PROGRAM ASSESSMENT

Leadership Development: Observations on Practicum as a Team-Based Approach

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Introduction

Over the last decade there has been an increased emphasis on learning through work-related experiences (Bell, Tannenbaum, Ford, Noe, & Kraiger, 2017). However, simply assuming that leadership development will occur naturally in work-related contexts is an inferior approach to achieving organizational leadership needs. Too many organizations take leadership development for granted, assuming that leaders will develop as they encounter new roles and assume progressive responsibilities. In contrast, evidence suggests that effective experiential approaches require a high degree of intentionality to shape developmental contexts (Bell et al., 2017; DeRue & Wellman, 2009). In developmental contexts, leader self-efficacy is increased by providing supervisor support (e.g., feedback) and creating interventions like structured reflections to enhance learning. Leaders who are learning extemporaneously on the job without such support may contribute to substantial problems at work. As an example, roughly 70% of employees report that their leaders are the worst part of work (Hogan & Kaiser, 2005). While there are potentially many explanations for this phenomenon, the role of leader development should not be overlooked. Organizations that want to reliably benefit from developmental efforts must be willing to commit to systematically planned and executed efforts—efforts that are in addition to day-to-day operational requirements for most organizations.

Organizations seeking to meet operational requirements often turn to external consultants to meet leadership development needs. Given the prevalence of this approach, many academic institutions overlook the valuable built-in alternatives to inform, plan, implement, and assess developmental efforts. Faculty and staff who have the knowledge and skills to systematically evaluate institutional practice can help shape strategy. Elements of leadership development strategy include efforts like informing staffing efforts, crafting developmental experiences and programs, and aiding

in the identification and differentiation of effective and high potential leaders. To this end, this article offers a description of a developmental strategy as executed through practicum—an academically structured project in the context of a working organization to facilitate leadership development for twenty-one mid-level officers at the United States Air Force Academy (USAFA).

A Generalized Strategy for Leadership Development

Strategy is simply a high-level plan to achieve goals in the face of uncertainty. Organizations and academic scholars alike have interest in implementing effective strategies to meet organizational leadership needs. Given the abundance of leadership theories to choose from, it is easy to appreciate why many organizations rely almost exclusively upon experience as a proxy for leadership development. Some organizations may embrace certain leadership theories and concepts (e.g., transformational or servant leadership), but may not fully understand how to effectively use experience as a reliable means to produce the desired qualities in leaders. Properly understood, however, experience is not simply practical exposure to work-related events, but an interplay of individual and contextual factors that become the work-based outcomes of knowledge, skills, attitudes, and motivation that generate performance (Tesluk & Jacobs, 1998). Thus, for the purposes of this article, this interplay of individual and contextual (interpersonal) factors is offered as a key consideration to creating and implementing leadership development efforts.

Individual Factors. At the intrapersonal level, a leader's individual attributes have important implications for the performance of any developmental strategy. Individual factors are latent qualities that are

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not directly observable. It is important to note that individual factors are addressed as antecedents and moderators of developmental efforts, not as objectives of developmental efforts. Three key individual factors are beneficial to informing the creation and implementation of a leadership development strategy.

First, individual differences (e.g., personality, motives, and values) affect how individuals think, experience, and manifest leadership behaviors. Decades of evidence indicate that dispositional qualities broadly predict leadership potential, of which personality emerges as the key contributor (Kaiser & Hogan, 2011). Simply stated, who a leader is affects how they lead (Hogan & Kaiser, 2005). As a consequence, individual differences predict important leadership outcomes including emergence, follower perceptions of leader effectiveness, and overall job performance (Judge, Bono, Ilies, & Gerhardt, 2002; Judge, Colbert, & Ilies, 2004; Lord, De Vader, & Alliger, 1986). The evidence suggests that organizations with leaders who lack certain essential individual qualities will struggle to achieve the intended outcomes.

Second, developmental strategies further benefit from accounting for a leader's learning orientation. Learning orientation is an individual characteristic that describes how individuals master tasks and seek challenges to advance job-related knowledge and skills. Organizations wanting to create the best conditions for leadership development should consider how potential leadership students are likely to benefit from the experience offered. In all likelihood, many developmental interventions fail to work simply because organizations overlook how a leader learns or that they may be reluctant to do so. For example, organizations should consider that leaders might have bias against new knowledge that appears contradictory to past successes. As a result, the Achilles heel of high potential leaders may be a tendency to seek information that is consistent with their past leadership experiences

(Bandura, 1971; 2012). In contrast, developmentally-ready leaders integrate experiences and internalize thought to adjust their behavior to meet new situations (Deci & Ryan, 2000). Of note, research demonstrates an important link between personality and learning orientation. Conscientiousness, openness to experience, and emotional stability predict learning outcomes for structured developmental activities like reflective assignments or developmental experiences (DeRue, Nahrgang, Hollenbeck, & Workman, 2012). Thus, organizations and leaders alike are encouraged to look beyond past success as the only evidence of future potential. Organizations need to undertake intentional efforts that account for effectiveness that results from a leader's willingness to learn.

