Leading for Innovative Practice: Melding Theories of Organizational Change, Adult Learning, and Conditions of Learning

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We live in an era of unique challenges requiring us to face a new reality mired in information overload for the 21st Century. This new reality emphasizes the critical need for educational leaders who can think and act systemically rather than bureaucratically. The bureaucratic model inherited from the Industrial Era still prevails in many educational organizations, and consequently the leader's role is defined by the structure and function of this model. Deviation from the bureaucratic model requires leaders who are systems thinkers and who can effectuate necessary sustainable change and innovative practice within this model. In this article we discuss (a) the concept of systems thinking to promote organizational change within a bureaucratic model, (b) the role of adult learning theory in the process of change, and (c) the use of Cambourne's Conditions of Learning (1988) as one model for developing the personal reflection that may lead to achieving sustainable change within the system.

Introduction

We live in an era of unique challenges requiring us to face a new reality mired in information overload for the 21st Century. This new reality emphasizes the critical need for educational leaders who can think and act systemically rather than bureaucratically to shape educational systems to meet the needs of these times (Drucker, 2006; Marx, 2006; Paul, 1992; Senge, 2000, Wagner, Kegan, Lahey, et al., 2010). The bureaucratic model inherited from the Industrial Era still prevails in many educational organizations, and consequently the leader's role is defined by the structure and function of this model. Deviation from the bureaucratic model requires leaders who are systems thinkers and who can effectuate necessary sustainable change and innovative practice within this model. Almost 20 years ago, Paul (1992) described a futuristic world in which information would be multiplied at a rate so fast that it would quickly become obsolete, a world in which ideas would be continually "restructured, retested, and re-

thought," and most importantly, "where one could not survive with simply one way of thinking" (p. 5). In 2009 we are at the crossroads, facing never before envisioned and complex challenges and changes.

In this article we discuss (a) the concept of systems thinking to promote organizational change within a bureaucratic model, (b) the role of adult learning theory in the process of change, and (c) the use of Cambourne's Conditions of Learning (1988) as one model for developing the personal reflection that may lead to achieving sustainable change within the system.

Systems Thinking Defined

A contemporary popular assumption among leaders in educational institutions is that they are "systems thinkers." Leaders have a personal view of themselves that might be contrary to what others believe about them. Individuals have a tendency to think of themselves as better than average (Price, 2006; Pronin, Lin & Roth, 2006). Evidence stemming from social-cognitive society indicates that individuals who aren't clinically depressed tend to overestimate their traits and abilities (Dunning, Keith & Suls, 2004) However, our informal observations of current practices suggest that this overestimation of one as a systems thinker is a somewhat unexamined assumption given the depth to which people are socialized to think narrowly in terms of linear causality and the pursuit of certainty inherent in the bureaucratic model.

Leaders wishing to achieve sustainable innovation need to develop into systems thinkers (Capra, 2002; Hensley & Burmeister, 2009; Kuhn, 1996; Mirci, 2008; Senge, 1994; 2000; Wheatley, 2005). Systems thinking requires that one examine a situation or phenomenon in terms of interrelated dimensions recognizing that change within one of the dimensions impacts all the other dimensions. In making decisions, systems thinkers realize that there are multiple possible actions they can take in a given situation and that their intentional actions to understand the interactions among various dimensions of the whole can impact outcomes (Schn, 1987; Loughran, 1996; Hensley, 2006). They further realize that choosing an action may have unintended consequences throughout the social system. Unlike reductionistic thinking based in simple cause/effect patterns and reinforced in a bureaucratic model, systems thinking requires collaboration with others and broad analysis of possible outcomes resulting from a variety of possible actions (Burmeister & Hensley, 2006). A priority in a potential systems thinker's store of knowledge must be learning to shift from using simple strategies to solve isolated problems to viewing phenomena and situations as interrelated and part of a larger whole. In support of this notion of interrelatedness, current neuroscience research suggests that the notion of systems thinking is supported by physiological processes in the brain. One's experience leads to the development of "new synaptic connections among neurons in the brain and also alters existing patterns of connections" (Byrnes, 2001, p.179). Further, the development of new synapses and re-

sulting patterns of connections as a structure for learning involve "intercellular movement through blood and cerebrospinal fluid as coequal players in the learning process" (Howard, 2006, p. 53). Jarvis (2006) suggested that multiple systems within the body interact to transform cognitively to make sense of social situations (Sternberg, 1985, 1990). This perceiving and interpreting process results in a "changed" or more experienced person whose experience promotes the ability to respond automatically to routine situations and deal effectively with novel situations (Sternberg). People grounded in these definitions of learning begin to suggest that change within organizations is a social enterprise structured much like the processes the body follows to physiologically enhance learning.

