Evaluating Leadership Training and Development: A Levels-of-Analysis Perspective

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The changing context of work and organizations is making new demands of leadership. Differing expectations on the goals of leadership training, and development are also emerging. To date, few comprehensive models to guide evaluation research and practice in the field of leadership training and development have appeared in the literature. This article puts forward a multilevel evaluation model to guide leadership training and development at five levels of analysis: Individual, Leader-Follower Dyad, Team, Organizational, and Community. The model attempts to overcome significant limitations in previous evaluation models by putting forward clearer theoretical rationales to explain leadership training and development impacts at each of these five levels. In so doing, it posits a framework for identifying how specific behavioral and cognitive factors in organizations support social capital, and the particular social and emotional skills and behaviors that facilitate social participation from which social capital can emerge. The model offers an integrative approach to examine how leadership may interact and bridge these differing levels of analysis.

There is a general consensus that organizations have experienced a recent period of considerable investment in leadership training and development (LTD) (O’Leonard, 2007). Accompanying this trend has been a broadening of the goals articulated by organizations as to the impact expected from this investment. In a review of leadership studies published between 1984 to 2000, Collins (2001), reported that 30% of studies were evaluating LTD for its impact at the organizational level. Elsewhere, other authors have suggested leadership development achieves community-wide goals such as improvements in health and public good (Martineau & Patterson, 2010).

Recently, Clarke and Higgs (2010) found significant variations in the goals being pursued by ten leadership academies representing different business sectors in the United Kingdom. These goals were closely aligned to various levels (individual, organizational, community) at which LTD was expected
to impact. The range of interventions now being undertaken under the umbrella of leadership development reflect changing notions of leadership. In two decades, Conger’s (1992) classification of LTD as taking place either through (1) personal growth, (2) conceptual understanding, (3) feedback, or (4) skill building now fails to fully capture the complexity and scope of LTD that is taking place in today’s organizations. This represents a significant challenge to HR practitioners and managers in how best to evaluate LTD. Especially since most evaluative processes have traditionally focused primarily on the individual leader. This takes place against a background where securing leadership talent and determining the effectiveness of HR practices for developing human capital are highlighted as top priorities for HR departments (Elias & Scarbrough, 2004; Fegley, 2006).

This article builds on previous work in the field of leadership development in putting forward a comprehensive, multilevel evaluation model to guide the evaluation of LTD. Following calls in the literature for more integrative approaches to theory building in leadership (Avolio, 2007), the model identifies a taxonomy to guide LTD evaluation at five levels of analysis: Individual (leader, follower), dyad (leader-follower), team, organization, and community. Significantly, theoretical and empirical developments in both leadership and LTD effectiveness are drawn upon in order to identify formative as well as summative criteria at each level. Although each level is not assumed to be hierarchically dependent on those preceding it, the model does however identify where LTD criteria at lower levels (e.g., at the individual level) might contribute to effects at higher levels. The model also considers in detail evaluation criteria at the community level, incorporating recent developments in integrative leadership theory. The article is organized as follows. First, current approaches to evaluating LTD are briefly reviewed and their limitations highlighted. Next, each of the five levels of LTD evaluation is presented and rationales for each of the targets of summative and/or formative evaluation explained. The article then concludes with a discussion of the implications of the model for advancing theory and practice in evaluating LTD.

Review of the Literature

Writing on leadership development evaluation has for some time been generally overlooked (Avolio, 2007). Recently, however, a number of authors have begun to direct their attention to the topic. Day (2000), presented a review of research in leadership development that examined the effectiveness of six popular practices. These included 360-degree feedback, executive coaching, mentoring, networking, job assignments, and action learning. He identified a range of development targets to guide evaluation for each of these practices, distinguishing between leader and leadership development. In the latter, leadership is perceived as a function of social resources embedded in relationships, as well as an emergent possibility within the wider social system. Such
distinctions become critical for delineating differences in the developmental targets of leader and leadership development as being primarily concerned with either human capital or social capital respectively.