Third, leadership development strategies can further benefit by accounting for a leader's motives to become proficient at leadership competencies. For example, one's *motivation to lead* (MTL) predicts leadership potential over and above general cognitive ability, values, personality, and attitudes (Chan & Drasgow, 2001). Furthermore, leaders' self-comparisons to other leaders (i.e., exemplars and global representations) predict leader potential, leadership emergence, and overall team effectiveness (Guillén, Mayo, & Korotov, 2015). MTL and leaders' comparisons to prototypes affect how they interpret their leadership experiences and adjust their leadership behaviors. When controlling for personality differences, research indicates that organizations that are willing to make costly investments to improve leadership bench strength are wise to account for MTL as an indicator of which leaders are more adaptable (Hendricks & Payne, 2007).

What this means is that organizations can maximize the returns on developmental interventions. By selecting individuals who are open to learning and most likely to benefit from experience, organizations are more likely to observe measurable differences in leadership development outcomes. Leaders' needs for development

and the organization's need for performance combine to create a symbiotic relationship between leader behaviors and organizational performance.

Interpersonal Factors. Where the preceding section addressed who a leader is, this section focuses upon how they lead. A common characteristic of prominent leadership theories is the effort to explain how and why leaders are able to influence others (e.g., Transformational Leadership, Servant Leadership, Authentic Leadership). With few exceptions, leadership definitions consistently invoke language to account for how a leader interacts with others to produce desired outcomes (Yukl, 2013).

Leadership and its development encompass dynamic contexts and the interactive process where leaders mine accumulated experiences for valuable lessons to be applied to present and future work. Leadership is manifested at the interpersonal level as behavior. Development is a progressive, logical growth toward an advanced state over time (Bass, 1990). Therefore, the logical progression toward an advanced state of leadership capacity (leadership development) requires improving the quality and quantity of leadership behaviors. To be certain, vision statements and desired outcomes are beneficial statements that bespoke of organizational values and intimate plans and policies required for performance. Practically speaking, achieving an organization's vision and associated outcomes requires deliberate attention, planning, and execution. Accordingly, it is equally consequential to know where the journey is to start from in order to plan the route to get there. Experts recommend that organizations should begin by defining leadership in terms that reflect the competitive value of teams, implement competency models that incorporate the skills needed to effectively lead these teams, assess how leaders affect team performance, and focus training and developmental efforts to improve team and organizational performance (Kaiser & Curphy, 2013).

Approaches to developing leadership knowledge and skills in postsecondary academic environments (Rosch, 2018) and in corporate settings (Kaiser & Curphy, 2013) are not consistently producing measurable, much less desirable, improvements in leadership capacity. One explanation for this lack of improvement rests upon ill-formed ideologies on how leadership capacity is advanced. For example, teaching leadership as an academic topic can and should reasonably produce outcomes related to knowledge and comprehension, but is substantially limited when it comes to students applying concepts. In fact, evidence demonstrates that delivering curricula to improve knowledge and comprehension of leadership concepts without implementing additional interventions to improve self-efficacy are of little effect to improving leadership capacity (Dugan, 2011). Thus, it is necessary to scope leadership education efforts to build an accurate understanding of concepts while also providing structured opportunities for leaders to practice effective leadership behaviors.

An emphasis on building leader self-efficacy and behavior can be compared to developmental approaches that rely on teaching leadership in an explicit manner. A meta-analysis on the effectiveness of eighty-three leadership development programs shows that training interventions are the most effective when they have knowledge outcomes (Collins & Holton, 2004). While knowledge plays an important role in leadership activities, effective leadership involves active learning (e.g., interpreting past experiences and applying acquired concepts to new experiences). Leadership capacity is thus best understood in terms where acquired knowledge interacts with reflective interventions and experience. By its nature, leadership involves influencing others. A leader's daily experiences are offered as a primary source of leader development beyond knowledge. Approaching development in this manner reflects a theoretical model of work experience that integrates interactive qualitative and

quantitative elements that accrue over time (Tesluk & Jacobs, 1998). To the extent that leadership is non-routine and unstructured, Tesluk and Jacobs propose that exposure to unique and diverse situations are particularly important for gaining experience. With these observations and theoretical underpinnings, interpersonal interactions in leaders' daily work experiences are offered as the best context for development.

Practicum as a Means of Experiential Leadership Development

Experience is central to many domains of work performance (Tesluk & Jacobs, 1998), of which leadership is a valuable element. Taking a systematic approach to identifying leadership needs and providing robust developmental experiences is of value. However, as indicated in the discussion on intrapersonal factors, shared experiences do not produce common developmental outcomes across individuals. Given the relative stability of individual factors like personality, research suggests that learning outcomes that result from developmental experiences can be enhanced.

