Burke
LEARNING AGILITY INVENTORY

Technical Report v3.3

A Guide for Learning about Learning Agility

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Introduction

"The ability to learn is a defining characteristic of being human; the ability to continue learning is an essential skill of leadership. When leaders lose that ability, they inevitably falter. When any of us lose that ability, we no longer grow" (Bennis & Thomas, 2007, p.1).

Attempting to learn about, and measure learning agility is like using a yardstick when you are not sure that what you are measuring is a matter of inches and feet, much less linear, and that what you are measuring is indeed even measurable. Yet it has been highly important for us to try. This Technical Report/Guide outlines our journey in attempting to define and test a measure of learning agility particularly in the context of leadership selection and development. We believe, as others do, that the ability to learn from experience is fundamental to leadership success (Spreitzer, McCall, & Mahoney, 1997; McCall, 2010; McCauley, Ruderman, Ohlott, & Morrow, 1994; De Meuse, Guangrong Dai, & Hollenbeck, 2010) and that when selecting and developing leaders, we must consider not only their intelligence or technical competence, but their ability to figure out what to do when they don't know what to do (Eichinger & Lombardo, 2004). This belief provided the drive for us to "stay the course" to define and measure learning agility over a period of more than five years. We do not go so far as to declare learning agility as the answer to our leadership issues and failures, but we do think that with proper measurement and application, a contribution can be made to both theory and practice.

The State of Leadership

Initially our concerns were about, and still are, learning agility in the context of leadership. Learning matters to effective leadership, and the record of leadership success can be used to make this point. This record is not one to be proud of or to shout from the rooftops. The failure rate for people in positions of leadership ranges from 30-67% with an average of one out of every two leaders failing (Hogan, Hogan, & Kaiser, 2009). Mistakes are made at the beginning. We select people for leadership who are strong technically and perhaps have a good track record, but the relationship between technical ability and leadership success hovers around zero (Hogan, Curphy & Hogan, 1994). To use the cliché, "what got you here will not get you there"; more advanced and

complex leadership roles require new skills, abilities, and perspectives that cannot be learned elsewhere (Spreitzer et al., 1997; McCall, 2010).

Leadership failure rates, of course, cannot be solely attributed to poor selection. While a recent overview by McCall (2010) paints a picture of how leaders develop, outlining that "to the extent leadership is learned, it is learned through experience" (p.3), the painting continues to be viewed more abstractly than concretely. Executives tend to develop skills through the accumulation of challenging experiences (McCall, Lombardo, & Morrison, 1998; McCauley, Ruderman, Ohlott, & Morrow, 1994) and individuals vary in their ability to learn from such experiences (Howard & Bray, 1988; McCall & Lombardo, 1983; R.F. Morrison & Branter, 1992). Yet, organizations continue to struggle in translating this evidence into practice. As McCall (2010) points out, we know a lot about the importance of job rotation with assignments being challenging and requiring new learning "on the run" but getting executive decision-makers to subscribe to this form of development as opposed to their preference for results and performance over learning is no easy matter.

Encouragingly, executives do seem to believe that leadership matters and makes a difference (Day & Lord, 1988; Hogan, Curphy, & Hogan, 1994). However, many executives also subscribe to the belief that the "cream rises to the top" and that one's current expertise will somehow constitute future success. The reality, however, is that half of this "cream" lacks the proper consistency, let alone desirable taste to succeed in leadership roles. It is clear that we need to find another lens through which we can select and develop leaders.

Defining and Measuring Learning Agility

In recent years, the concept of learning agility has been gaining prominence in the practitioner world as a way to select and develop individual potential in organizational settings (DeRue, Ashford, & Myers, 2012; Lombardo & Eichinger, 2000; Eichinger & Lombardo, 2004; DeMeuse, Dali, & Hallenback, 2010; Silzer & Church, 2009). Defined as "the willingness and ability to learn from experience, and subsequently apply that learning to perform successfully under new or first-time conditions" (Lombardo & Eichinger, 2000, p. 322), the concept captures an important aspect of what has been missing in the way we select and develop individuals in our organizations.

A number of attempts have been made at developing a measure of learning agility (Lombardo & Eichinger, 2000) or related concepts (e.g. Spreitzer et al., 1997) with varying degrees of scope and empirical rigor. While we acknowledge the important role this work has played in advancing

our understanding of learning agility and its potential for measurement, we believe a number of common limitations leave room for further development.

The most systematic of these measures, the *Prospector Survey*, was developed by Spreitzer et al. (1997) to aid in the identification of international executive potential. While not a measure of learning agility in name, potential is operationalized through the measurement of an executive's ability to "learn from experience", in conjunction with performance on a number of "end-state" competencies (e.g., Is Flexible). Specifically, Spreitzer et al. (1997) identify six "learning-oriented" competencies which they suggest are integral to executive performance: *Uses Feedback, Is Culturally Adventurous, Seeks Opportunities to Learn, Is Open to Criticism, Seeks Feedback, and Is Flexible*[1]. Of these six "learning oriented" factors, however, only two were shown to be significantly related to current performance evaluations, and no support was found for the incremental predictive power of learning-oriented factors beyond end-state factors. While a substantive reason offered for this finding is that companies fail to take learning competencies into account when assessing performance (Spreitzer, et al. 1997), further evidence is needed to validate the learning component of this measure.