Gardner, Avolio, Luthans, May, and Walumbwa (2005), next described a model of authentic leadership evaluation that included elements of the leader, follower and context. Their model included (1) cognitive elements that focus on leader and follower self-awareness, (2) individual leader-follower behavior, (3) the historical context (which identifies how previous experience or individual factors have influenced development in the past), and (4) proximal context (which highlights organizational climate has impacting on leader and follower development). Although a somewhat more detailed model, a limitation is that it is primarily focused towards evaluation criteria at the individual level.

A number of more recent developments have sought to expand on these early initiatives. Ely et al. (2010) presented an integrative framework for evaluating leadership coaching based on Kirkpatrick’s four-level taxonomy. A focus on formative evaluation was included where assessment also incorporated those factors and conditions considered to bring about positive coaching outcomes. For example, the need to examine aspects such as rapport, trust and collaboration in the client-coach relationship, and the nature of challenge and support as part of the coaching process. Orvis and Langkamer (2010) also stressed a focus on both process as well as outcome in their model for evaluating leader self-development. Building on the instructional design and adult education literatures (Kraiger, 2002), they presented a taxonomy of instructional design attributes that focused on content relevancy, learner engagement, challenge, structure, and experiential variety. An important contribution by Hoppe and Reinelt (2010), was to shift the attention of evaluation away from a particular LTD activity, instead to evaluate the impact of LTD on leadership networks. Through a focus on dimensions of connectivity within a network, changes in network structure can be identified which suggest whether LTD impacts on network ties. This study is of particular note, since it explicitly recognizes leadership at the community level, an aspect that has received far more limited attention in previous models of LTD.

The EvaluLead framework (Grove, Kibel, & Hass, 2007) is perhaps the most developed of those so far discussed, in that it explicitly attempts to link associations between results observed in the individual, organizational and societal domains. However rather than a theoretical model it is better described as a methodology that advocates evaluating four parameters of LTD. These are identified as (1) context (including the purposes and assumptions surrounding leadership); (2) result types (i.e., the different forms or depth of change required, such as developmental or transformative); (3) domains (these are listed as the three levels at which LTD results are expected to occur); and (4) forms of inquiry (the different approaches to collecting data and assumptions underpinning them). An important contribution of the framework
is that it emphasizes identifying context specific notions of leadership associated with differing levels of impact in an evaluation. However beyond open systems theory, the theoretical arguments put forward to explain differing levels of impact are underdeveloped. Although these approaches represent advances towards building a theory of leadership development to guide evaluation efforts, they are limited in that they either consider LTD evaluation on the basis of the nature of the intervention (e.g., Ely et al., 2010; Orvis & Langkamer, 2010), or fail to incorporate all levels of analysis in their evaluation models (e.g. Day, 2000; Gardner et al., 2005; Grove et al., 2007). The model presented here takes us forward in that it is an initial attempt to find connections between leadership at differing levels and identify how these map to potential criteria for evaluating LTD given its multiplicity of goals. Like many HR development evaluation models, it is not assumed that all LTD interventions would be expected to impact on all levels. Rather, it offers a framework for selecting the most appropriate criteria, depending upon the level at which LTD planners are expecting some impact.

Analysis at the Individual Level

Table 1 shows the conceptual model beginning with the individual level of evaluation. Undertaking evaluation at the individual level remains the most thoroughly developed and informed within the HRD literature (Kuvaas & Dysvik, 2010; Santos & Stuart, 2003; Williams, Hirsh, & Burgoyne, 2004). In terms of leadership development, this recognizes outcomes from LTD activities as affecting both leaders and their followers. In relation to the leader, three categories of summative criteria are identified in the model: (1) leader knowledge, skills, and behaviors, (2) leader identity and self-awareness, and (3) leader effectiveness.

**Leader knowledge, skills, and behaviors.** Bass (1990) stated that increasing supervisors’ human relationship knowledge and skills was a basic goal of leadership training. Here, evaluation studies have generally mirrored much of the HRD literature in finding training can have an impact on leader/manager performance on the job (Taylor, Russ-Eft, & Taylor, 2009). Mumford, Campion, and Morgeson, (2007) conceptualized 21 leadership skills in four domains, consisting of cognitive skills (e.g., active listening, critical thinking, information gathering); business skills (resource allocation and analysis); interpersonal skills (social perceptiveness and persuasion); and strategic skills (problem-solving, visioning, and systems thinking).