With a particular emphasis on the role of interpersonal factors, practicum is offered as an experiential learning intervention to supplement classroom-based academic leadership instruction. While research on practicum as an educational intervention to promote leadership development is limited, preliminary research is promising. Evidence suggests that practicum is an effective tool because it requires students to integrate theory and practice while addressing legitimate organizational problems (Lindsay, Tate, & Jacobs, 2008). Lindsay and colleagues evaluated graduate students' experiences with practicum projects and

Table 1

Proposed Relationship Between Bartram's Great Eight and Competency Areas Affected by Practicum

Great Eight Competency Factor[a]	Competency Domain Definition[a]	Proposed Relationships to Practicum Competency Category[b]	Percentage of Students Who Reported Benefits[b]
Leading and Deciding	Takes control and exercises leadership. Initiates action, gives direction, and takes responsibility.	1. Personnel recruitment, selection, placement, and classification 2. Performance appraisal and feedback 3. Leadership and management	100% 80% 77%
Supporting and Cooperating	Supports others and shows respect and positive regard for them in social situations. Puts people first, working effectively with individuals and teams, clients, and staff. Behaves consistently with clear personal values that complement those of the organization.	1. Ethical, legal, and professional contexts 2. Consulting and business skills	84% 97%
Interacting and Presenting	Communicates and networks effectively. Successfully persuades and influences others. Relates to others in a confident, relaxed manner.	1. Consulting and business skills	97%

Analyzing and Interpreting	Shows evidence of clear analytical thinking. Gets to the heart of complex problems and issues. Applies own expertise effectively. Quickly takes on new technology. Communicates well in writing.	1. Job/task analysis, job evaluation, and compensation 2. Judgment and decision making[c]	90% 52%
Creating and Conceptualizing	Works well in situations requiring openness to new ideas and experiences. Seeks out learning opportunities. Handles situations and problems with innovation and creativity. Thinks broadly and strategically. Supports and drives organizational change.	1. Criterion theory and development	81%
Organizing and Executing	Plans ahead and works in a systematic and organized way. Follows directions and procedures. Focuses on customer satisfaction and delivers a quality service or product to the agreed standards.	1. Organization development	77%
Adapting and Coping	Adapts and responds well to change. Manages pressure effectively and copes well with setbacks.	1. Work motivation 2. Small group theory and team processes	52% 35%
Enterprising and Performing	Focuses on results and achieving personal work objectives. Works best when work is related closely to results and the impact of personal efforts is obvious. Shows an understanding of business, commerce, and finance. Seeks opportunities for self-development and career advancement.	1. Consulting and business skills 2. Human performance/human factors	97% 58%

Note: Proposed relationships are expected to vary (e.g., according to the nature of the assigned practicum project and with respect to an increased emphasis on developing leadership capacity).

[a] Bartram (2005)

[b] Lindsay et al. (2008)

[c] Within Bartram's (2005) framework, "judgment" is a component of *Analyzing and Interpreting* and "making decisions" is accounted for within *Leading and Deciding.* For the purposes of this table, "judgment and decision making" are accounted for in Bartram's *Analyzing and Interpreting* level of description only.

observed that seventy-seven percent of students reported increases in leadership and management competency areas. Other outcomes observed by Lindsay, Tate, and Jacobs can be translated into the leadership domain using the Great Eight Competency Framework (Bartram, 2005). This comparison reveals important potential applications of practicum to developing specific leadership competencies (Table 1). Practicum demonstrates potential benefits across the Great Eight as a predictor of leadership performance.

Experiential learning provides leaders with practical knowledge (e.g., skills and abilities) from naturally occurring uncertainties that create legitimate needs for dynamic leadership behavior. Bartram's (2005) framework offers a focused view on what we can hope to gain through leadership experience against the backdrop of meaningful and important workplace behaviors. In short, experiential leadership activities require leaders to enact a variety of critical leadership behaviors. Performing leadership roles requires leaders to make decisions, take responsibility, understand others, adapt to the team, manage conflict, and adapt to change, setbacks, and other pressures (Bartram, 2005). Yet, organizations, leaders, and supervisors who lack the requisite knowledge and skills to reliably identify, describe, and learn from observed leadership phenomena are at a substantial disadvantage. For an organization's senior leaders to model and prescribe reliable and validated behaviors, they need to learn them.

Leaders require accurate and reliable means to interpret and learn from experience. Misinformed or simplistic observations of work characteristics and the corresponding need for specific leadership behaviors are likely to result in unbefitting behaviors and deleterious effects. When leaders manifest non-relevant behaviors they are more likely to be perceived as wasteful or distracting to work efforts (McCall & Lombardo, 1983). Thus, organizations require reliable means of diagnosing leadership experiences. First, the leader requires accurate representations of work-related phenomena from which they can identify needs and apply the most appropriate behaviors. Additionally, while experience is a well-documented developmental approach that is especially valued for leaders, supervisor support is needed (DeRue & Wellman, 2009). Therefore, the leader's supervisor (presumably a more developed leader) requires additional knowledge, skills, and abilities to facilitate personalized developmental feedback (e.g., coaching and other developmental interventions) to build the leader's capacity to support organizational objectives. Therefore, organizational members responsible for planning and/or implementing leadership development must carefully consider the role of individual and interpersonal factors. To maximize the benefits leaders gain through experiential learning, organizations must provide guidance under advanced leaders who possess requisite complementary skills (e.g., leadership, teaching, coaching, and counseling) that promote the development of a superior workforce. Practicum is an example of such an effort.

Method

A practicum project was embedded as the capstone project in the final of a three-course sequence within a graduate leadership curriculum that progressively surveyed leadership topics through the scholarly literature. General areas of coverage in these three courses included intrapersonal, interpersonal, teams and organizational content. This sequenced delivery of leadership knowledge draws upon conventional conceptualizations of leadership theory (Yukl, 2013) that are consistent with USAFA's *Personal, Interpersonal, Team, and Organizational (PITO) Model*. Upon graduation, the students are employed as frontline supervisors who function as leader and leadership developers for cadets at USAFA.