In developing stores of knowledge, people wishing to become systemic leaders actually are continuous learners. They intentionally seek to understand how the physical processes of learning relate to those theories of learning most closely aligned to emerging findings from neuroscience research, especially constructivism and cognitivism. Constructivism has posited that learning is a sense making process dependent on the use of one's existing stores of knowledge to draw upon in interpreting experience. Cognitivism asserts that people learn from the schemata they have constructed in their brains (Byrnes, 2001; Hoy & Hoy, 2003). Both of these theories have as their emphasis that learning is constructing interpretations of experiences using one's existing knowledge base. When people deepen their understanding of these theories and implement practical applications of them, they create stores of knowledge for understanding others, self, and situations.

If people wishing to lead for innovation develop an understanding of the physiological processes that expand and modify their stores of knowledge and are willing to critically evaluate the beliefs, attitudes, dispositions, stories, and assumptions contained in their stores of knowledge, they may be more likely to engage in systems thinking. Sadly, many people may not become effective leaders because they have not paid attention to critically evaluating their personal stores of knowledge. Fullan (2005) asserted that in educational institutions, innovations fail because the majority of people in authority have not learned how to be systems thinkers in action. This seems consistent with Schon's (1983) concept of people developing the capacity to draw upon their existing knowledge to engage in reflection in action. The specific point regarding one's store's of knowledge may be stated in the following questions: What professional knowledge is the person aspiring to be a systems thinker pursuing so as to have enriched stores of knowledge to draw upon in decision-making? How do professionals think in action (Schön, 1987)?

Our stores of knowledge are consistently prone to limited understandings, unexamined assumptions, and errors in knowledge construction. If leadership is about systems thinking and acting, then we need to uphold as a principle that our thinking may be prone to error. When we fail to develop accurate systems thinking expertise, we inevitably face the probability of operating on the unexamined assumptions that were created through expe-

riences of socialization into bureaucratic mindsets and reductionistic thinking. Instead of being a leader, such failure renders the person in authority to actually being a manager of the status quo rather than a leader for innovative practice.

Leaders as Connectors

Systemic leadership occurs within a context of thinking and dialogue (Senge, Cambron-McCabe, Lucas, et al., 2000). Dialogue, in which the goal is to listen to others in order to clarify understanding rather than debate in which the goal is to win a point, encourages people to examine their assumptions in a safe environment—discovering, clarifying, and modifying them as appropriate and doing the same for others.

Such dialogue occurs within contexts where leaders serve as "connectors" in bringing people together (Hensley & Burmeister, 2009). The stores of professional knowledge of these leaders are anchored in systems thinking. This means understanding the interconnectedness of organizational change theory, adult learning, and conditions that can create reflective learning opportunities. Such leaders realize that leading for innovation involves being people-oriented (Whitaker, 2007; Hindman, Seiders & Grant, 2009). These leaders pursue development of intellectual empathy such that they are able to emotionally place themselves imaginatively and accurately into what another person is experiencing socially, emotionally, ethically, and intellectually (Paul, 1992). Empathy involves using communication to create consensus, supporting those involved in the change when their sense of competence is threatened as they move out of their comfort zones, and developing the self discipline necessary to engage in regular reflection so as to interact in ways where trust permeates the organizational environment (Hensley & Burmeister, 2009).

Leaders who have become "connectors" understand that our personal stores of knowledge operate according to habitual ways of thinking and acting. They understand that through intentional examination of habits, that is, our automatic, unconscious behaviors, we can change destructive or ineffective habits (Bennett & Goleman, 2001; Mezriow, 2000; Taylor, 2000; English, 2005).

Because we act according to habitual ways of thinking and acting that are informed by the multiple human systems into which we have been socialized, leading for innovative practice includes developing the capacity for reflective thought that is systemic. According to Hensley and Burmeister (2009), "Reflection is the art of purposefully thinking about what you have done and what you are going to do next. When we engage in reflection, it becomes much easier to make sense of our personal and professional worlds and how we operate within them; things become clearer (p. 102)." Engagement in systemic reflective thought means the leader is relying on some criteria that are based in their professional knowledge about organizational change, adult learning, and the conditions of learning.

Organizational Change and the Perpetuation of a Bureaucratic Mindset

We inherited an organizational model that was necessary and useful throughout the Industrial Era. This system, known as the bureaucratic model, was intended to maximize efficiency and fairness. The problem for contemporary leaders who face implementing organizational change is to achieve the change within the boundaries of bureaucratic thought and organizations. Working within such confines may prevent questioning assumptions regarding the structure and the function of the bureaucratic model itself. Reductionistic thinking is reinforced when today's leaders function and act within bureaucratic structures rather than using systemic thought within such organizations. Wheatley (2005) wrote:

> Those of us educated in Western culture learned to think and manage a world that was anything but systemic or interconnected. It's a world of separations and clear boundaries: jobs in boxes, lines delineating relationships, roles and policies describing what each individual does and who we expect them to be. Western culture is very skilled at describing the world by these strange, unnatural separations (p.100).