Perhaps the first formal measure of learning agility was developed by Lombardo and Eichinger (2000). The authors based their measure on a review of some early studies at the *Center for Creative Leadership* (see, for example, Lindsey, Homes, & McCall, 1987) and executive interviews, finding evidence for four components (or factors) of learning agility that they term *mental agility, people agility, change agility* and *results agility*. The Choices Architect, as it was originally commercially branded, has been shown to be related to independent ratings of performance and potential (Lombardo & Eichinger, 2000) and unrelated to IQ and the Big Five personality factors (Eichinger & Lombardo, 2004).

While the results reported by both Sprietzer et al. (1997) and Lombardo & Eichinger (2000; Eichinger & Lombardo, 2004) are promising, each has its respective limitations. Most significant is the way in which each measure operationalizes learning agility. While the Prospector Survey is based on relevant literatures (Boyatzis, 1982; Lobel, 1991; Quinn, Faerman, Thompson, & McGrath, 1990), it does not explicitly measure the concept of learning agility. It is likely that the "learning-

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[1] Of these, "Uses Feedback" explained the highest percentage of variance among all the factors (including end-state competency factors; 41.90%).

oriented" dimensions of the Prospector overlap significantly with learning agility; however, it cannot be assumed that the instrument adequately represents all theoretical domains that are foundational to the concept. The authors of the Choices Architect, on the other hand, do claim to measure learning agility explicitly, but with 81 items comprising 27 dimensions, the instrument seems to measure more than just the construct in question. While the four factors possess intuitive appeal, their sheer scope suggests that a more focused measure may be needed.

DeMeuse, Dali, & Hallenback (2010), make the case for an assessment battery that taps into the psychological constructs that predict learning agility, rather than learning agility itself, suggesting that the construct may be a "meta-competency" that is prerequisite to the development of other competencies. DeMeuse et al. (2010) provide theoretical support for three antecedents to learning agility: past experience (De Pater et al., 2009), self-awareness (Briscoe & Hall, 1999), and ability to handle complexity (Day & Lance, 2004; Hoojberg, Hunt, & Dodge 1997). Although the measure by DeMeuse et al. (2010) provided a conceptual foundation for a more theoretically grounded measure of learning agility, differentiating it from other related constructs and establishing boundary conditions, they do not themselves offer and test a measure. They also fail to tackle the inherent bias in both multi-rater and self-assessments that plague previous attempts at measuring the construct. The Burke Learning Agility Inventory (Burke LAI) extends DeMeuse et al.'s (2010) theoretically grounded approach to measuring learning agility, but limits item construction to observable behavior. By doing so, greater correspondence can be gained between multi-rater and self-assessments, and raters may be better able to evaluate aspects of learning agility without needing an awareness of the construct. **The authors know of no instrument to date that is specifically focused on the concept of learning agility, theoretically grounded *and* behaviorally based**.

A conceptual base for theory development and measurement, however, has been provided by DeRue et al. (2012). These authors reviewed the literature up to 2012 and defined learning agility primarily in terms of *flexibility* and *speed*. They also emphasized the importance of distinguishing between learning agility and learning ability. Yet, these two constructs may be related up to a point. It may be that for a person to be agile as a learner a basic amount of learning ability is required but after reaching a certain threshold of ability there may be little relationship between ability and agility. As we attempt to show later, agility is a skill set that requires self-awareness and actions such as feedback seeking, flexibility, collaborating and reflecting that correspond more with social intelligence than with the traditional measures of mental ability.

DeRue and his colleagues also provide a model for understanding important ingredients that affect learning agility. Antecedents like individual differences that include goal orientation, cognitive ability, and openness to experience, and contextual factors such as complexity and organizational climate and culture. As noted earlier in their definition of learning agility, they emphasize flexibility and speed, and they state that learning agility can be understood in either of two processes — cognitive and behavioral. With respect to measurement we have chosen the more parsimonious process, i.e., behavioral. DeRue et al. (2012) also account for outcomes in their model in two forms: (1) learning in and across situations and (2) positive performance change overtime.

Finally, it should be noted that in the DeRue et al. model, learning agility placed between antecedents and outcomes becomes either a moderating variable or a mediating variable or perhaps both. In summary, an abbreviation of their model looks like the one in Figure 1.

Figure 1: Abbreviated Version of the model by DeRue, Ashford and Myers (2012).

Theoretical Background

Like DeRue et al. and others, we believe that learning is a process and that learning agile persons, as they interact with their respective environments, will likely engage in an array of behaviors that increase learning opportunities and the probability that learning will occur. To understand learning agility as a process, we briefly review relevant literature on how individuals may seek out, manage, and learn from new experiences.

When addressing a relatively new psychological venture such as learning agility, to define the concept, to attempt to measure it, and to understand what it may mean, it is highly important to place the construct into a theoretical context. The following two sections focus on this importance — i.e., theory. At least two theoretical streams are most relevant: Kurt Lewin's analysis of social

behavior (Lewin, 1935; 1951) and principles of adult learning starting with John Dewey and later with such contributors as David Kolb, and Argyris and Schön.