While the PITO model reflects conceptual levels of knowledge and skills, USAFA's *Leadership Growth*

Model (LGM) prescribes how these concepts can be learned. Consistent with the generalized leadership development strategy addressed herein, development under the LGM results from expectations, inspiration, and instruction that are matched with feedback and opportunities for reflective learning. Thus, the practicum project is grounded in the academic literature and employed through an institutionalized framework. This framework is also consistent with pedagogical recommendations for leadership education. For example, the *Know, See, Plan, Do* approach borrows from an array of learning theories that suggest that learning occurs from interactions between a student's knowledge, observations, planning, and practice (Allen, Miguel, & Martin, 2014; Martin & Allen, 2016). The model relies heavily on a constructivist approach whereby students acquire knowledge and meaning by actively interacting in a structured learning environment. Students learn through activities that inform internal principles that transcend superficial and simplistic representations of knowledge (Piaget, 1965). Similarly, practicum includes elements of social cognitive theory that describes how people interact with social systems that influence personal learning and development (Bandura, 2012). Thus, practicum is an extension of the learning environment that involves more than simply collecting and storing knowledge, but is a complex process whereby individuals form representations that can be accessed and applied.

To bridge the scientist-practitioner gap, the practicum project was designed with these elements in mind.

At the beginning of the third and final semester, the Teams and Organizations course instructor introduced the practicum project as a practical application of program content in support of an assigned client. The course instructor coordinated the clients and general practicum constraints in advance. The students had the opportunity to identify their preferences for the projects sponsored by four separate agencies at USAFA. The project prompt identified practicum as an opportunity to apply the graduate program's content to real-world challenges at USAFA as teams. Team sizes varied from four to six members. The clients were

> *...practicum is an extension of the learning environment that involves more than simply collecting and storing knowledge, but is a complex process whereby individuals form representations that can be accessed and applied.*

USAFA agencies with interest in receiving external assistance to address challenges and opportunities at USAFA. In this fashion, students used knowledge from coursework, applied knowledge to matters with real-world consequences, and worked with agencies that are connected to the students' future leadership roles at USAFA. This latter point is predicted to assist the students in relating and networking with future associates, producing opportunities for mutual influence between academic material and practical considerations, and generally contributing to student involvement in the broader organization.

The cohort of students were active duty and reserve officers in the USAF who had approximately 12 to 14 years of professional experience in a variety of occupational fields. The cohort attends the master's program as a developmental leadership opportunity. A senior USAFA official selected the cohort for the program on the basis of the cohort members' past leadership experiences and stated interest in assuming developmental and leadership roles for the cadets at USAFA.

As a project, practicum was further divided into six assignments. Assignments included identifying the student preference for the project, reflective assignments (e.g., identifying three ways that the student expected practicum to prepare them to take on a leadership role at USAFA), self- and peer-assessments of contributions to the practicum project, presentations, and an assessment of team processes.

The purpose of the initial presentation was to provide students an opportunity to formalize the agreements made between team members and the assigned clients. Students were required to provide a clear problem statement for the designated issue, address how the client described their needs, define their team's culture (e.g., expected values and norms), and to establish a plan for how to meet the clients expectations. Student teams received written and oral feedback from the instructor. Additionally, students were encouraged to ask questions and make observations about each other's presentations.

The purpose of the final presentation was for student teams to outbrief the rest of the class on the results of the team's practicum effort. Students were asked to analyze and communicate organization/institutional lessons learned from the experience, synthesize and communicate knowledge learned from the practicum that applies to their future leadership roles, to apply course concepts to identify and share lessons learned on team experiences, and to encourage class participation in discussion about the experience.

Additionally, the instructor collected observations in the form of notes derived from in-class interactions, meetings, and electronic communication with teams, team members, and clients throughout the semester. These observations were used to complement formal assessments of student experiences, key challenges, and learning outcomes.

Results

Individual Factors. Following the posting of the project to the course's learning management system and an in-class discussion of practicum, students offered questions that indicated a variety of individual differences with respect to how they were thinking about, experiencing, and manifesting leadership behaviors in reaction to practicum. Questions and comments from the cohort fell into four general categories as qualitative observations of student motives and learning orientation. These categories reflect classifications of the behaviors and expressed feelings and are not categorizations of the students.

The first category of student behavior was constructive in nature. Constructive behaviors appeared as questions and comments from students that served to satisfy curiosity about what they expected to experience and to clarify objectives for the project. The nature of these constructive behaviors is hypothesized to indicate students with high levels of conscientiousness, openness to experience, and emotional stability. Furthermore, the nature of these types of questions indicate that a percentage of the students possessed learning orientations with a greater proclivity to master tasks and seek challenges that would further advance their leadership-related knowledge and skills. Example statements by students that reflect constructive attitudes and behaviors include "A positive attitude is critical to achieving my goals, and maintaining awareness of my values, and how they may be changing," and "This assignment assists [me] with the development of leader and leadership development, improved effectiveness when working within teams and organizational leadership, and executive coaching and career development [for cadets]."