Within the bureaucratic model, the person at the top of the hierarchy is supposed to occupy this position because he or she possesses expert technical knowledge. During the Industrial Era this model was intended to prevent dilettantism. The person at the top of the hierarchy was supposed to possess the technical knowledge to ensure that the organization operated according to maximized efficiency. Control was based on possession of knowledge. Weber (1947 as cited in Matteson, M. & Ivancevich, 1986) noted the tendency of a bureaucratic system to "level" society in an impersonal, formalistic manner designed to promote equality. Bennis (1966) suggested that the bureaucratic model was appropriate during the industrial revolution as "a reaction against the personal subjugation, nepotism and cruelty, and the capricious and subjective judgments that passed for managerial practices during the early days of the industrial revolution" (p. 181). Bureaucracy met the Victorian workers' need for order. Bennis further argued that the bureaucratic model of organization is now an obstacle to efficiency and effectiveness given the shift from an Industrial Era to a rapidly changing context through information technologies. Instead of a bureaucratic model, which by its very nature is designed to resist change, the emerging model is one rooted in an understanding of systems. This requires a different type of thinking than the programmed role functions defining a bureaucratic model.

The structure and function of the bureaucratic model was not designed for innovation. Because operating within an organizational context serves as a socializing function, the tendency in a bureaucratic model is for the person in authority to act as a bureaucratic manager. Larson and Ovando (2001) provided the following insight:

> A bureaucratic administrator or teacher sees himself or herself as an objective judge who steps back and stands outside of the situation in order to get a more neutral view

> of it. Bureaucrats claim to separate themselves from their own feelings about the situation and to separate the facts from the values in the situation in order to adjudicate a neutral decision grounded in the sanctioned policies and procedures of the institution (p. 39).

Leading for innovation means leaders recognize and resist developing a bureaucratic mindset. However, such resistance is difficult given how deeply ingrained the mindset is because of the structure and function of many organizational cultures.

The vision of practice that underlies the nation's reform agenda requires most teachers to rethink their own practice, to construct new classroom roles and expectations for student outcomes, and to teach in ways they have never taught before—and probably never experienced as students. The success of this agenda ultimately turns on teachers' success in accomplishing the serious and difficult tasks of *learning* the skills and perspectives assumed by new visions of practice and *unlearning* the practices and beliefs about students and instruction that have dominated their professional lives to date (Darling-Hammond & McLaughlin, 1995, p. 597).

Banathy (1991) identified five reasons why goals for education reform have failed. The first was that leaders approached innovation implementation using a piecemeal or incremental non-systemic approach. Thus, they conformed to the role functions of a bureaucratic mindset in terms of being reductionistic. This led to the second reason for failure in that possible solution options were not identified and integrated in a systematic manner. The third reason arose from viewing academic disciplines in isolation. They failed to use a systemic approach leading to interdisciplinary efforts and writing across the curriculum. The fourth reason was thinking within a reductionistic orientation that prevents making important connections and identifying underlying unexamined assumptions governing the system. The final reason was a failure to really "think outside the box" (i.e., failing to think outside the framework of the existing system). These reasons reveal that leading for innovative practice remains dependent upon the need for constructing professional knowledge and experience that result in systemic thinking.

General Change Strategies and Bureaucratic Organizations

Leading for innovative practice requires a shift in existing practice and the process for attaining such a shift. Change strategies are based on assumptions about the nature of the human person. Of the three general change strategies described by (Chin and Benne, 1984), two seem to be used in bureaucracies because they neither address what is known about human learning nor how organizations operate as social systems. The first is called the rational-empirical model. This model assumes the human person is rational and will change when provided with evidence indicating the need for change. This change strategy has worked when implementing the change

has been in the self-interest of the person involved in the change. It has worked when there already has existed almost universal readiness within the population to accept the innovation. The second is the power-coercive strategy. This approach depends on the use of sanctions, economic and/or political, to coerce change. For example, Gandhi used a non-violent power-coercive change to challenge the British rule in India. In contrast, this strategy also is used to force people within institutions to change. An example has continued to be the implementation of the No Child Left Behind federal legislation in education. Schools not meeting growth targets on a single standardized norm-referenced test have faced sanctions tied to mandates from this legislation. When used in isolation, this approach tends to undermine innovations such that they have failed to become institutionalized.

In contrast to the two strategies explained, the third strategy is more aligned with systems thinking. According to this strategy, known as the normative-re-educative strategy, the assumption about human nature is that humans are complex and change often is connected to the identity of the people involved in the change. Given this understanding, change is viewed as involving major shifts in attitudes, beliefs, and practices. Success with this strategy means internal shifts have occurred within people's personal stores of professional knowledge. Shifts also have occurred at the organizational level whereby people now possess shared understandings. In other words, the concerns, attitudes, values, practices, and beliefs of people are involved and need to be addressed. Leading for innovation in education is more likely to succeed in bringing about sustainable implementation because it is systemic in nature and reflects professional knowledge of adult learning and how change occurs in social systems. Unfortunately, people with authority in the bureaucratic model, operate within the terms of its designed structure and function.

Organizations as Social Systems

When organizations are understood as social systems, leading for innovative practice becomes empowered. Within this mind set the leader is able to use a normative-re-educative strategy aligned to both human adult learning and how social systems operate even within bureaucratic organizations that are social systems themselves. The problem remains that many people in positions of authority do not seem to have an understanding of this strategy to draw upon when leading. The result is managing the status quo rather than creating systemic change.