Lewin's Formulation

Considered by many as the father of social psychology, Lewin conceived of behavior as an interaction of the person with his or her environment usually captured in the formula of **B = f (P, E)**. Even though Lewin promoted this way of thinking as far back as the late 1930s and early 40s, psychology for many years, well into the 1960s and later, was taught to students in segments. There were personality psychologists, e.g., Gordon Allport (1937) and social psychologists e.g., ironically Gordon's brother, F.H. Allport (1962). Although brothers they did not view the world of psychology the same way.

It has been stated by some social psychologists, perhaps in jest, but argued nevertheless that in social psychology, unlike personality research, there are no main effects. Behavior can only be explained interactively not by either personality or environment alone. Moreover, cognition, particularly the notion of social cognition, can be viewed as an interaction, that is, how the person thinks about the situation one may be facing determines whether and how that person will act. This action whether observed behaviorally or not (being merely a thought) is nevertheless a perceptive interaction between the person and the situation.

The work of Albert Bandura referred to as *reciprocal determinism* carries this line of thinking to another level (Bandura, 1977; 1978; 2004; see also Phillips & Orton, 1983). In short, reciprocal determinism states that the person, the environment, and behavior exist and function in an interlocking relationship characterized by bidirectional causality. As further explained by Kihlstrom (2015) people shape their environments but environments also shape people. Personal factors, such as extraversion for example, influence behavior but behavior also feeds back to affect the individual who engaged in it. Environments elicit behavior, but behavior affects and changes the environment in which it takes place. (See page 797)

Kihlstrom (2015) further dissects reciprocal determinism into three "dialectics" of social interaction.

1. The dialectic between the **person and behavior** encompasses "all of the influences of the person's internal states and dispositions" such as "personality traits social attitudes,

cognitions and beliefs, emotional states and moods, motives and values" that influence one's behavior; in other words, personality psychology. This dialectic also includes all of the "influences of behavior on the individual's mental states and dispositions as exemplified by the James-Lange theory" (Lange, 1994) and self-perception theory (Bem, 1967)."

2. The dialectic between **environment and behavior**, that is, all of the physical and social situation factors that influence one's behavior as well as the effects of one's behavior on the environment.

3. The dialectic between the **person and the environment**, again the reciprocal influence of the environment on the person, e.g., individual conformity to a norm, and vice versa, as in for example, exerting personal power and influence, i.e., getting people to do what they might not otherwise do.

Thus, Lewin's formula integrates personality psychology and social psychology which in turn establishes the theoretical basis for understanding learning agility. Agile learners have a deeper appreciation of the nature of social interaction and pay more attention to the consequences of their behavior and at the same time how they are affected by situations that they face. This awareness furnishes clues from which to learn. We will elaborate on this point later in the Discussion section.

Experiential Learning Theory

The theories of action learning (Lewin, 1951), experiential learning (Dewey, 1938), and cognitive development meta-theory (Piaget, 1983; Perry, 1999) serve as the foundation for Experiential Learning Theory (ELT), (Kolb, 1984), which presents a model of individual learning styles and types by considering the distinct ways individuals typically take-in and process information. Kolb conceived learning as a cycle in which individuals observe and experience an event (CE; concrete experience), reflect on that experience (RO; reflective observation), form hypotheses and theories (AC; abstract conceptualization) and then act based on this understanding (AE; active experimentation).

Kolb states that "learning is the process whereby knowledge is created through the transformation of experience" (p.38). Some individuals may learn better from doing tasks, whereas others may learn better from coaching or critical reflecting. As a result, individuals rarely master all four modes of learning, because the abilities required for learning some modes are polar opposites. For

example, CE and AC are two distinct ways of grasping information from the environment; AE and RO form two distinct ways of transforming that information into knowledge (Kolb, 1984). Individuals must choose which learning mode they will use and feel most comfortable within a given situation. This approach will take the form of one of four styles. In brief, **Accommodators** (AE & CE) grasp information intuitively and have a strong action orientation. They are open to new experiences and tend to take risks by using trial-and-error approaches. **Divergers** (CE & RO) grasp information intuitively and attempt to make meaning of those feelings. They tend to view problems from multiple perspectives and generate multiple alternatives. **Assimilators** (RO & AC) enjoy the logic of an argument and tend to use inductive reasoning to create theories and models. Finally, **Convergers** (AC & AE) combine thinking and doing into a style focused on problem solving, decision-making and pragmatism.

An important finding in Kolb's research is that individuals learn more when they incorporate multiple modes of learning (e.g., reflecting and doing tasks together, for example), and the individual who is capable of doing this is said to have learning flexibility. Agile learners then, according to ELT, are those who navigate multiple modes of learning. As such, we would expect learning agile individuals to be able to demonstrate behaviors associated with each of the four components of the cycle.

Learning Goal Orientation

The experiential learning cycle proposed by Kolb (1984) provides a comprehensive framework that outlines how effective learners take in, and process information. Such a model is agnostic to the type of experience, however certain types of experiences have been shown to be an important determinant of leader development (McCall, 2010). Thus, we must also consider the extent to which an individual seeks out, is open to, and persists with, new and challenging work related experiences. A measure of learning agility should not only consider behaviors that indicate an individual's ability to effectively navigate the learning cycle (Kolb, 1984), but also their willingness to seek out relevant situations in which new learning can occur.