Certain student reactions appeared to delay the learning process. Negative reactions included manifestations of neuroticism and general doubt about the effectiveness of the project as a leadership

development experience. Negative reactions manifest as expressions of feeling overwhelmed by the magnitude of the effort, criticizing the probability of success in the stated approach, and comments that generally served to raise alarm about the effort. Some negative reactions may have resulted from mismatched expectations between the course's focus on the organizational level and student expectations to learn about their projected leadership roles. Additionally, some students initially offered constructive inputs about how they thought the project could be adapted to meet these expectations, but then demonstrated less favorable reactions when the instructor did not put all of the inputs into practice. Example student statements from this category include "My expectations for the class was that it would help immerse me with the [leadership role] I will be taking over," and "[practicum] left me with the perspective of being hired help."

Through written reflective assignments, the instructor identified a third, less obvious category of student reactions to the project. Compared to the observed constructive and negative responses, students in this third category exhibited generally neutral reactions to the project during in-class discussion of the project. These students remained relatively or completely silent about their reactions to the project or to other students' interactions. However, these students did share approval or disapproval of the project and their expectations of the effort through written reflections. Example statements from students in this category include, "I am still extremely hesitant to define the benefits that will stem from this experience," and "I am having a hard time actually understanding what our assigned practicum will do to help prepare me to take on a leadership role at USAFA."

Taking a longitudinal perspective, the authors observed a fourth category of behaviors that were developmental in nature. While the first three categories of behavior represent snapshots of student reactions at the onset of the effort, student attitudes toward the project were not static. As the learning experience evolved, the students demonstrated dynamic change in response to interactions within their teams and through contact with clients. These evolving perceptions demonstrated practical value to learning and draw attention to the value of working in teams as a developmental experience, especially for developing agentic views. Some of the students in this category initially took hard stances against the project, but adjusted their perspectives as they observed and experienced benefits. A student statement that fits this category is, "I was very skeptical of practicum…I am beginning to see some of the connections to becoming an effective and successful [leader]."

Interpersonal Factors. Evidence indicates that practicum's structure served to improve knowledge and comprehension of leadership concepts while also requiring students to improve observational capabilities and to promote leadership self-efficacy. Using the twenty competency dimensions underlying Bartram's Great Eight (2005), the instructor inventoried student stated expectations of practicum to prepare them for leadership roles. Responses were collected from a reflective assignment. Of note, student-stated expectations demonstrated opportunities to gain experience in seven of the eight leadership competency factors, with Creating and Conceptualizing being the most popular response (28.6%) (See Table 2 for a full list of results for Reflective Assignment #1 that capture expectations at the individual level). The instructor also catalogued competencies observed during the final practicum presentations observed at the team level (See Table 3 for a list of results for the Final Presentation that captures experience at the team level. Figure 1 provides a comparison of the individual and team level behaviors reported in Tables 2 and 3).

Discussion

As an approach to leadership development, practicum demonstrated the value of measuring behaviors that are under the control of the leader that contribute

Table 2

Inventory of Observed Competency Dimensions for Reflective Assignment #1 (Individual Level)

Great Eight Competency Factor[a]	Competency Dimension	Frequency of Observation	Percentage of Observations Within Competency Factor
Leading and Deciding	Deciding & Initiating Action Leading and Supervising	4 2	9.5%
Supporting and Cooperating	Working with People Adhering to Principles and Values	8 2	15.9%
Interacting and Presenting	Relating & Networking Persuading and Influencing Presenting and Communicating Information	9 1 1	17.4%
Analyzing and Interpreting	Writing and Interpreting Applying Expertise and Technology Analyzing	1 3 3	11.1%
Creating and Conceptualizing	Learning and Researching Creating and Innovating Formulating Strategies and Concepts	13 0 5	28.6%
Organizing and Executing	Planning and Organizing Delivering Results and Meeting Customer Expectations Following Instructions and Procedures	4 4 0	12.7%
Adapting and Coping	Adapting and Coping Coping with Pressure and Setbacks	0 0	0%
Enterprising and Performing	Achieving Personal Work Goals and Objectives Entrepreneurial and Commercial Thinking	3 0	4.8%

Note: Observations independently coded by the instructor.

[a] Bartram (2005)

Table 3

Inventory of Observed Competency Dimensions for the Final Presentation (Team Level)

Great Eight Competency Factor[a]	Competency Dimension	Frequency of Observation	Percentage of Observations Within Competency Factor
Leading and Deciding	Deciding & Initiating Action Leading and Supervising	3 4	11.1%
Supporting and Cooperating	Working with People Adhering to Principles and Values	10 1	17.5%
Interacting and Presenting	Relating & Networking Persuading and Influencing Presenting and Communicating Information	1 2 1	6.3%
Analyzing and Interpreting	Writing and Interpreting Applying Expertise and Technology Analyzing	4 5 3	19.0%
Creating and Conceptualizing	Learning and Researching Creating and Innovating Formulating Strategies and Concepts	4 4 3	17.5%
Organizing and Executing	Planning and Organizing Delivering Results and Meeting Customer Expectations Following Instructions and Procedures	7 7 1	23.8%
Adapting and Coping	Adapting and Coping Coping with Pressure and Setbacks	3 3	9.5%
Enterprising and Performing	Achieving Personal Work Goals and Objectives Entrepreneurial and Commercial Thinking	0 1	1.6%