Thinking in terms of systems means identifying not only the networks or interrelationships operative within a situation but how these connections govern the behavior of the whole. For example, sustaining a change in one part of the system requires support from all the other parts of the system: the entire system is impacted (Rohmann, 1999).

Because the bureaucratic model was designed to resist change, it can per-

petuate itself over long periods of time. Systemic change in education has been unsuccessful because leaders have tended to be managers who have adhered to the functions and structure of their position. This has prevented them from intervening systemically to bring about organizational change. As a result, the organizational system operates in maintenance mode rather than goal attainment mode. Leading for innovation has necessitated systemic leaders capable of moving the system out of maintenance mode and into goal attainment mode (Parsons, 1964). This has included the need for a conscious and intentional reallocation of fiscal and human resources to attain the espoused goal.

There is a difficulty in shifting an organization out of maintenance mode and into goal attainment mode in highly bureaucratic contexts. Scott and Marshall (2005) suggested that in such contexts the hierarchical structure supports rigid paths of communication, opportunities for secrecy, ponderous numbers of rules and regulations, and a well-defined chain of authority. They stated,

> [There exists concern] about the indestructibility of fully established bureaucratic structures. . . . The professional bureaucrats are also chained to their activity and thus seek its perpetuation. . . . Bureaucratic knowledge is thus power, not only in the sense of expert [i.e. technical] knowledge, but also as concealed knowledge which enables officials to hide behind routines and procedures (pp. 46–47).

Because an organizational system has operated in maintenance mode, the challenge of a leader is unfreezing the system in terms of institutionalized norms, values, and beliefs (Lewin, 1951). From a systems perspective, success would be defined as the system moving into goal attainment. According to Lewin, organizational change involves three phases: unfreezing, moving, and refreezing.

The unfreezing phase of change has necessitated what Lewin (1951) called driving and restraining forces. He stated that an individual or organization exists in a state of equilibrium wherein the forces for and against change are held in balance. Disequilibrium is necessary in order for change to occur. Then the change happens through a shift in the social forces acting on an individual or group within the social-psychological environment. This means that the existing equilibrium needs to be unfrozen by changing the balance between the driving and restraining forces. This necessitates identifying the people who possess the self-efficacy and receptivity to become involved in the change process. Such involvement takes the form of building capacity for system-wide change.

Creating such capacity occurs through the use of the normative re-educative strategy. According to this approach, leaders understand that changes in the workplace impact the people working with them. Change, then, involves addressing the values, beliefs, dispositions, attitudes, and practices of these people. This occurs when leaders draw upon an understanding of adult learning. These leaders emphasize and work toward development of shared understandings focused on the need and urgency for change. From

this understanding emerges a change in structure. Application of this understanding to education means ensuring that there is enough time built into the work so that teachers actually are able to engage in professional development. This also suggests that professional development should be based on a solid foundation of adult learning theory. Additionally, change necessitates the reallocation of fiscal and human resources towards increasing the driving forces and reducing the restraining forces. Reallocation of resources requires a focus on helping to identify reasons to change people's concepts, perceptions, or skills and turn this understanding into action.

Using Lewin's model, the greatest restraining force in education has seemed to be that leaders have not engaged in systems thinking (Fullan, 2005). They haven't known how to change organizational cultures. This has resulted in sabotaging the re-culturing of the organization by operating in ways that maintain the very system needing to be transformed. Sarason (1990) illustrated this problem:

> Like almost all other complex traditional social organizations, the schools [based on the existing culture of the district] will accommodate in ways that require little or no change. . . . The strength of the status quo—its underlying axioms, its pattern of power relationships, its sense of tradition and, therefore, what seems right, natural, and proper—almost automatically rules out options for change (p. 35).

Lessening the restraining forces has included (a) district and site investment in professional development, (b) clear communication by the superintendent that the responsibility of every department in the district is to contribute to and attain the transformation of the education system and holding the department leadership accountable for evidence of support, (c) superintendent and school board commitment to changing the organizational model of the district from being bureaucracy driven to being driven systemically, (d) changing policies and administrative regulations that hinder the change process, (e) and selecting principals who operate in the same manner and take responsibility for leading and supporting the change process. Central to this first phase is meeting the needs of the people involved in a respectful, supportive, and relevant manner.

During this stage of the process, people who fulfilled the roles of managers of the bureaucracy must become leaders focused on changing the very culture of the organization. Bennis (1989) indicated the need for a shift in role from manager to systemic leader because school districts and schools are ". . . social systems in which people have norms, values, shared beliefs, and paradigms of what is right and what is wrong, what is legitimate and what is not, and how things are done (p. 30)." Fullan (2005) asserted that the central work of today's educational leader is changing the culture of an organization but stated that this rarely happens in actuality. For all the rhetoric and current claims made by most educators in positions of authority that they are systems thinkers, the claims have tended to be proven false. Changing the organizational culture has been avoided and replaced by managing

the day-to-day operations of the school district or school. The work of changing the organizational culture seems to be avoided, and solving the day-today problems of the school or district is embraced. Furthermore, Fullan asserted that a ônew breed of leaderö has been needed because "Sustainability is the capacity of a system to engage in the complexities of continuous improvement consistent with deep values of human purpose" (p. ix).