**Leader identity and self-awareness.** Leader identity is recognized as an aspect of an individual’s self-concept that is included here as an important outcome criteria. Leader identity is closely associated with one’s self-efficacy, or confidence to lead a group. This facilitates increased participation in leadership activities or experiences (Eden, 1993; Hannah, Avolio, Luthans, & Harms 2008). Leader identity has also been suggested to affect participation in leadership development (Murphy & Johnson, 2011) as well as providing the basis
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<tr>
<th>Level</th>
<th>Summative Criteria</th>
<th>Formative Criteria</th>
<th>Example LTD Approaches</th>
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<tbody>
<tr>
<td>INDIVIDUAL Follower</td>
<td>1. Follower Outcomes (Attitudes and Performance)</td>
<td>1. Follower Implicit Leadership Theories</td>
<td>1. Training for followers 2. Training for leaders and followers together, 3. Socialization practices</td>
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<td>LEADER-FOLLOWER</td>
<td>1. Leader-Follower Bonding Social Capital (Relational and Cognitive)</td>
<td>1. Leader-Follower Relationship Quality (Affect, Contribution, Loyalty, Respect)</td>
<td>Same as for Individual Leader and Individual Follower above</td>
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Table 1. A Multilevel Model for Evaluating Leadership Training and Development (Continued)

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<th>Level</th>
<th>Summative Criteria</th>
<th>Formative Criteria</th>
<th>Example LTD Approaches</th>
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<tr>
<td>ORGANIZATIONAL</td>
<td>1. Organizational Performance and Effectiveness (Efficiency, Human Capital and Adaptation to environment)</td>
<td>1. Leadership Culture</td>
<td>1. Same as for Individual Leader above</td>
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<td>3. Organization Development</td>
<td>3. Organization Development</td>
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<td>4. Strategic planning exercises</td>
<td>4. Strategic planning exercises</td>
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<td>6. Leader planning meetings</td>
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<td>2. Network Conditions</td>
<td>2. Inter-organizational development activities (eg search conferences,</td>
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<td></td>
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<td>3. Shared Leadershipway</td>
<td>3. Inter-organizational learning activities (eg collaborative forums, network</td>
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<td>4. Inter-Organizational Learning</td>
<td>maintenance activities,</td>
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for leaders to develop self-awareness and desire personal change (Boyatzis, 2008). Through reflection and feedback, self-awareness develops, which has been shown to be associated with leader effectiveness (McCarthy & Garavan, 2000). This continues to be the basis for the use of many of the self-diagnostic instruments that have characterized much leadership training and development.

**Leader effectiveness.** The acquisition of knowledge and skills and development of self-awareness, offer only a partial analysis at the individual leader level. Perceptions of the leader by followers as either “leaderlike” or how effective they are, implies the exercise or transfer of acquired knowledge or skills gained through LTD. This is referred to as leader effectiveness (Judge, Bono, Ilies, & Gerhardt, 2002). These represent indicators that are more likely to be associated with career development, since they reflect how leaders are regarded. As such, measures of leader emergence and leader effectiveness are likely to correspond with selection and promotion into leadership positions (Lord, DeVader, & Alliger, 1986).

**Proposition 1:** Summative evaluation criteria for LTD at the individual level include (1) leader knowledge and skills, (2) leader identity and self-awareness, and (3) leader effectiveness.

Three categories of formative criteria are also identified in the model that relate to those factors that support the impact of LTD at the individual level.

**Leader characteristics.** A number of factors found to be significant include the following individual leader characteristics: developmental readiness, opportunities and motivation to lead, and motivation to perform (Avolio, 2003; DeRue & Wellman, 2009).

**Transfer climate.** This refers to those work environment conditions under which leader-specific knowledge and skill acquisition is able to transfer to use on the job (Burke & Hutchins, 2007).

