy needed to achieve goals. An expert performer with inadequate motivation is like a precision racing car with an empty gas tank or a dead battery.

KNOWLEDGE AND MOTIVATION SYSTEMS

KNOWLEDGE

Makes it possible to:

Understand goals
Develop/implement plans to reach goals
Monitor progress towards goals
Revise and improve plans

MOTIVATION

Makes it possible to:

Make a strong commitment to goals
Persist with plans and goals when distracted
Monitor goal value and personal confidence
Invest necessary mental effort in plans

The CANE Motivation Model: Commitment And Necessary Effort

In the CANE model, motivation is defined as two interlinked processes. The first process leads us to make

a commitment to a performance goal and persist the face of distractions from appealing but less important alternative goals. The second motivation process is concerned with the amount and quality of the “mental effort” people invest in achieving the knowledge component of performance goals. These two motivation processes, committed, active and sustained goal pursuit on the one hand, and necessary mental effort to tackle goal-related problems, on the other hand, are the primary motivation goals in the CANE model. I have based the model on a huge body of research generated by a diverse group of researchers and practitioners over the past two decades. Researchers will find evidence for the model summarized in Clark (In press) and in Ford (1992), Bandura (1997), Bower (1983; 1995), Heckhausen and Schultz (1995), Pintrich and Schunk (1996), Salomon (1984) and Shapiro, Schwarz and Austin (1996). John Keller (1987) has developed an approach to incorporating motivation in instructional designs. Another application version of the CANE model presented here can be accessed in a very clear description by Blair and Price (1998). All of these studies and application models are concerned, one way or the other with a series of questions, including: How do we know that people have a commitment, persistence and/or an effort problem? Once identified, what solutions or programs will foster work goal commitment and maximum effort? These are the questions that will guide the remaining discussion.

Identifying Commitment Problems and Opportunities

In today’s complex work environments the variety of job tasks that confront all of us change constantly over time. We cannot commit ourselves equally to all tasks. We must prioritize and focus on important tasks in order to be successful. Commitment problems happen when people resist assigning adequate priority to important job tasks. Research on motivation suggests that people with commitment problems may avoid a task altogether and/or argue that the task is less important than some other set of tasks. They may attempt to hand off the task they resist to someone else or blame someone for their own failure to perform the task. If all else fails, some people simply procrastinate and blame their delay on the need to service other high priority work goals. People who lack adequate commitment to important work goals tend to be easily distractable by tasks that they think are more important but which do not support business goals. They often convince themselves that their managers are wrong, arbitrary, undependable or ignorant and therefore not able to assign adequate priority to tasks. Uncommitted people also find it easier to convince themselves that they do not have the time or resources to complete a key task.

What causes commitment problems?

Three factors have been found to increase (or decrease) work goal commitment. The first factor is “task assessment”. All of us will analyze any task we are assigned to determine whether we can successfully complete the task. We all tend to ask ourselves two questions about new tasks - “Can I do it?” and “Will I be permitted to do it?”. If we think that we have the ability to accomplish the goal and that we will be permitted to accomplish it, our commitment will increase (Bandura, 1997; Ford, 1992). If we doubt our ability or the organization’s willingness to let us use our skills, commitment will decrease.

Emotion and commitment

The second factor influencing commitment is our mood or emotions. All positive emotions facilitate commitment and all powerful, negative emotions discourage goal commitment (Bower, 1983; 1995; Ford, 1992). This may seem like a minor issue but for temperamental people or in organizations where pressure is high and/or change is constant, negative emotional undercurrents can be strong. Angry or depressed people find it nearly impossible to make a commitment to work goals.

Values and commitment

The final factor that influences the strength of goal commitment is our personal value in the goal. It is my experience that values are the most important element in increasing or decreasing the strength of our commitments. Psychologists now have good evidence that the most important value at work is our belief about whether the achievement of a work goal will increase our personal control or effectiveness (Shapiro et al, 1996; Locke and Latham, 1990). The more we believe that achievement of a work goal will make us more successful, the higher our level of commitment to the goal. The reverse is also true. Few of us will give a high priority to tasks that we sincerely believe will lead us to fail or be perceived as incompetent

Utility, Interest and Importance Values.

Three varieties of “effectiveness values” have been found to be important - utility value, interest or curiosity value and importance value (Eccles and Wigfield, 1995). Utility value represents the case where a person does not value the task at hand but values the consequence of successfully completing the task. In this case we may perform a task we do not like or value but we believe that the result of completing the task will be positive. Interest value occurs when people are curious or like the pursuit of a particular goal. They do not have to believe that completing the task will make them successful or more effective. Instead, the opportunity to pursue their curiosity or interests is enough to increase their commitment (and presumably enough to make them feel more effective because

they are able to pursue something interesting). Importance value comes from the recognition that commitment to a specific task represents a person's strengths and personal goals. It is useful to think of the strength of task commitment as the result of the answer to series questions depicted below.