Research suggests that individuals typically approach achievement situations as either a way to *develop* one's competence (a learning or mastery goal orientation) or to *demonstrate* one's competence (a performance goal orientation). Originating from work conducted by Carol Dweck (1986; Dweck & Leggett, 1988; Elliott & Dweck, 1988), these concepts have recently been applied to the workplace by VandeWalle (1997, 2001). Relevant to the concept of learning agility is the

notion that goal orientations are associated with different personal beliefs about the relationship between effort and ability. *Learning goal orientations* defined as "a focus on developing one's competence by acquiring new skills, mastering new situations, and learning from experience" (VandeWalle, 1997, p. 1000), are borne from the belief that one's ability can be developed with effort and that this will lead to success. Conversely, *performance goal orientations* are borne from the beliefs that ability is innate, difficult to develop and thus effort is largely seen as unrelated to success. Two different performance goal orientations have been identified, a *proving goal orientation* which is defined as "a focus on demonstrating one's competence and the gaining of favorable judgments from others", and an *avoiding goal orientation,* defined as "a focus on avoiding negation of one's competences and the avoiding of negative judgments from others" (VandeWalle, 1997, p. 1000).

Research has found that individuals can approach new and challenging experiences in qualitatively different ways depending on their orientation. For example, individuals with a learning goal orientation display greater tolerance for ambiguity, thoughtfulness, open-mindedness (Kroll, 1988), persistence in the face of difficulties (Dweck, 1986; Dweck & Leggett, 1988; Elliott & Dweck, 1988) and prefer challenging tasks (Ames & Archer, 1988). Conversely, performance goal orientations are negatively related to tolerance for ambiguity, thoughtfulness, complexity (Kroll, 1988), and have been shown to be related to a general avoidance of challenging tasks (Dweck, 1986; Dweck & Leggett, 1988; Elliott & Dweck, 1988).

Seeking out, and being open to new and challenging experiences is important for any learning to be possible. To this end, the specific behaviors that are related to a learning goal orientation are likely to be integral to the concept of learning agility. Behaviors that demonstrate a tolerance for ambiguity, open-mindedness, persistence, and a general preference for challenging tasks are likely to increase the likelihood that individuals will find themselves in, and persist with new and challenging experiences long enough for learning to occur. If individuals are unable to do this, they will likely avoid challenging situations, quit when difficulties arise and perhaps continue to seek out familiar situations. Conversely, individuals who continually seek out new situations will have many new experiences from which to extract new understanding, meaning and insight. A measure of learning agility should assess an individual propensity to behave in ways fitting the latter of these two examples.

Job Adaptability

The learning goal literature (Dweck, 1986; Dweck & Leggett, 1988; Elliott & Dweck, 1988; VandeWalle, 1997, 2001) provides a rich source of behaviors that indicate an individual's ability to seek out and persist with new and challenging experiences. Additionally, experiential learning theory (Kolb, 1984) provides a framework for understanding how, once in such situations, effective learners may take-in, and process information. In an environment that is conducive to learning, seeking out new experiences, accompanied with the ability to take-in and manage information in an appropriate manner will likely be sufficient for one to learn effectively. However, in many organizations the primary focus is often on production rather than learning and thus they can rarely be considered optimal environments. In most work situations, immediate performance comes first while learning is of secondary concern (if at all). Effective learning at work then must also consider an individual's ability to manage the immediate demands of the situation (i.e., the pressure to produce and perform), in order for learning to occur either in parallel, or after the fact.

The job adaptability and performance literatures provide a rich source of behavioral indicators that are relevant to job performance in every occupational domain (Campbell, 1993; Pulakos, Arad, Donovan, & Plamondon, (2000). Many of the dimensions discussed in this domain are relevant to handling new and challenging experiences. Specifically, an overview provided by Pulakos et al. (2000) highlights two components that are relevant here: *dealing with uncertain and unpredictable work situations* and *handling work stress.*

In line with what we have argued previously in this Technical Report/Guide, Pulakos et al. (2000) suggest that effective job performance requires an individual to be able to *deal with uncertain and unpredictable work situations.* Specifically, the authors posit that the ease and effectiveness with which one confronts and deals with uncertainty is demonstrated when individuals refuse to be paralyzed by uncertainty or ambiguity, don't need things to be black and white, and take effective action without having to know the total picture or have all the facts at hand (Pulakos, et al. 2000). In order to learn from new experience, an individual will undoubtedly need to manage such uncertainty displaying such behaviors.

Challenging situations, while rich opportunities for learning, can also evoke stress, especially in work situations where an individual is under pressure to deliver and be present in the moment. This pressure to deliver, when not managed well may impede an individual's ability to attend to cues that may provide valuable learning both during and after an experience. An individual's ability to

handle such pressure is thus an important aspect of the learning agility process. The work of Pulakos et al. (2000) again serves as a source of behavioral indicators that may demonstrate such ability. Specifically, the authors suggest that effectively handling work stress involves remaining composed and cool when faced with difficult situations, managing frustration well by directing effort to constructive solutions rather than blaming others, and demonstrating resilience in stressful circumstances.