Note: Observations independently coded by the instructor.
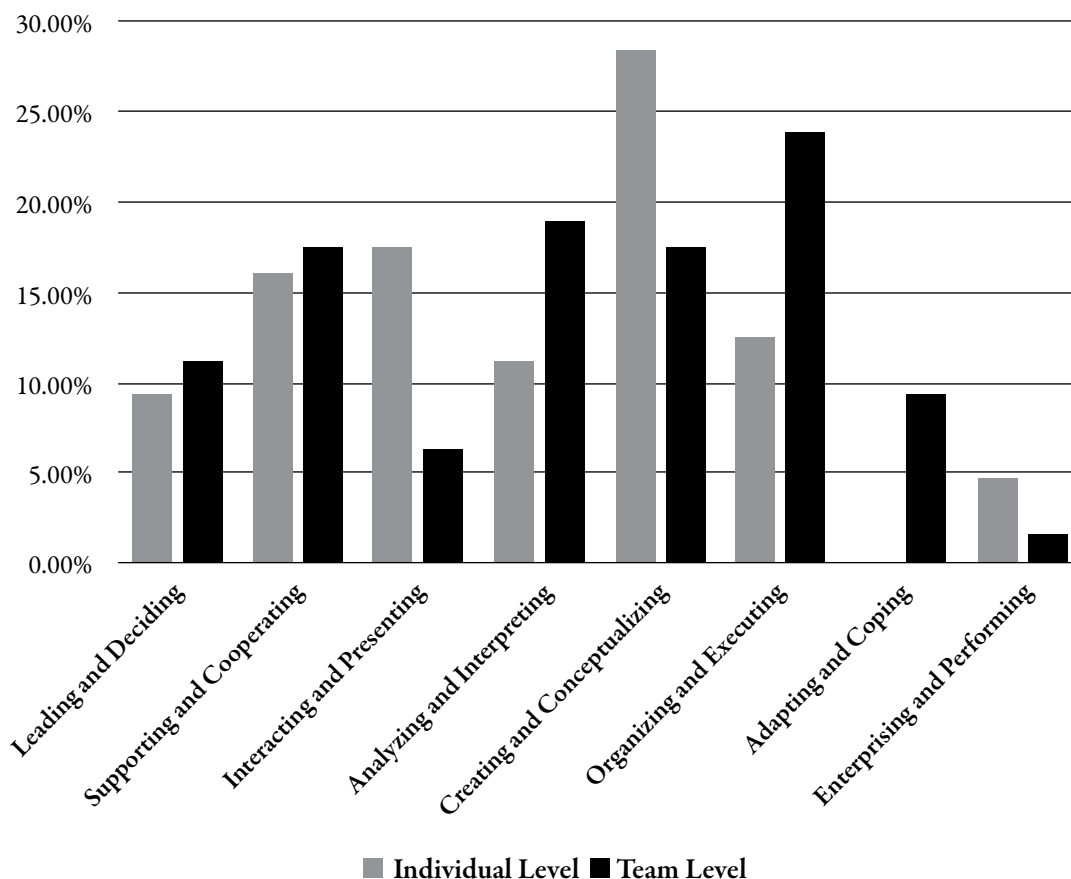
[a] Bartram (2005)

Figure 1. Comparison of Observed Team and Individual Level Competency Factors

to organizational goals. In contrast, claims of developmental success often rely upon leaders' self-reported levels of satisfaction with training or interventions. Organizations also miss the mark when they predominantly rely on consequences or results of leaders' actions as the measure of leadership performance. While there are legitimate reasons to measure leader satisfaction and objective results, the observed leadership behaviors that occurred at the team and individual levels during the conduct of practicum suggests the value of measuring leader actions and behaviors—in developmental contexts behavior is performance.

As an observation of an evidence-based learning approach, the methods used to explore the practicum project were principally qualitative. As an exploratory assessment, our efforts revealed the need to create clear priorities for future iterations of leadership development in similar academic settings. Observed results shed light on how to approach qualitative and quantitative assessments of leadership development in the future.

Conceptually, observed attitudes and behaviors illustrate the value of selecting measures of performance that have broad applications. We observed that

individual-level tendencies were characteristically different from team-level behaviors. Though not a focus of this assessment, we also suspect that the qualities of the assigned projects, subordinate roles of team members, and culture of the teams affected which behaviors are needed to achieve superordinate and supporting goals. Alternatively stated, no one approach to leadership works equally well across situations. Different situations require different kinds of leaders (Fiedler, 1964). Thus, it is also worthwhile to consider that developmental goals at the individual level not only resulted from self-comparisons against prototypical leaders, but also emerged when students compared themselves to the roles and requirements of the project.

The Great Eight demonstrated its potential as an a adaptive structure for differentiating leader performance while remaining generalizable across a variety of leader roles (Bartram, 2005). The Great Eight provides a universal competency framework of distinctive job performance measures that function across roles, work experiences, cultural contexts, and time. Additionally, the structure demonstrates usefulness across organizational levels (e.g., individual and team). While the approach in assessing practicum in the present effort was rather subjective (although the instructor is an industrial organizational psychologist trained in assessment), it none-the-less demonstrated the value of adapting Bartram's framework to suit diverse organizational needs.