CANE Model of Factors Influencing Goal Commitment

TASK ASSESSMENT X EMOTION X VALUES = GOAL COMMITMENT

Ability (Can I do it?)	(Do I feel like it?)	Utility (Value later?)
Context (Will I be permitted?)		Interest (Am I curious?)
		Importance (Is this me?)

Service Technician Goal Commitment Example

To illustrate the CANE model of goal commitment, we return to the clients problem with timely and accurate service reports. As a follow up on the initial interviews with the repair technicians, a number of regional focus groups were organized and interviewed. Many of the open and closed questions asked in the interviews were based on the CANE questions (above). A sample summary of the interviews follows:

Jorge X: Service Technician, Santiago, Chile

Can you do it?	“Yes, easily, it is simple work”
Are you Prevented?	“Sometimes, when a high volume of service calls occurs”.
Do you feel like it?	“No, and I’m angry that I am expected to do secretarial work”.
Does it have utility for you?	“No, it is a distraction from more important work goals”
Are you curious about it?	“Are you joking?”
Is it important to you?	“Would filling in forms be important to you?”

The result of the information gathering phase was a clear indication that nearly all of the technicians understood that they were being asked to provide speedy reporting. They believed that they had adequate knowledge and tools to make the necessary reports. They did not mention any important organizational or environmental barriers existed that would prevent them from making speedy and accurate reports. An analysis of the errors in a sample of reports from around the world indicated that most problems were caused by simple carelessness when entering information in fields. Most of the errors, it was suggested, could be cleaned up by adding an error checking feature to the computer software. Many technicians mentioned the time crunch that occurred with seasonal increases in service demands, but generally they felt that they could make reports on time and accurately. Job aids for filling in the forms seemed to be available to everyone and were very well designed. Some of the technicians were resentful and angry at being asked to do what they perceived as “someone else’s paper work”. An analysis of the errors on the forms submitted indicated that most mistakes were caused when the technicians, in a rush, hit the wrong computer keys. The computer software did not include an “answer and error checking” feature. Despite the problems with the forms, most technicians seemed very enthusiastic about their work and their relationships with their clients.

Almost to a person the technicians said something like “Report writing is not our job. Reporting is the job of the office staff. Our job is to meet our response deadlines on our service calls, fix the machines and keep our customers happy”. There were clear indications from almost all of the focus groups and individual interviews that these technicians had a value problem. They simply did not value the task they had been assigned. They believed that they could do the job and they had positive feelings about their work. However, there was a widespread belief that making timely and accurate reports would detract from their main job of servicing their customers and therefore make them less effective. In fact, some technicians seem to understand that delayed reports caused delayed invoices to their clients and saw this as a benefit to their clients. None of the technicians seemed to have any interest in form completion. They thought of themselves as engineers and technical experts, not as “paper pushers” - so they assigned no importance to the task. They did not perceive timely and accurate forms as making them more effective. Many technicians in a focus group suggested that if they spent time on the forms they could not do the best job for their clients. In their mind, the motive for avoiding the reports were to protect their customers and ignore, as one articulate technician phrased it, “ the mindless demands of the paper pushers who do not understand our situation”. This value problem was costing over ten million dollars a year.

Solving Commitment Problems

The solution to most commitment problems and opportunities is to convince people that completing the task they are resisting will make them more effective and/or perceived as more effective. People simply will not do what they believe will make them less effective or less successful. Many people are suspicious of change simply because they feel that they will be perceived as less effective under novel, negative or uncertain conditions. They must be convinced that if they commit themselves to the avoided task(s) they will become significantly more effective or successful. The specific solution that accomplishes this goal may be quite different for different individuals and work cultures. Some organizations have adopted various “employee empowerment” solutions to value problems. In many empowerment settings staff are asked to choose their own work goals in order to get them to value their work. There is good research evidence that this is not necessary.

I have been impressed with the research and practical applications suggested by Locke and Latham’s (1990) studies of work goals. They conclude that employees do not have to participate in work goal setting in order to give strong commitment to the goal they have been assigned. In cases where participatory goal setting is not possible, they find that value for the goal is enhanced if people perceive the goal to be: 1) assigned by a legitimate, trusted authority with an “inspiring vision” that reflects a “convincing rationale” for the goal (importance value), and who; 2) provides expectation of outstanding performance (importance value) and gives: 3) “ownership” to individuals and teams for specific tasks (interest value); 4) expresses confidence in individual and team capabilities (interest value) while; 5) providing feedback on progress that includes recognition for success and supportive but corrective suggestions for mistakes (utility value).