Boundary Topics

The concepts covered thus far provide the primary theory for learning agility. But what may seem relevant yet is not addressed? For example, what current conceptions of learning agility that are not addressed is a connection to psychological research on behavioral learning theories from the tradition of Hull, Spence, and Skinner. While these theories directly address how learning changes behaviors, research from this scholarship is generally regarded as too different an approach from the very situational and context driven conceptualization of learning agility we are attempting to address. Another boundary of the theoretical contribution of this work noted briefly earlier is along the cognitive-behavioral line drawn between aspects of experiential learning. As purported in the De Rue et al. paper, there are distinct (but connected) processes that occur when an individual is learning. The cognitive processes associated with learning have received the most attention by scholars and thus are associated with common wisdom and conceptualizations of learning: namely, learning is a literal change in connections between neurons that results in new memories and thought processes. While this tradition is vast and widely studied, less attention has been paid to what people actually do, in terms of behaviors, when they are learning.

The approach taken in this paper, is built on theories of organizational and team learning in organizations. Most specifically, the theory of learning agility employed here is drawn from the scholarship of Argyris and Schön: reflective practitioner, double loop learning, and defensiveness. This literature also draws upon other social-cognitive theories of learning such as situated learning. This theory provides insight into how a collaborative approach to learning can enhance the capability to learn. That is, it is through interactions with others not just in a vicarious learning way, but through the interpersonal processes of working together and sharing knowledge that capacity for learning is built within a particular social context (i.e., work organization) and culture.

The contribution of this approach is to address what is known about how individual learning is connected to team and organizational learning. In addition, this work addresses the issue of how

individuals learn in organizations by outlining the behaviors associated with learning, as separated from the cognitive processes associated with learning. This work will clarify the content of the construct of learning agility as it relates to behaviors performed when individuals are learning. Through the development of a new measure of learning agility, clarity will be provided as to the content of the construct as well as to convergent, discriminant, and predictive validity. A primary goal of this work is to provide construct validity for the notion of learning agility, and the approach is largely behavioral in nature. Findings from this research can contribute to a larger body of work on leadership, in general, and leadership development, in particular. **In sum, learning agility is a developable set of behaviors that requires an examination of both the personal characteristics that antecede learning agility as well as the social contextual elements that can enhance or attenuate a person's ability to act in learning agile ways.**

Defining Learning Agility

Learning agility is defined as the engagement in learning behaviors to enhance the capacity to reconfigure activities quickly to meet the changing demands in the task environment.

Agility, as extrapolated from DeRue et al. (2012), is defined to have two components: flexibility and speed. In regard to flexibility, it is the process of abandoning behaviors that have worked in the past for new behaviors that meet the demands of the future. As a result of the learning behaviors that individuals engage in (e.g., reflecting, collaboration), in concert with an examination of the needs of the current situation, individuals change their approach to tasks along with changes in needs or context. *Flexibility* involves unlearning as much as it does learning; that is, the process of abandoning previously effective behaviors in favor of behaviors that will work better in the new context is a critical component of flexibility. In addition, flexibly has to do with behaviors that are contingency-based such that individuals readily change course in response to feedback from others or the environment.

Speed, however, has to do with how quickly an individual can change course in behaviors as well as how quickly an individual can read the situational cues in order to form a plan of action. Colloquial phases such as "up to speed" and "quick study" exemplify the nature of this component of learning agility. Individuals who demonstrate behaviors related to speed can change their position during a discussion in response to social cues, or immediately change behavior after a learning experience to adjust to the new knowledge.

Method

Our statistical analyses support the claim by De Rue and his colleagues (2012) that Flexibility and Speed are key dimensions of learning agility. Yet we have identified 7 other dimensions as well, and the correlations among them show that all are acceptable as both interdependent and reasonably independent – see Tables 1,2, and 3 that follow. It is likely that these additional 7 when practiced and incorporated into one's learning repertoire will support being flexible and quick.

Finally, learning agility is based on two major factors: skill and motivation. Skill concerns developing the 38 behaviors of the BLAI, and motivation is the willingness to take risks and from time to time move beyond one's comfort zone.

The Burke Learning Agility Inventory®

Based on our literature review and preliminary testing, a 38-item learning agility inventory, with a seven point Likert-style rating scale, was created for further investigation. The inventory was given the name "Burke Learning Agility Inventory" (Burke LAI). It was postulated that learning agility consists of nine independent dimensions. These include:

Flexibility – Being open to new ideas and proposing new solutions.

Speed – Acting on ideas quickly so that those not working are discarded and other possibilities are accelerated.

Experimenting – Trying out new behaviors (i.e., approaches, ideas) to determine what is effective.

Performance Risk Taking – Seeking new activities (i.e., tasks, assignments, roles) that provide opportunities to be challenged.

Interpersonal Risk Taking – Confronting differences with others in ways that lead to learning and change.

Collaborating – Finding ways to work with others that generate unique opportunities for learning.

Information Gathering – Using various methods to remain current in one's area of expertise.