The second stage of the change process is what Lewin (1951) called the moving phase. Once the unfreezing stage is successful, this next stage must be addressed. This means that people in authority have not underestimated the level of support needed for people at the classroom, school, and district levels. Professional development should be based on adult learning theory with ongoing coaching as a major component of support.

Adult learning principles must be used to guide the change because changes in familiar practices can be threatening as purported by Evans (1996):

> Change immediately threatens people's sense of competence, frustrating their wish to feel effective and valuable. . . . Alterations in practices, procedures, and routines hamper people's ability to perform their jobs confidently and successfully, making them feel inadequate and insecure, especially if they have exercised their skills in a particular way for a long time (and even more if they have seen their performance as exemplary) (pp. 32–33).

Once the innovation has been implemented, the final phase begins. During this phase the leader maintains a focus on refreezing or "stabilizing and maintaining the new equilibrium" (Zand, 1981, p. 110). An indicator that refreezing has occurred is the acceptance and commitment of people to sustain the innovation. This has resulted from the innovation becoming familiar to those involved in using it. Refreezing occurs when people accept and are committed to the change. Benne (1985) emphasized the importance of an internal shift within the person in quoting the work of Lewin and Grabbe (1945, p. 218): "It is basic for reeducation that this linkage between acceptance of new facts or values and acceptance of certain groups or roles is very intimate and that the second frequently is a prerequisite for the first." Schein (1980) further observed that change includes multiple stages that must be addressed before the change can stabilize.

Adult Learning

As early as 1926, Lindeman identified insights into adult learning that can guide contemporary administrators and leaders. He noted that the learner's life experiences are central to learning and that there are certain conditions they require in order to choose learning. Within those conditions the following must be considered:

> . . . meaning must reside in the things for which people strive, the goals which they set for themselves, their wants, needs, desires and wishes. . . . They want to count for something; they want their experiences to be vivid and meaningful; they want their

talents to be utilized; they want to know beauty and joy; and they want all these real-izations of their total personalities to be shared in communities of fellowship (p. 9).

In extending Lindeman's earlier work, Knowles (1980) incorporated his theory of andragogy regarding adult learning. According to Knowles, the four basic assumptions of andragogy include: (a) adults have a psychological need to be self-directing, (b) adults bring an expansive reservoir of experience that can and should be tapped in the learning situation (c) adults' readiness to learn is influenced by a need to solve real-life problems often related to adult developmental tasks (d) adults are performance centered in their orientation to learning—wanting to make immediate application of knowledge. In 1984 he added an additional assumption which indicated that adult learning is primarily intrinsically motivated. A number of theorists have questioned Knowles' theory, especially as it relates to whether or not his learning assumptions relate to adult learning only (Tennant, 1986; Brookfield, 1986; Pratt, 1988, Rachal, 2002).

When people in authority develop a working knowledge of adult learning as well as organizations as social systems, they can lead for innovative practice. There exists a commonality in both adult learning and changes in organizational systems. Both require a process of moving from maintenance mode of habitual ways of thinking and acting to goal attainment mode (i.e. sustainable implementation of the innovation). In working with individuals as well as groups within the organization, leading for innovative practice means a leader knows how to "unfreeze," "move", and "refreeze" the organization and the adults with whom he or she works. A person desiring to become a systemic leader and operate within a bureaucratic model of organization until another emerges may be helped by acquiring knowledge of transformational learning, understanding and applying transformational learning and ultimately engaging in transformational learning.

Transformational Learning and Systemic Leadership in Changing Organizations

Socrates is credited with saying that the unexamined life is not worth living. Erikson (1998) asserted that most people live lives of unexamined assumptions. There is a saying that is attributed to Carl Jung. A paraphrase of it is that most people are willing, and begin enthusiastically, to make a journey inward toward self-understanding. However, at the first unpleasant encounter that surfaces an unexamined assumption or calls into doubt a belief, most people run away from such a journey never to return to the pursuit. Maybe changing habituated ways of thinking and acting is too hard and perseverance is too weak. This may be a reason that Fullan (2005) questioned whether people in leadership positions in education today are capable of making the changes necessary. Because transformative learning theory is based on the assumption that one enters into such learning because of a disorienting event or series of experiences in conflict with one's

existing worldview, people in positions of authority can avoid questioning one's functioning within a bureaucracy, continue to limit thinking to reductionistic linear causality, and retain a bureaucratic mindset resulting in maintaining the current system of education and thwarting the sustainability of innovative practices.