**Job developmental challenge.** Recognizing that leader skill development depends also on informal learning, directs the evaluation at the individual level to those aspects of job and work design that have been found to contribute to leader skill development. These have been found to be (1) working across boundaries, (2) unfamiliar responsibilities, (3) high-level responsibility, (4) creating change, (5) managing diversity, and (6) access to feedback (Enos, Tham, & Kehrhahn, 2003; DeRue & Wellman, 2009).

**Proposition 2:** Formative evaluation criteria for LTD at the individual level include (1) leader characteristics, (2) transfer climate, and (3) job developmental challenge.

**Follower outcomes.** Summative indicators for evaluating leadership development at the individual level also include (1) attitudinal and cognitive
follower outcomes including motivation, organizational commitment, trust, identification with the organization (Avolio, Avey, & Quisenberry, 2010), as well as (2) follower performance (Mumford, Scott, Gaddis, & Strange, 2002).

**Proposition 3:** Summative evaluation criteria for LTD at the individual level include (1) follower attitudinal and cognitive outcomes and (2) follower performance.

**Follower implicit leadership theories.** A further area for evaluation concerns followers’ implicit leadership theories. These comprise follower expectations and prototypes in relation to leaders that moderate the effects of leadership (Lord & Maher, 1993). Relational perspectives on leadership through a constructionist lens, suggest that followers’ implicit leader theories are shaped in negotiation with leaders over time (Gergen, 1994). We would, therefore, expect follower implicit leadership theories to be influenced as a result of leadership development within an organization.

**Proposition 4:** Formative evaluation criteria for LTD at the individual level include follower implicit leadership theories.

**Analysis at the Dyad Level**

In terms of summative evaluation, the outcome criterion of leader-follower social capital is highlighted at the dyad level.

**Leader-follower bonding social capital (relational and cognitive).** Although the concept of social capital has received minimal attention within the training and development literature (Van der Sluis & De Jong, 2009), its significance in promoting knowledge transfer (Levin & Cross, 2004) and in career development (Hezlett & Gibson, 2007) is well established. Social capital is defined as “the sum of the actual and potential resources embedded within, available through, and derived from the network of relations possessed by an individual or social unit” (Nahapiet & Ghoshal, 1998, p. 243). Social capital can be characterized in terms of differences between its source (such as the nature and frequency of contacts in a network, or structural capital) as well as the conditions under which it can be used (Burt, 2000). This has resulted in distinctions made between relational and cognitive types of social capital. Relational social capital has been suggested to involve conditions such as trust and reciprocal norms, whereas cognitive social capital involves conditions such as shared representations and systems of meaning (Bolino, Turney, & Bloodgood, 2002). Both forms enable resources to be obtained. Internal social capital is concerned with social ties that bond group members within a social group, whereas external social capital concerns social ties that bridge group members with other people external to their immediate social group. At the dyad level (or leader-member relationship), leadership
development is suggested to give rise to bonding social capital (Uhl-Bien, Graen, & Scandura, 2000).

**Proposition 5:** Summative evaluation criteria for LTD at the level of leader-follower dyad include the criterion of bonding social capital.

**Leader-follower relationship quality.** Leader-Member Exchange (LMX) refers to the quality of the interpersonal relationship between a leader and follower dyad (Uhl-Bien et al., 2000). The theory argues that high-quality leader-member relationships reflect the presence of high levels of mutual trust, respect, and obligation between both parties involved in the relationship. Most recently, this has culminated in the development of a four-factor model of leader-member exchange comprising the four exchange currencies of affect, contribution, loyalty, and professional respect. At the leader-follower relationship level of analysis, these four indices of relational quality are seen as targets for formative evaluation of LTD.

**Proposition 6:** Formative evaluation criteria for LTD at the level of leader-follower dyad includes mutual (1) affect, (2) contribution, (3) loyalty, and (4) respect.

**Analysis at the Team Level**

Teams represent a unit of organization where leadership has been found to exert significant influence (Salas, Sims, & Burke, 2005). In turn, team results and group processes have been linked to wider organizational outcomes (Hogan & Kaiser, 2005). At the team level, four outcome criteria are identified that form the basis for summative LTD evaluation: (1) team effectiveness (2) team performance, (3) relational team bonding social capital, and (4) cognitive team bonding social capital.