Feedback Seeking – Asking others for feedback on one's ideas and overall performance.

Reflecting – Slowing down to evaluate one's own performance in order to be more effective.

Samples

Over the past four years the 38-item Burke LAI was administered to three different samples. A brief summary of the samples is provided below.

Mid-Level Managers. Participants for this study received an email through a list serve that included alumni of executive education programs at a large, mid-Atlantic organizations that specialize in leadership development. Participants were provided with the online questionnaire via a link received in their email. Participants were able to complete the questionnaire at their convenience. In total, 393 participants completed the study materials and were 57% male with the largest proportion being between the ages of 35-44 years old (27%), followed by 45-49 (19%), 50-54 (18%), and 55-64 (18%). The majority of participants held jobs in the corporate sector (57%) and came from various roles in the organization including manager (24%), director (19%), professional staff (13%) and executive level (11%). This sample was used as the norm group for the Burke Learning Agility Inventory and as such, it the sample from which percentile scores found in our report are derived. Please see table 1 for information on the sample.

Table 1. Participant Demographics (Mid-Level Manager Sample)

Participant Demographics	N	(%)
Age		
18-24	4	1.0%
25-34	48	12.2%
35-44	104	26.5%
45-49	76	19.3%
50-54	72	18.3%
55-64	69	17.6%
65+	20	5.1%
Gender		
Male	223	56.7%
Female	170	43.3%

Participant Demographics (Cont)	N	(%)
Job Function		
Accounting	7	1.8%
Administration/General Mgmt	84	21.4%
Consulting	33	8.4%
Coaching	16	4.1%
Strategy	5	1.3%
Academician	5	1.3%
Human Resources	40	10.2%
Information Systems	32	8.1%
Marketing/Sales	23	5.9%
Operations/Production	38	9.7%
Research & Development	21	5.3%
Training & Development	44	11.2%
Other	45	11.5%
Organizational Level		
C-Level/President/Chairman/EO	43	10.9%
Executive/Senior/Group VP	24	6.1%
Vice President	25	6.4%
Director	73	18.6%
Manager	96	24.4%
Adjunct/Faculty	6	1.5%
Owner	14	3.6%
Consultant	13	3.3%
Owner/Consultant	19	4.8%
Professional Staff	51	13.0%
Contract Employee	12	3.1%
Student/Intern	2	.5%
Other	15	3.8%
Role		
Individual Contributor	104	26.5%
Manager	70	17.8%
Manager of managers	52	13.2%
Senior level manager	71	18.1%
Executive level	64	16.3%
Other	32	8.1%
Sector		
Corporate	225	57.3%
Education	37	9.4%
Government	36	9.2%
Non-profit	25	6.4%
Other	70	17.8%

Online Convenience Sample. A convenience sample of 207 individuals was recruited using Amazon's Mechanical Turk survey service. Participation was limited to U.S. adults over the age of 18. Slightly more than half of participants were male (51.2%). The majority of the sample was White/Caucasian (71.5%) followed by 7.7% Asian/Asian-American, 6.8% Hispanic/Latino(a), 5.3% Black/African-American, 1.9% Biracial, and 6.8% did not respond.

The average age of participants was 34 (SD=10.25) and they had an average of 13.86 years of work experience (SD=9.63). The majority of the sample were employed (86.5%) when the survey was administered, 6.8% were not employed, and 6.8% of the sample did not respond. Over one-third of participants (34.3%) completed a four-year college degree, almost one quarter of participants (24.2%) reported completing some college, 13% completed their high school/GED degree, 12.6% completed their two-year college degree, 7.7% completed a Master's Degree, and 1.4% completed a professional degree such as a Medical Degree (MD) or Juris Doctorate (JD).

Health Care Organization Sample. A sample of 471 employees at a Health Care organization was surveyed using an online survey platform. Slightly more than half of participants were female (56.1%), 14.4% were male, and 29.5% did not respond. The majority of the sample was White/Caucasian (60%), 6% were Hispanic/Latino(a), 1.7% were Asian/Asian-American, 1.5% were Black/African-American, .9% were Biracial or Multiracial, .6% were Native Hawaiian/Pacific Islander, and 29.5% did not respond.

The average age of participants was 41.11 years (SD=14.10) with an average of 20.29 years of formal work experience (SD=13.38). Roughly one quarter (26%) of participants earned a four-year college degree; 19.1% earned a two-year college degree, 14.2% completed some college, 5.4% earned a High School Diploma or GED, 2.2% earned a Master's Degree, 3.4% earned a professional degree such as a Medical Degree (MD) or Juris Doctorate (JD), .2% completed a doctoral degree such as a PhD or EdD and 29.5% of participants did not respond. Over one-third (35.9%) of participants identified as a Team Leader or Supervisor who manages others; almost one quarter of the sample (24.1%) identified as Individual Contributors who manage themselves; 3.9% identified as Functional Mangers who manage a business function in the organization; 3.7%

Results

Intercorrelations. The intercorrelations of the Burke Learning Agility scales for the mid-Level manager sample, the online convenience sample and the healthcare organization sample appear in Table 1, 2 and 3 respectively. Intercorrelations between dimensions are moderate and positively correlated, which is consistent with learning agility's theoretical underpinnings. It is also important to note that intercorrelations are moderate (i.e., less than .8) indicating that, while scales are related, they are also measuring unique dimensions.