The depth of commitment, perseverance, courage, and struggle involved in authentic transformative learning cannot be emphasized enough. It requires a level of critical self-examination that permeates a person's intuitive, rational, emotional, ethical, social, and intellectual dimensions of how one has made sense of the world. Calling into question one's present worldview or concept of reality ultimately occurs within the context of one's identity. For example, social justice is not simply a set of practices that can be separated from the person who aspires to be a leader for innovative practice (Mirci, 2000). Evidence of this can be seen in the lives of people such as Dr. Martin Luther King, Jr., Gandhi, Mother Teresa, Paulo Freire, Cesar Chavez, Harvey Milk, Eleanor Roosevelt, Reuven Feuerstein, bell hooks, Henry Giroux, Ira Shor, and Jonathan Kozol.

Paul (1992) revealed that identity is encompassed in a way of thinking. He suggested that thinking and knowledge are intertwined, and knowledge acquisition does not follow a clearly defined path. The act of thinking requires us to consider supportive as well as opposing information. It must have a purpose that makes sense to us:

> In other words, we must "argue" ourselves out of our present thinking and into thinking that is more or less novel to us if we are to gain genuine knowledge. . . . When we talk as if knowledge could be divorced from thinking, and thinking divorced from struggle . . . we distort the nature of knowledge (p. xi).

Transformative learning theory has continued developing over the course of 25 years. Mezirow (2000) and Cranton (2006) have supported its evolvement and have expressed the belief that it is a theory in progress. Although it began as a model that relied heavily on rationality, it has expanded to encompass the roles of emotion and intuition in learning (Dirkx, 2001). The following definition by O'Sullivan (2003) reflects this expanded understanding of the theory:

> Transformative learning involves experiencing a deep, structural shift in the basic premises of thought, feelings, and actions. It is a shift of consciousness that dramatically and irreversibly alters our way of being in the world. Such a shift involves our understanding of ourselves and our self-locations; our relationships with other humans and with the natural world; our understanding of relations of power in interlocking structures of class, race and gender; our body awarenesses, or visions of alternative approaches to living; and our sense of possibilities for social justice and peace and personal joy (p. 327).

This theory may appeal to those who desire to develop into systemic leaders as they engage in a change process of personal transformation. This can be overwhelmingly and incredibly threatening because such an endeavor inevitably calls into question the very sense of the world people have constructed. Once a leader has gone through transformative learning,

he/she may be able to increase in empathy for people involved in implementing an innovation.

If people engage in transformative learning to meet a need for achieving a purpose, then they must possess the intellectual perseverance necessary to sustain the pursuit. Paul (1992) offered the following definition of intellectual perseverance: "Willingness and consciousness of the need to pursue intellectual insights and truths despite difficulties, obstacles, and frustrations; firm adherence . . . to struggle with confusion and unsettled questions over an extended period of time in order to achieve deeper understanding or insight" (pp. 652–653).

According to Mezirow's (2000) theory, people either experience a sense of disequilibrium caused by an event or enter into disequilibrium over time initiated by a dilemma. For example, a superintendent may realize he/she possesses a bureaucratic mindset but is being held accountable for change by a school board where the majority of members are systems thinkers. Another example would be to examine one's possible prejudices as they relate to racism, sexism, heterosexism, ableism, ageism, classism, and ethnocentrism. These would create a dilemma because of different ways of perceiving situations. With perseverance, this may signal that a person is moving out of maintenance mode or habituated ways of thinking. Unfreezing one's current belief system can prove quite threatening. If the theory is viewed systemically, disequilibrium can impact one's understanding of self that encompasses identity and convictions (Mezirow).

The magnitude of impact caused by disequilibrium can be illustrated by Marzano's (1998) systemic concept of the self-system in the brain. According to Marzano, there are three systems operating in the brain: the cognitive (one's existing knowledge base), meta-cognitive (a system responsible for planning and monitoring what the self-system chooses to learn), and self-system. Of the three, the self-system is the executive function in terms of choosing whether or not to engage in any act of learning. This system is consistent with adult learning theory and the definitions of learning shared in this paper in that it encompasses the current identity of the person. This means the self-system is comprised of one's self-attributes (everything related to beliefs about one's sense of self ranging from perceptions of intelligence to physical appearance). The second component involves beliefs about self in relationship to others. This includes individual and group relationships and the reasons one chooses these. The third component involves beliefs about one's self-efficacy. This refers to beliefs about one's capacity to succeed in attaining something. The fourth is one's beliefs about the nature of the world as existing on a continuum between friendly and hostile. The more one falls towards the hostile end of the continuum, the more inflexible or rigid one's thinking. The final component includes beliefs about one's sense of purpose in life. The concept of the self-system is introduced here to reinforce the notion that leading for innovation means understanding that changes within an organization can deeply impact the habituated self-systems of the people involved.