CANE Model -Solutions to Value Problems

VALUE PROBLEM + SOLUTION = GOAL COMMITMENT

This will not help me	“Here is how this task will help you”
	“Tell us how to make this valuable to you”
- No immediate incentive	“The later utility of the task is...”
- I am not interested	“The task does connect to your interests”
- This is not important	“This task uses your ability and expertise”

Motivation Solutions for the Service Technicians

The technicians had three motivation problems that were preventing their commitment to filing accurate and timely service forms: 1) Their task assessment resulted in a belief that barriers existed when the volume of service calls increased; 2) Some were angry because they perceived that they were being asked to do “someone else’s job” and that in high volume periods, they could not complete forms and respond in a timely fashion to customer service requests; and 3) Most had no value of any kind for the form completion task. The general solution to their problems were obvious. Some way had to be found to adjust the deadline or increase the staffing for form filing during high volume periods. This solution could be expected to remove the “I’m not permitted to do this task during volume periods”. I have found that emotional reactions to problems often take care of themselves when the problem that is the focus of the emotion is solved. Thus, the third problem, value for the task, was the major challenge. Some way had to be found to convince the technicians that the form filing task had personal value for them. Since different organizational cultures have different beliefs about what is important or valued, performance consultants must attempt to “translate” solutions in ways that are compatible with their client’s expectations and beliefs.

Value problems are often multi-level issues in an organization. In this organization, there were a number of beliefs and patterns that had to be considered. The managers of the technicians had their own motivational issues to handle. For example, the senior manager acting as sponsor for the motivation project placed a number of constraints on a value solution for the technicians. She did not want to create value by offering financial incentives because money would establish a precedent and lower the service net income. Locke and Latham’s (1990) research indicates that giving money for this kind of task can complicate the future solution to value problems in some organizations. The manager also was not free to increase the staffing of the repair units. She also was very concerned that a solution to the timeliness problem did not cause a “side-effect” of reducing the number of “on time” service calls as technicians filled in forms for just completed service. Contractual agreements with service customers tied income to response time for service calls. On-time responses had to be preserved.

The focus groups and individual interviews had indicated a number of important organizational facets to

this problem. The service groups operated very independently and the line managers were all experienced technicians who were generally liked and respected by the service staff. It was also obvious that this independence had led most line managers to avoid giving their service groups feedback about the tardiness of forms or about its importance. During the previous two attempts to solve the problem, many line managers simply told their staff that senior managers were momentarily upset about the problem and thus “you should take greater care with the forms and hand them in rapidly until things calm down”. This preserved the bond between line managers and technicians but at a great cost. It was also important that the forms originated when a customer contacted a regional central “call center”. The call center staff sometimes made mistakes on the form that was sent to the technicians. This had allowed the managers and technicians to avoid responsibility for errors and for delays since they could blame some errors on the call center staff. The line managers encouraged this blaming to curry favor with the technicians. In fact, there was good evidence that line managers were spending their own expensive time correcting errors and finishing reports for particularly tardy and careless technicians. It was obvious that the managers were not pushing their staff to turn in clean, speedy reports. In the past, line managers performance was evaluated based on the selling of new service contracts and on speedy and successful replies to service requests from customers, not on the timeliness and accuracy of reports.

The Solution to the Case Study

The decision was made to solve the value problem in two parts. First, to create value for accurate and timely reports, the sponsor put the line managers performance evaluation in jeopardy. She believed that technicians valued their line managers and would “do it for them” if not for the organization’s financial health. Line managers were directed by the sponsor to give specific and constant instructions to all technical staff that henceforth, the line managers monthly performance evaluations would be based on improvements in the timeliness and accuracy of service reports as well as on the familiar criteria of new business and timely responses to service requests. It was expected that this would create powerful “utility value” for improvements in technician reporting. The implicit message in this change was “You may not like to hand in timely and correct reports, but you do value your manager and your manager’s performance evaluation now depends on timeliness”. Line managers were required to take ownership for the problem and the solution which gave them their own utility value for clearer communication and making their staff responsible for delays and errors. Regional managers were informed that their performance review would henceforth include these indicators for their line manager direct reports.

In the second part of the solution, line managers were required to give private but constant, clear and corrective feedback to all employees who were tardy or made excessive errors on their reports. It was clear that they had avoided this kind of feedback in the future. Some of them clearly did not know how to give effective feedback. This was treated as a knowledge problem and job aids were developed to help them implement the program. They were asked to post the list of improvements in report response time and accuracy along with other indicators in a very public place for all service staff. These reports were intended to create importance value for those who had made a commitment to improve. Managers were encouraged to be fair and adjust their feedback during very busy periods. The system was adjusted to provide them with similar reports from other units for comparison. This change was in response to criticism from some of the technicians that they were not responsible for the errors (a task assessment issue since they believed that the call center errors were barriers to their own success). Since many of the service staff seemed to value competition, an informal reporting “contest” was focused on speed and accuracy of reports. Contest results were circulated system wide each quarter. This created interest for many of the less motivated technicians.