Table 2. Burke LAI Scale Intercorrelations (Mid-Level Manager Sample)

	Flexibility	Speed	Experimenting	Performance Risk-Taking	Interpersonal Risk-Taking	Collaborating	Information Gathering	Feedback Seeking	Reflecting
Flexibility									
Speed	.74** N=393								
Experimenting	.71** N=393	.60** N=393							
Performance Risk-Taking	.60** N=393	.47** N=393	.63** N=393						
Interpersonal Risk-Taking	.63** N=393	.51** N=393	.68** N=393	.67** N=393					
Collaborating	.72** N=393	.52** N=393	.69** N=393	.67** N=393	.72** N=393				
Information Gathering	.66** N=393	.57** N=393	.73** N=393	.66** N=393	.71** N=393	.72** N=393			
Feedback Seeking	.46** N=393	.34** N=393	.55** N=393	.56** N=393	.67** N=393	.59** N=393	.58** N=393		
Reflecting	.69** N=393	.53** N=393	.70** N=393	.65** N=393	.72** N=393	.75** N=393	.64** N=393	.62** N=393	

** p<.01

Table 3. Burke LAI Scale Intercorrelations (Online Convenience Sample)

	Flexibility	Speed	Experimenting	Performance Risk-Taking	Interpersonal Risk-Taking	Collaborating	Information Gathering	Feedback Seeking	Reflecting
Flexibility									
Speed	.59** N=204								
Experimenting	.74** N=194	.57** N=194							
Performance Risk-Taking	.68** N=193	.47** N=193	.65** N=193						
Interpersonal Risk-Taking	.60** N=194	.50** N=194	.62** N=194	.59** N=193					
Collaborating	.68** N=194	.48** N=194	.58 ** N=194	.62** N=193	.51** N=194				
Information Gathering	.66** N=194	.51** N=194	.59** N=194	.61** N=193	.50** N=194	.59** N=194			
Feedback Seeking	.52** N=194	.40** N=194	.51** N=194	.55** N=193	.54** N=194	.56** N=194	.57** N=194		
Reflecting	.64** N=194	.50** N=194	.66** N=194	.52** N=193	.54** N=194	.55** N=194	.63** N=194	.55** N=194	

** p<.01

Table 4. Burke LAI Scale Intercorrelations (Healthcare Sample)

	Flexibility	Speed	Experimenting	Performance Risk-Taking	Interpersonal Risk-Taking	Collaborating	Information Gathering	Feedback Seeking	Reflecting
Flexibility									
Speed	.52** N=280								
Experimenting	.61** N=279	.53** N=279							
Performance Risk-Taking	.62** N=280	.45** N=280	.60** N=279						
Interpersonal Risk-Taking	.41** N=280	.29** N=280	.43** N=279	.41** N=280					
Collaborating	.56** N=280	.50** N=280	.47** N=280	.52** N=280	.39** N=280				
Information Gathering	.40** N=280	.33** N=280	.37** N=279	.41** N=280	.24** N=280	.39** N=280			
Feedback Seeking	.52** N=279	.29** N=279	.45** N=279	.58** N=279	.41** N=279	.48** N=279	.34** N=279		
Reflecting	.57** N=280	.43** N=280	.53** N=279	.48** N=280	.45** N=280	.46** N=280	.42** N=280	.39** N=279	

** p<.01

Test Reliability

Tables 4-6 show the scale reliability (internal consistency) for each of the Burke LAI subscales. Each subscale demonstrates excellent reliability as Cronbach's Alpha is greater than .7 for all subscales in all three samples. Reliability evidence suggests that the Burke LAI is a reliable measure for use across multiple types of samples.

Table 5. Internal Consistency (Mid-Level Manager Sample)

Scale	Item Count	Cronbach's Alpha
Flexibility	5	.81
Speed	5	.85
Experimenting	4	.85
Performance Risk-Taking	4	.88
Interpersonal Risk-Taking	4	.78
Collaborating	4	.88
Information Gathering	4	.81
Feedback Seeking	4	.87
Reflecting	4	.83

N=393.

Table 6. Internal Consistency (Online Convenience Sample)

Scale	Item Count	Cronbach's Alpha
Flexibility	5	.80
Speed	5	.89
Experimenting	4	.85
Performance Risk-Taking	4	.90 [a]
Interpersonal Risk-Taking	4	.79
Collaborating	4	.82
Information Gathering	4	.87 [b]
Feedback Seeking	4	.88
Reflecting	4	.87 [b]

N= 194; Superscripts indicate different sample sizes. a: N=193; b: N=195

Table 7. Internal Consistency (Healthcare Organization Sample)

Scale	Item Count	Cronbach's Alpha
Flexibility	5	.79
Speed	5	.90
Experimenting	4	.85 [a]
Performance Risk-Taking	4	.86
Interpersonal Risk-Taking	4	.76
Collaborating	4	.80
Information Gathering	4	.86
Feedback Seeking	4	.86 [a]
Reflecting	4	.88

N= 280; Superscripts indicate different sample sizes. a: N=279

Confirmatory Factor Analyses

A Confirmatory Factor Analysis (CFA) was conducted for each of the three samples. Results depicted in Tables 7-9 suggest a reasonably strong factor structure. For the Mid-Level Manager sample, the analysis was conducted by randomly splitting the sample into two subsequent samples to test model fit, and confirm the model fit, respectively.