**Team effectiveness.** A number of authors have argued that measures of team effectiveness are more appropriate indicators of leadership. Studies show that leaders influence both team processes (such as team climate and dynamics) and the results they achieve (Hogan, Curphy, & Hogan, 1994; Kaiser, Hogan, & Craig, 2008).

**Team performance.** Relatively few studies have researched leadership and team performance outcomes (DeChurch, Hiller, Murase, Doty, & Salas, 2010). A recent study by C. Burke et al. (2006) has provided some insights into the impact of leadership at on team performance. Their results found that task-focused leader behaviors were moderately related to perceived team effectiveness and team productivity. By contrast, person-focused team leader behaviors were positively associated with perceived team effectiveness, team productivity, and team learning. A limitation of this work, however, is that it defines team leadership at the level of an individual team leader. In the evaluation model here, these leadership behaviors are seen as a property of the
team, which differing members may perform, depending upon the circumstances and are defined at the team level.

**Relational and cognitive team bonding social capital.** Relational social capital includes motivational aspects, of which reciprocity norms and trust are seen as the most significant. Cognitive social capital in contrast is often described as shared representations and paradigms (Nahapiet & Ghoshal, 1998). Salas et al. (2005) suggested that effective teamwork requires three essential coordinating mechanisms labeled as (1) shared mental models, (2) closed communication, and (3) mutual trust. The first and last of these coordinating mechanisms are thought to be the basis for relational and cognitive forms of social capital. Although leadership has been implicated in developing both trust and shared mental models for some time (Stout, Cannon-Bowers, Salas, & Milanovich, 1999), a role in developing social capital in teams is more recent (Emmerik, Jawahar, Schreurs, & Cuypers, 2011). Following Bolino et al (2002), social capital is recognized here as having structural, relational, and cognitive dimensions. Bonding social capital describes the structural dimension present within a social group such as a team. Consequently, both relational and cognitive forms of bonding social capital are, therefore, identified as key summative criteria.

**Proposition 7:** Summative evaluation criteria for LTD at the team level include (1) team effectiveness, (2) team performance, (3) relational team bonding social capital, and (4) cognitive team bonding social capital.

Two categories of LTD criteria are also identified in the model for formative evaluation. These are (1) team leadership processes and (2) team leader behaviors.

**Team leadership processes.** Salas et al. (2005) identified team leadership processes as (1) the creation, maintenance, and accuracy of the team’s shared mental model; (2) the facilitation of team effectiveness by monitoring the internal and external environment of the team to facilitate team adaptability, and (3) setting behavioral and performance expectations and tracking the abilities and skill deficiencies of team members.

**Team leader behaviors.** Recent findings have also suggested that leader behaviors can influence the development of bonding social capital. A study by Carmeli, Ben-Hador, Waldman, and Rupp (2009), found that leaders exhibiting relational leader behaviors cultivated social capital. This then mediated the relationship between leader behavior and employee vigor. Relational leader behaviors are those thought particularly relevant for developing strong interpersonal relationships and, therefore, most likely associated with social capital (Kozlowski & Ilgen, 2006). An additional study also demonstrated that employees exhibiting altruistic citizenship behavior occupied greater advice network centrality (Zhang, Zheng, & Wei, 2009). Together, these findings suggest that LTD (1) develops relational leader behaviors, and (2) altruistic
citizenship behaviors within team contexts are likely to affect team bonding social capital.

**Proposition 8:** Formative evaluation criteria for LTD at the team level include (1) leadership processes (maintenance of the team’s shared mental model, the monitoring of the internal and external environment, and establishing behavioral and performance expectations), and (2) leadership behaviors bringing about team level social capital.

**Organizational Level of Analysis**

**Organizational performance and effectiveness.** Drawing upon the strategic human resource management literature and human capital theory, Yukl (2008) put forward a theory of flexible leadership that identified organizational performance as dependent upon three determinants of organizational effectiveness. These were identified as: (1) efficiency and process reliability, (2) human capital, and (3) adaptation to the external environment. He argued that specific types of leader behaviors influence each of these key determinants. Task-oriented leader behaviors improve efficiency, change-oriented behaviors improve adaptation, and relations-oriented behaviors improve human relations in the organization.