If there is a significant enough dilemma or disorienting event or series of experiences causing a shift in how one interprets reality, understanding the concept of the self-system may be helpful because it means changing one's perceptions of self, others, and the world. Transformative learning involves the capacity to challenge and have challenged one's current assumptions as well as surfacing unexamined but operative other assumptions. This requires intellectual courage, defined by Elder and Paul (2006) as:

> Willingness to face and fairly assess ideas, beliefs, or viewpoints to which we have not yet given a serious hearing, regardless of our strong negative reactions to them; arises from the recognition that ideas considered dangerous or absurd are rationally justified sometimes, in whole or in part, and that conclusions or beliefs that those around us espouse or inculcate in us are sometimes false or misleading. . . . [W]e must not passively and uncritically accept what we have learned (p. 322)

The point is that the leader engages in a form of critical self-examination. This process directly focuses on one's internalized assumptions, beliefs, values, and ways of making sense of the world. In summarizing Mezirow's original phases of transformation posited in 1975, Cranton (2006) noted that they focused primarily on "preparation for and implementation of new, revised perspectives," but that "In recent years, the emphasis has been much more on encountering the disorienting event [or experiences occurring over time] and critically questioning or responding to the assumptions and expectations that make it disorienting" (p. 18).

Cambourne's Conditions of Learning as a Model for Reflection

In the next section of this article we adapt and present Cambourne's Conditions of Learning (1988) as a set of criteria a leader might use to engage in a process of critical reflection. Because Cambourne's conditions are interrelated, the assumption is that the person creating such conditions is doing so systemically to create a culture for continuous learning. The theory as originally developed was based on research regarding the conditions in which infants learned to speak. There were eight conditions and when seven were operating as intended, the eighth one emerged to empower learning. The eight conditions include: (a) Expectation, (b) Feedback or Response, (c) Approximations, (d) Modeling, (e) Responsibility, (f) Practice, (g) Immersion, and (h) Engagement. The discussion of each condition as it relates to leadership is followed by sample reflective questions that a leader might develop to assure that the innovations being considered are meaningful, purposeful, ethical, and aligned with the vision and mission of the organization.

Description of Conditions and How They Could Operate as Criteria

The first condition, *Expectation,* uses a term which may be misleading be-

cause it is often used to tell people what they are supposed to do (e.g., "I expect you to behave"). According to Cambourne, Expectation is a belief existing deep within a person in authority that others can succeed. It is conveyed nonverbally as well as verbally. When adapted for leadership, this condition would mean believing that the people whom you lead are capable of growing socially, emotionally, ethically, and intellectually. This belief would reflect an understanding of adult learning so that the leader could convey it through expectation. The belief also would be informed by professional knowledge regarding social systems, how they change, and how such change parallels the ways individuals change. Given the often-made assertion that educators are responsible for creating learning environments for all students, expectation would include that a leader could deconstruct the meaning of "all" students to recognize any who have not been served appropriately.

Reflective Questions:
1. Do I deeply believe and convey the belief through my expectations that staff members and students can succeed?
2. What evidence exists that I am conveying the expectation, or "gut" belief, that together with others we can create a safe learning environment that is inclusive rather than exclusive and embraces students, family members, and staff members?
3. Do I have the same expectation of this kind of success for myself?

A second condition is *Feedback or Response.* This condition means that the leader strives to limit the use of moralistic evaluative statements such as "great" or "excellent," as well as, negative feedback. Instead, feedback refers to specifically stating information that reflects how a person can come closer to hitting the bull's eye of proficiency. If the person demonstrates proficiency, the leader reiterates the evidence of this person that is indicative of proficiency.

Reflective Questions:
1. What evidence exists that my feedback or responses to others reflect my expectations of success as defined in the first condition?
2. What evidence exists that my responses or feedback reflect that I have sought to identify and address the interconnected dimensions of a situation so as to reflect progress towards systems thinking?
3. What evidence exists that I am moving towards feedback that furthers learning rather than impedes development through the use of moralistic judgments like "excellent" or "bad" that imply that I, as leader, only need to make such superficial comments instead to providing feedback or responses that are specific and informative to the individual or group with whom I am interacting?

A third condition is *Approximations.* This condition challenges the unex-

amined assumption that accuracy is supposed to be immediate. In natural learning people make errors or approximations toward mastery or proficiency. An assumption perpetuated by our inherited industrial model of education is that "failure" arises from deficits within the student or other person. The condition of approximation means that instead of viewing mistakes as simple errors to be corrected, they should be viewed as inaccuracies that reflect effort on the individual that the leader can seek to understand and then provide the feedback necessary for the person to move toward mastery.

Reflective Questions:
1. What evidence exists that my response or feedback to others reflects an understanding that errors occur, indicate effort, and represent approximations toward mastery that I am responsible for helping the person attain?
2. What evidence exists that my response or feedback is shared in ways that simultaneously convey my expectation of success for the other person?
3. What evidence exists that I not only honor the approximation as movement towards mastery but also work with the other person to attain mastery given that errors are critical to learning?

A fourth condition is *Modeling*. This condition means that everything an adult does serves as a model of behavior. An adaptation of this condition to leadership means that the leader is aware that he or she constantly is modeling expectations through response or feedback, the honoring of approximations while supporting development toward mastery, and the use of the other conditions yet to be addressed. The leader consciously and intentionally seems to model professional standards of behavior that include cultural proficiency and a stance towards social justice for all people.