Limitations. The qualitative approach used to identify student individual differences, learning orientations, and leadership development was helpful to interpreting observations of student behavior, but is not without error. Using self-reported data to code responses is standard practice in the leadership development industry. As a first step towards purposeful assessment efforts to support leadership development, the catalogued observations of student behavior served

to suggest the nature of formal assessments needed in developmental contexts like the one we observed.

The cross-sectional design employed in this assessment of practicum is extremely limited for understanding leadership development. Accurately measuring leadership development requires an explicit model of individual growth (Raudenbush & Bryk, 2002). By measuring leaders across multiple points in time, growth can be observed. By nesting measurements within the individual, individual change can be represented via a two-level hierarchical model as an individual growth trajectory. Because trajectories theoretically rely on person-level and contextual characteristics (e.g., solving real-world problems, within team interactions, or individual-level reflection), the causes of observed growth can more readily be determined. Additionally, the growth model has the added benefit of permitting estimated growth trajectories. Comparing trajectories is potentially more useful for certain leader-to-leader comparisons than simple comparisons of objective results. Comparing growth trajectories reveals who is learning the knowledge, skills, and abilities that translate into effective leadership as an explanation of objective performance. Without assessing the learning process, objective results can falsely indicate who is an effective leader. In addition, multiple observations of individual leader behavior provide a more accurate picture of how leaders change over time with respect to their agentic views, motivation to lead, and leadership competencies. We propose that organizations interested in developing leaders need to apply an explicit model of individual growth.

Finally, for the purposes of the project, assessments focused on student learning at the individual and team levels. Given the nature of the projects, however, there were potential effects at the organizational level that were experienced by the students, but not directly observed by the instructor. Future applications of

similar practicum experiences could further benefit by incorporating additional measures throughout the experience. Once students set developmental goals for the experience, targeted assessment of how they are practicing such behaviors is one potential option. Similarly, collecting and assessing client observations of the teams would be of added benefit to better understand what types of organizational-level learning are being achieved. Considering that for this project students worked with members of the organization they were preparing to join, what clients take away from the experience and the future benefits of established relationships are potentially fruitful opportunities for exploration.

Individual Development. Leadership development is often the principal consideration for organizations wanting to become more responsive to change. To create leaders who are more effective in guiding their teams, work groups, and organizations, it is helpful to offer specific strategies that relate to the prescribed approach. Following are three recommendations for organizations wanting to develop leaders through similar experiences.

The first recommendation concerns the inherently complex nature of leadership experiences. Because experiential learning is not automatic, the use of interventions like reflection assignments as a form of after-event reviews (AER) appeared to enhance learning and developmental outcomes during the practicum project. By challenging leaders to evaluate expectations and consider why events unfolded as they did, research demonstrates that AERs generate systematic thinking about behavior and thereby improve performance (Ellis & Davidi, 2005). For practicum, there were observable differences between unrehearsed, in-class discussions and the reflective assignments. Finally, research suggests that without AERs, even highly conscientious leaders regress (DeRue et al., 2012). Thus, AERs represent an important characteristic of maximizing the leadership lessons learned through any developmental experience.

For the initial reflective assignment, the instructor did not require students to identify developmental efforts directly from the Great Eight (Bartram, 2005). Requiring students to select efforts with direct reference to Bartram's Great Eight could be advantageous for organizations managing large-scale efforts that require tracking student-generated developmental goals, and to allow for ready comparisons across students and developmental experiences. However, there are also potential benefits to encouraging open and honest answers where students do not feel constrained to pick efforts from the Great Eight or similar list of leadership competencies. The open-ended prompt may be useful for getting students to consider personal developmental needs without the option of thoughtlessly selecting concepts from a laundry list. As demonstrated, a subject matter expert can readily categorize student open-ended responses for the purposes of comparison across students.

Further demonstrating the versatility of practicum as a developmental experience, students who experienced the same projects identified and experienced unique developmental opportunities. Presumably, students selected team roles, tasks, and other efforts to meet personal developmental needs in the conduct of the assigned project. A benefit of this approach is that it does not require all of the team members to be evenly matched in terms of their leadership development. Students at different stages were free to focus their efforts as needed. The result is that practicum offered simultaneous learning at individual and team levels. Research findings also suggest that as leaders gain experience their perspectives on what constitutes effective leadership continues to evolve (Nichols, 2016). In addition to in situ learning, practicum may have lingering effects as students continue to refine personal efforts to develop.

An additional benefit observed in this effort relates to how organizations can help leaders meet developmental goals. Organizations should intentionally help leaders

appreciate how their behaviors affect others. In a general sense, feedback is indispensable to learning from highly-challenging experiences that otherwise deplete cognitive resources (DeRue & Wellman, 2009). Regular exposure to specific behavioral assessment from multiple sources (e.g., setting developmental objectives for specific leadership behaviors) is more valuable than providing generalized feedback (e.g., "You are my top leader" or "Nice job") to leaders. Providing team members with formal and informal opportunities to provide and receive feedback are proposed as an important characteristic that supplements practicum as a developmental experience.