**Organizational bridging social capital.** Hoppe and Reinelt (2010) have suggested that bridging social capital represents connections to diverse others within an organization. LTD is also considered to bring about social capital in the organization (Woolcock & Narayan, 2000). An important contribution made to the training and development literature by Brown and Van Buren (2009) is their argument that training promotes organizational social capital. They suggest that LTD can be designed to build relationships between participants that foster network ties, and establish reciprocity norms through repeated interactions and information sharing. Leaders in the same organization who have shared their LTD experience are more likely to be able to access social capital resources.

**Proposition 9:** Summative evaluation criteria for LTD at the organizational level include (1) organizational effectiveness and performance and (2) organizational bridging social capital.

Two criteria for targeting formative LTD evaluation at the organizational level are also identified in the model as (1) leadership culture and (2) indices of network connectivity.

**Leadership culture.** Martineau and Patterson (2010) posited a framework for directing LTD evaluation based on direction, alignment, and commitment as the outcomes of leadership development. A significant contribution of this work has been to suggest that LTD is responsible for the
Development of leadership beliefs and practices (in both leaders and followers) associated with bringing about a leadership culture. Leadership culture is identified as the mediating factor between direction, alignment, and commitment on organizational-level outcomes over the long term.

**Indices of network connectivity.** The second target for formative evaluation are indices of connectivity within organizational level leader networks. These have been recognized in the literature as contributing to the development of bridging social capital (Hoppe & Reinelt, 2010). These include (1) the level of coordination and collaboration among leaders, (2) the level of trust within the network, and (3) the extent of growth in the network.

**Proposition 10:** Formative evaluation at the organizational level for LTD includes (1) leadership culture and (2) indices of network connectivity.

**Analysis at the Community Level**

Assessing the impact of leadership training and development at the community level emphasizes the notion of leadership as socially situated and influenced by structures, institutions, and culture. The model also draws upon integrative leadership concepts as constituting the type of leadership that is able to work across organizational boundaries to solve “messy” problems (Alban-Metcalfe & Alimo-Metcalfe, 2010). Evaluation at this level move furthest away from deterministic notions that LTD will have an impact directly on community-level outcomes. The focus is instead on trying to bring about the interactive conditions that make a productive future more likely (Clarke, in press; Marion & Uhl-Bien, 2001). At the community level of analysis, community social capital is the main, broad summative criterion of interest included in the model.

**Community social capital.** Here the evaluation model focuses on the contribution LTD can make to bringing about more effective, self-sustaining learning networks and building social capital. In fostering these conditions at the community level, responses to wide ranging community problems (other distal, desired outcomes) are then more likely to follow. While individual leaders are seen as important and requiring a particular set of skills, LTD also involves shaping the context particularly structures and cultures. Within the health-care field particularly, LTD is increasingly being used as an intervention to improve social capital among leadership networks and community networks more widely (Ceraso et al., 2011; Umble et al., 2005).

**Proposition 11:** Summative evaluation at the community level for LTD targets community-level social capital.

Supporting the development of social capital at this level are four targets for formative evaluation. These are respectively (1) integrative leader behaviors,
(2) network conditions, (3) shared leadership, and (4) interorganizational learning. Complementing this perspective is a notion that leadership is viewed as a set of processes describing “what makes things happen” (Huxham & Vangen, 2005, p. 202). In this sense, it is not only individuals’ personal influence and their relational skills or behaviors but also structural and process ‘catalysts’ that can be thought of as constituting leadership.

**Integrative leader behaviors.** Based on structuration theory (Giddens, 1984), individuals are considered to be active agencies that through practices are able to influence the dynamic interaction between processes and structures at the community level. There have been a number of key contributions that have shaped our understanding of the critical leader behaviors deemed necessary. Crosby and Bryson (2005), for example, identified eight primary leadership capabilities. These included, among others, understanding the social and political context, building work groups, communicating and sharing a vision, and effectively implementing policy decisions. All of these emphasize the importance of behaviors considered necessary for effective boundary spanning and the creation of boundary groups.