The result of the solution was that timeliness improved by 60 percent within a month and the gain held constant for the four months it was tracked daily. Senior managers decided that the 60 percent improvement was the maximum that could be achieved without reducing response time. Response times did not decline except when timeliness exceeded the 60 percent improvement level in some locations. The improvement has held constant as of the time this article is completed, many months later. Most important for the client, the cost of the solution was less than one and a half percent of the annual financial loss from the problem. Errors on the reports decreased 86 percent in one month and the decrease is still holding. Often, errors indicate knowledge and effort problems not commitment problems. In this case, the entry errors occurred because the technicians were not committed to the job and so they were not exercising caution when entering the service codes on the new computer system. In the next installment of this series, I’ll describe other error problems and suggest that mistakes usually indicate a “mental effort” problem and not a commitment problem.

Conclusion

The CANE model presented here will work in any performance setting. Salomon (1984) has described the way that parts of a similar model would explain the motivational components of media in training and electronic

support systems. Keller (1987) has used a similar model to suggest ways to build motivation into training. Bandura (1997) has described the ways that parts of the model could be used in a huge varieties of organizational settings and in individual and group psychotherapy. Shapiro et al (1996) have discussed the positive and negative health benefits of similar models. Locke and Latham (1990) focus parts of a similar model on the development of work goals in management interactions at work. The advantage of the CANE model is that it attempts to unify all previous cognitive models of motivation into one approach.

The complicating element in the model comes from the need to apply it to the very different beliefs, values, emotional patterns and expectations that characterize the extraordinary and growing diversity in our workforce. It is relatively easy to provide evidence that all human beings make commitments only to work goals that are perceived as increasing their individual and collective effectiveness and control. It is much more difficult to know in advance exactly how each individual and group defines “effectiveness” or “control”. For one person, effectiveness at work is only available when that person’s line manager is a strong, experienced, authoritarian leader. For another person, effectiveness at work only comes when they are allowed to decide how to perform their job, independent of a manager. Some cultures value honor, other cultures value income, yet others value achievement. Some individuals place a very high value on being perceived as capable by their peers and others are only concerned with achieving a “personal best” and are relatively unconcerned with the views of others. In the case presented in this article, the organization was very well developed and had a strong organizational culture that tended to influence values in every region of the world where it was operating. Individual and cultural differences between people in the same organization are more often the real challenge in motivating performance. The CANE model can provide the “generic solution” to any motivation problem. Only the performance specialist can tailor the CANE recommendations to their client’s specific cultural patterns and individual differences in task assessment, emotional patterns and values.

Practitioner Annotated References

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Dan Blair and Donna Price have written a very clear and readable account of this model. Their article contains a number of additional case studies focused on individual motivation problems. They emphasize ways to promote persistence at a task (the definition of task commitment is the extent to which a person will persist at the task over time).

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Martin Ford’s research and his book are one of the primary sources for the CANE theory. Ford reviews research and practice examples of what he calls “Motivational Systems Theory” (MST). While much of the book describes research, the reader interested in practical suggestions will find many examples and recommendations that will help diagnose and solve motivation problems.

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Executive Summary

Motivating Performance: Diagnosing and solving motivation problems
by Richard E. Clark

Two types of motivation are important at work, persistence and mental effort. Commitment (persistence at a task) is increased by convincing people that: a) the organization will remove unnecessary barriers; b) that achievement of the work goal will make the person more personally effective; and c) that the manager requesting the goal is credible, trustworthy, optimistic (about the person or team’s ability to achieve the goal), able to clearly communicate the vision connected to the goal and willing to give ownership for the accomplishment. Mental effort is enhanced by insuring that the goal assigned is very challenging. Managers must work with people to adjust their confidence level whenever they become over confident (and thus refuse to take responsibility for errors or poor performance) or under confident (and thus find an excuse to procrastinate or avoid the goal altogether).

Personal Biography

Richard Clark is President of Atlantic Training Inc. in Los Angeles. He is also a professor of Educational Psychology and Technology at the University of Southern California where he directs doctoral and master’s level programs in human performance at work. He has past business experience in the United States and Europe (Ireland, Holland, Germany) as a training manager, performance consultant, research director, reporter, media director and producer. For many years his interest has been in the design, delivery, management and evaluation of human performance support systems that are focused on business goals.

Dick is the author of more than 100 published articles, book chapters and monographs on training, technology, knowledge work, motivation and ways to solve human performance problems. His work is featured in many national and international publications including the *U.S. News and World Report*, *Psychology Today*, *The Chronicle of Higher Education*, *The International Journal of Educational Research* and *Harvard Magazine*. He is an elected Fellow of the American Psychological Association (Division 15, Educational Psychology) and is a Fellow of the Association of Applied Psychology and a Founding Fellow of the American Psychological Society.