Reflective Questions:
1. What have I modeled today in terms of expectations, responses or feedback, honoring of expectations, and the other conditions of learning?
2. In what ways have I been conscious and intentional in modeling cultural proficiency and social justice in my interactions with others?
3. How have I modeled what others have needed so that they could move from approximations to mastery?

A fifth condition is *Responsibility*. This condition means that the adult provides the child or young person with choices within boundaries. When applied to adult leadership, it means that the leader examines situations, issues, and tasks in a systemic way, seeking to identify all of the interconnected dimensions. Possibilities are identified and consequences of choosing among the different possibilities are analyzed within a context of collaboration with others. The leader works with others to develop shared understandings, especially around the vision and mission, and then models decision-making that is not arbitrary but based on the shared understand-

ings. As much as possible the leader strives to present options for the staff to consider and, hopefully, achieve consensus on in moving forward with a course of action that is aligned to a clearly identified and relevant purpose.

Reflective Questions:

1. What evidence exists that I am serving as a "connector" in establishing relationships with others and dialoguing with them to create shared understandings around issues of deep moral purpose?

2. How am I holding myself accountable for:

   Creating the conditions of learning with all of them operating interdependently to create an organizational culture where continuous learning becomes normative and focuses around a psychologically and physically safe environment as evidenced by cultural proficiency and social justice?
   Using the conditions of learning to help others in attaining proficiency regarding social systems, how they operate, and how we need to work together when the need arises to implement an innovation that necessitates moving the system from maintenance mode to goal attainment mode?

A sixth condition is *Practice.* This condition was also labeled as *use* or *employment* as the theory was being developed. Originally this condition meant that children and youth needed opportunities to practice what they were learning in contexts that were relevant to them. In terms of adaptation for leadership reflection, this condition addresses the issue of professional development. The importance of professional development that is aligned to knowledge of adult learning and how social systems function, cannot be emphasized enough.

Reflective Questions:

1. What evidence exists that I am creating the necessary conditions of learning in a systemic manner to support professional development where individually and collectively movement out of maintenance mode and into goal attain mode is taking place?

2. How have I served as a "connector" and conveyed that implementing innovative practice is challenging because of our habitual ways of thinking and acting that serve to provide a sense of security and competency within others and self?

3. How have I created conditions for learning so that shared practice exists at the school in terms of social justice and the use of cultural proficiency?

A seventh condition identified by Cambourne is *Immersion.* This condition means that the adult surrounds the infant in uses of language and does so in an interactive manner with the child. When applied to leadership this condition involves immersing staff members in the innovative practice that is supported strongly through the use of all the conditions of

learning operating interdependently. The condition also involves using the conditions of learning to create an intentional organizational culture that reflects both the standards for the teaching profession as well as leadership standards. Because there exists a gap between traditionally underserved students (i.e. African-American, Mexican-American, Native American, and impoverished) and their more advantaged peers, the work of immersion also includes the moral imperative of working to attain social justice and cultural proficiency. Towards these ends, the leader embraces the moral imperative of creating an organizational culture characterized by equity and equality.

Reflective Questions:
1. What choices or decisions did I make today that contributed to or impeded attaining the vision and mission of the organization?
2. Which of the conditions of learning did I use to further immersion into a culture reflecting equity?
3. Which of the conditions of learning did I use to further implementation of innovative practice?

The eighth and final condition identified by Cambourne is *Engagement.* This condition refers to the learner. Cambourne posited that if all the other conditions were acting interdependently as intended, there would result a greater likelihood that the infant and young child would develop the belief that he or she possessed the potential to succeed. This condition is far more complex given the differences between pedagogy and andragogy. However, as adult learning theory has indicated that when innovation implementation includes support and occurs through the use of a normative-re-educative change strategy, people implementing the innovative practice may possess a stronger sense of self-efficacy in working through the disequilibrium of learning innovative practices to the point of habituated use.

Concluding Thoughts: Melding Theories of Organizational Change, Adult Learning, and Conditions of Learning

If we believe leadership can be learned, then we must engage in learning. If we believe that leaders should be systemic thinkers, then it is imperative that they acquire knowledge of how one learns and how one can become transformative and reflective in thought and actions.

Given the shift from an Industrial Era to one saturated with communication and other technologies, meeting the challenges facing people in positions of authority in educational institutions is of utmost importance. If such people simply draw upon their existing stores of knowledge based on experiences of being immersed within a bureaucratic model of organization and socialized into using reductionistic and linear causality thinking, then there is the possibility that leading for innovative practice will not oc-

cur. This is because such leaders actually will be managing within the function and structures of bureaucracy. However, if such leaders recognize the interconnections between organizational change and adult learning, they may be able to become systems thinkers capable of attaining sustainable change. In attaining such proficiency, self-examination through critical reflection will be an ongoing necessity. The conditions of learning described in this article may provide the criteria for such reflection. Although such leadership learning may be difficult and the tendency to avoid persevering to attain mastery may be a constant temptation, the result of developing proficiency may ultimately prove rewarding as one makes a positive and profound difference in the world as a systems-thinker-in-action (Fullan, 2005).

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