More recently, Ospina and Foldy (2010), in their study of integrative leadership for social change, were able to distil five leadership practices and associated behaviors that were critical at this level. These were labeled as: (1) prompting cognitive shifts, (2) naming and shaping identity, (3) engaging in dialogue about difference, (4) creating equitable governance mechanisms, and (5) weaving multiple worlds together. Together these studies point to the following integrative leader behaviors and skills as supporting the development of community social capital. These are (1) relational behaviors, (2) political skills, (3) visionary behaviors, (4) authenticity, and (5) systems thinking.

**Proposition 12:** Formative evaluation at the community level for LTD include integrative leader behaviors and skills.

**Network conditions.** Leadership is emergent, and a function of the processes, policies, and structures that shape its enactment. It follows, then, that structures and culture need to be included as dimensions of the environment that will influence conditions for facilitating network building. Elsewhere, a number of other authors have also identified policy, system, and program changes as important targets for evaluating the impact of leadership activity (Cashman et al., 2012; Ceraso et al., 2011; Grove et al., 2007). These are all considered here as associated with conditions within a network that are able to support the generation and flow of social capital. Interventions that create new structural arrangements such as boundary-spanning groups, policy changes, and collaboration agreements are as important for shaping leadership as those interventions that focus on leaders themselves (Crosby & Bryson, 2010). This suggests that LTD efforts in this area should include a range of specific organization development and change interventions. These include...
large-system OD efforts for building social capital such as search conferences (Clarke, 2005), as well as interventions aimed at changing opportunities for social connectivity at the community level (Burnett, 2006).

**Proposition 13:** Formative evaluation at the community level for LTD includes network conditions that support collaboration and building social capital.

**Shared leadership.** Leadership at the community level recognizes a differing pattern of interdependence between organizational actors, which pose challenges for understanding complex problems and coordinating responsive actions within networks (Uhl-Bien, Marion, & McKelvey, 2007). Leadership, therefore, needs to be distributed throughout organizational networks in order to capitalize on the intelligence that is available (Gronn, 2002). From a community-level perspective, shared leadership is seen as central to differing organizational units spontaneously coming together, interacting and generating new knowledge and mutual learning.

**Proposition 14:** Formative evaluation at the community level for LTD include mechanisms and conditions to support shared leadership.

**Interorganizational learning.** The literature on interorganizational learning has drawn upon an understanding of interorganizational relations, dynamics, and collaboration and integrated this with more recent work focused on cooperation in strategic alliances and other networks. Meaning-making processes such as sensemaking are identified as key to enable cognitive social capital. Such processes are widely recognized as elements associated with interorganizational learning (Child, 2001). A systemic approach to LTD at the community level would incorporate interventions designed to bring about interorganizational learning.

**Proposition 15:** Formative evaluation at the community level for LTD include interorganizational learning processes.

**Implications for Theory and Practice**

Academics within the HR field have commented on the paucity of models on which to base the evaluation of training and development, with scant progress made in the development of more theoretically informed approaches (Russ-Élt & Preskill, 2001). Approaches to evaluation more tailored to the specific area of LTD have tended to incorporate evaluation criteria based on the nature of the LTD intervention and, as a result, offer limited theoretical models for LTD more broadly conceived. Alternative approaches have begun to address the evaluation of LTD incorporating a levels of analysis perspective, but to date these have been partial or incomplete. The multilevel evaluation model outlined
here represents an attempt to advance a more theoretically informed model of LTD evaluation that incorporates more recent developments in our understanding of leadership as a multilevel phenomena (DeChurch et al., 2010).

Although there have been some attempts to integrate social capital within leadership development (Day, 2000) and training evaluation models (Brown & Van Buren, 2009), the model is the first to identify how LTD influences different forms of social capital at the levels of leader-member relationship, team, organization, and community. These were identified as targets for formative evaluation. So, for example, team leadership relational and altruistic behaviors are suggested as bringing about bonding social capital in teams (Carmeli et al., 2009; Zhang et al., 2009). At the community level, integrative leadership behaviors (including relational behaviors, political skills, visionary behaviors, and systems thinking) in conjunction with structural and process catalysts (through network conditions, interorganizational learning and distributed leadership) are suggested as bringing about community social capital. The model, therefore, offers an integrative approach for examining how leadership may interact and bridge these differing levels of analysis.