Team-Level Competencies. It was interesting to see the differences between what the students expected to gain from practicum as leaders, versus what they experienced as members of the team. In part, this is an illustration of the conclusions offered by Kaiser and Curphy (2013) about the need for greater emphasis on leadership development that purposefully involve teams. While our observations of student intent and experience are potentially biased, we nonetheless have support that indicates that working in a team environment on practicum created opportunities for students to look beyond themselves as individual leaders.

In three of Bartram's competency areas we observed noteworthy shifts in what students expected to learn from the practicum experience. Students' emphasis on Interacting and Presenting, Creating and Conceptualizing, and Enterprising and Performing were discernably lower at the team level compared to the individual level. Even though all four teams selected formal leaders, in-class emphasis on practicing shared leadership, and exercising individual and mutual accountability may have had consequential effects that contributed to the observed differences. This characteristic emphasis on team effectiveness may

have contributed to an increased capacity for leadership beyond what students expected at the outset of the effort.

The way that leaders process information and think in social situations (e.g., teams) demands additional attention. Not only did the team environment diminish the perceived value of certain individualized leadership competencies, it appears to have elevated the emphasis upon others. It is important for organizations to consider how the team environment affected the shifts illustrated in Figure 1. Nonetheless, organizations that want their leaders to think critically, work in systematic ways, and adapt need to consider that team-based developmental assignments may produce change that is more valuable. Considering the military background for the students who experienced this project, practicum also appears as a possible way to develop skill sets required to share leadership on military teams. Addressing increasingly complex missions and challenges requires shifts in the skill sets leaders need (Lindsay, Day, & Halpin, 2011). Practicum offers an opportunity to focus leadership training and education efforts to improve team and organizational performance in a manner that requires developing leaders to approach problems differently than they might on their own.

Conclusion

In a general sense, organizations need to provide experiences and interventions that facilitate raising leaders' comprehension of new experiences and the application of relevant leader behavior. Research demonstrates that experiential learning is enhanced when more senior leaders act as mentors by modeling effective leadership behavior and by providing job-relevant information to more junior leaders (Dragoni, Park, Soltis, & Forte-Trammell, 2014). This research demonstrates the importance of approaching development as an organizational effort, not as stand-alone interventions aimed at specific leaders. Key

outcomes associated with this leader-as-mentor model include leaders who learn new roles faster and therefore spend more time motivating and inspiring others. Overall, by establishing a leaders-as-developers culture, organizations are poised to accelerate the transition between leaders' self-perceived role knowledge and performance. To achieve this recommendation, we suggest that organizations provide education and training that are matched to the expectations of senior and junior leaders alike.

Educating and training leaders to meet modern demands cannot afford to overlook the role of teams as valuable learning opportunities. Teams, and not leaders, are the building blocks of modern organizations (Kaiser & Curphy, 2013). Providing a team context and real world consequences in the practicum environment appears to have offered a distinctive experience for each of the four teams and their twenty-one members. As observed by Kaiser and Curphy (2013), "Very little leadership training and development content concerns how to launch, maintain, and improve teams" (p. 298). Through this exploratory assessment of leadership development, we offer the following priorities to encourage the application of the lessons learned:

- **Team and Organizational Leadership**—leadership at the team and organizational levels is not simply leading more people, it is characteristically different and requires new skills and abilities.

- **Behavior is Performance**—adopt a reliable and validated competency framework (e.g., Bartram's Great Eight) as the foundation of assessing leader effectiveness for developmental purposes.

- **Growth Trajectories**—implement individual growth models to assess leader development over time.

- **Purposeful Assessment**—integrate empirically validated assessments (e.g., individual differences, learning orientation, and motives) into the developmental strategy.

- **Purposeful Experiences**—intentionally match leaders to developmental interventions (e.g., assignments based on level of challenge and developmental needs).

- **Purposeful Support**—educate and train supervisors to reinforce lessons learned and to increase leader self-awareness and use AERs and reflective assignments to complement these efforts.

- **Flexibility**—developmental needs and rate of growth will vary for individual leaders, across time, and in different contexts.

The logical growth of leaders to advanced states over the course of time involves subscribing to a scientifically grounded approach that is matched to relevant assessment (e.g., leadership behaviors and with the passing of time). The culmination of this effort involves theoretical, scientific, and practical insight for organizations to select and develop leaders. In review, the prescribed developmental approach suggested three key considerations with respect to leaders' intrapersonal characteristics (i.e., traits, developmental readiness, and motives). Building on these ideas, we framed an interpersonal approach around leaders' interactions in practical work contexts. These interactions provide a developmental context and involve learning and practicing normatively appropriate conduct. Bartram's Great Eight was offered with a proposed methodology to implement the prescribed approach. Practical recommendations were offered to aid organizations in the application of practices designed to enhance leader development and performance.

Finally, we acknowledge that our observations of leadership development provide no clear summit. To be precise, incremental development to advanced roles and responsibilities provide progressive and potentially unique developmental needs. In this manner, as leaders master competencies in present roles, leader potential is demonstrated by the development of competencies that transcend present needs and account for projected ones. This process is offered as one that occurs indefinitely over the course of a leaders' professional career and represents a lifelong pursuit that only ends when development plateaus or leaders depart their professions.

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