Importantly, the model identifies formative evaluative criteria at each level of analysis. This helps us better to elucidate potential moderating and mediating variables influencing the effectiveness of LTD. Previous research in the literature suggests leadership development can have positive effects, although the results have been more equivocal when seeking to evaluate at the organizational level and beyond (Avolio et al., 2010). A recent meta-analytic study by Avolio, Reichard, Hannah, Walumbwa, & Chan (2009) found that overall, leadership interventions produced a 66% probability of achieving a positive outcome. Of note, effects varied significantly, depending upon the nature of leadership theory that underpinned the intervention. In emphasizing these formative criteria for evaluation, the model moves away from the assumption that there is a linear relationship between training and development activities and organizational-level outcomes (Tharenou, Saks, & Moore, 2007).

Formative evaluation criteria for LTD at the community level are significant, since complexity approaches to leadership suggest that linear chains of causality are increasingly difficult to demonstrate for LTD interventions at this level. A growing body of literature has criticized the study of leadership as reductionist and deterministic, ignoring the interactive dynamics that are a natural part of social systems (Regine & Lewis, 2000). This requires a focus in leadership development evaluation that, at higher levels of analysis, may require examining best guess conditions likely to bring about outcomes as opposed to outcomes per se.

The model also offers practical guidance to managers and HR practitioners charged with planning evaluations of their leadership training and development. For well over 50 years now the KSA (knowledge, skills, and attitudes) formula has dominated thinking in how we perceive the impact of training and
development (McGehee & Thayer, 1961). The model here extends well beyond previous conceptualizations of how to evaluate LTD, in that it highlights human capital as only one focus while it also directs our attention to the need to build social capital. In so doing, it moves HR practitioners to consider leadership beyond just individual level sets of competences, to also incorporate relational and systemic perspectives.

In identifying specific criteria for formative and summative evaluation at each of the multiple levels, the model assists HR managers to select and/or develop interventions better aligned to targeting the key criteria. So for example, investment in personality tests would be most appropriate for enhancing leader self-awareness, while investment in organizational development interventions (e.g., team building, strategy workshops, culture change) may be deemed important for enhancing LTD organizational or community effects. As a result, the model provides HR managers with far wider scope to determine the impact of investments made in LTD.

Conclusions

The past decade has witnessed considerable expansion in leadership training and development. At the same time, changes in our understanding of leadership are broadening horizons of what might constitute leadership development and our expectations of what it might impact. The evaluation model presented here offers a clearer distinction between the nature of leadership taking place at each of these five levels. It also describes the target criteria that can serve as the basis for summative and/or formative evaluation. An important aspect of the model is that it builds on developments in leadership theory to distinguish evaluation criteria for leadership development beyond the individual level. It incorporates more recent perspectives that recognize leadership as an emergent property within patterns of relationships and organizational networks. The model does have some limitations. First, it omits to include other possible intervening levels of analysis. For example, multiunit (but not organization) represented by departments or divisions within an organization represent a level not identified in the model. Similarly, the model does not seek to differentiate between levels of leaders (e.g., first-line supervisors, middle managers, or CEOs). Neither does the model prescribe detailed methodologies nor measures for undertaking LTD evaluation at these multiple levels. The model does, however, provide a framework for guiding both future research efforts that seek to establish relationships between leadership at these differing levels. Although this has primarily focused at how individual-level leader behaviors might interact at higher levels, it offers a basis for further research to build upon. For example, further development of the model could focus on how group-level factors such social identity in groups (team level) might influence effects at higher levels (Boyatzis, 2008). Given the lack of models to guide HR evaluation efforts in this area, this multilevel model
represents a further step in developing more expansive, theoretically grounded evaluation frameworks that combine practical advice for planning which criteria to include in an evaluation.

References


Evaluating Leadership Training and Development


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