As shown in tables the model fits well in all three samples. RMSEA indices were all below .07 which indicates good model fit. The SRMR demonstrate exceptional model fit as they are all below .08. Lastly, the CFI indices were at .90 or above indicating acceptable model fit. Overall the factor structure fits well in all three of these samples using different populations.

Table 8. CFA for Mid-Level Managers Sample

Sample 1 (Model Fit)	n	χ^2	df	χ^2/df	CFI	RMSEA	SRMR
9-Factor	197	1085.48	629	1.73	.90	.061	.057
Sample 2 (Confirmatory)							
9-Factor	196	1060.84	629	1.69	.92	.059	.048

Table 9. CFA for Online Convenience Sample

	n	χ^2	df	χ^2/df	CFI	RMSEA	SRMR
9-Factor	193	1126.40	629	1.80	.90	.064	.052

Table 10. CFA for Healthcare Organization Sample

	n	χ^2	df	χ^2/df	CFI	RMSEA	SRMR
9-Factor	339	1200.04	629	1.91	.91	.052	.052

Construct Validity

After establishing that the Burke LAI reliably measures nine independent factors, it was necessary to ensure that the instrument actually measures what it is intended to measure - learning agility. Therefore, two types of correlation analyses were run -- convergent correlational analyses, which test for relationships between the Burke LAI and theoretically similar constructs; and discriminant correlational analyses, which tests constructs that are believed to be unrelated to the Burke LAI.

Convergent Validity. A total of nine cognitive, behavioral, and personality measures were tested for convergent validity (Learning Goal Orientation, Tolerance for Ambiguity, Generalized Self-Efficacy, The Big Five, and (External) Locus of Control) among the Online Convenience and Health Care Organization samples. These measures were selected based on theoretical research suggesting that there would likely be overlap among constructs.

Review of correlation matrices for convergent validity demonstrates that the nine dimensions of learning agility correlate significantly, in the expected direction, with 9 of the 10 cognitive, behavioral, and personality measures with which learn agility dimensions are expected to be correlated supporting the BLAI's construct validity. Furthermore, learning goal orientation, the construct most similar to learning agility demonstrates the highest correlation with overall learning agility and its dimensions, while more moderate correlations are observed with all the less similar constructs. While external Locus of Control demonstrated significant negative correlations, there was no significant correlation with Interpersonal Risk-Taking. Nevertheless, the data show that an external locus of control is negatively correlated with Learning Agility as expected. This pattern of results is expected and supports the construct validity of the Burke LAI.

Table 11. Convergent Validity for Online Convenience Sample

	Learning Goal Orientation	Tolerance for Ambiguity	Generalized Self-Efficacy	Big Five: Agreeable-ness	Big Five: Conscientious-ness	Big Five: Extra-version	Big Five: Neurotic-ism	Big Five: Openness to Experience	(External) Locus of Control
Learning Agility Measures									
Flexibility	.67** N=194	.34** N=194	.39** N=194	.39** N=194	.37** N=194	.36** N=194	-.32** N=194	.47** N=194	-.23** N=194
Speed	.63** N=194	.44** N=194	.57** N=194	.45** N=194	.56** N=194	.41** N=194	-.53** N=194	.41** N=194	-.32** N=194
Experimenting	.66** N=194	.38** N=194	.36** N=194	.31** N=194	.30** N=194	.35** N=194	-.32** N=194	.36** N=194	-.22** N=194
Performance Risk-Taking	.66** N=193	.51** N-193	.30** N=193	.29** N=193	.22** N=193	.35** N=193	-.25** N=193	.39** N=193	-.25** N=193
Interpersonal Risk-Taking	.53** N=194	.32** N=194	.29** N=194	.32** N=194	.25** N=194	.32** N=194	-.23** N=194	.26** N=194	-.14 N=194
Collaborating	.53** N=194	.31** N=194	.30** N=194	.32** N=194	.30** N=194	.38** N=194	-.29** N=194	.33** N=194	-.18* N=194
Information Gathering	.61** N=195	.27** N=195	.32** N=195	.31** N=195	.29** N=195	.29** N=195	-.26** N=195	.35** N=195	-.15* N=195
Feedback Seeking	.43** N=194	.20** N=194	.20** N=194	.25** N=194	.18** N=194	.23** N=194	-.20** N=194	.24** N=194	-.25** N=194
Reflecting	.64** N=195	.22** N=195	.33** N=195	.31** N=195	.29** N=195	.19** N=195	-.18* N=195	.35** N=195	-.17* N=195
Learning Agility Overall Score	**.75** N=193**	**.42** N=193**	**.42** N=193**	**.41** N=193**	**.38** N=193**	**.40** N=193**	**-.36** N=193**	**.44** N=193**	**-.27** N=193**

* p<.05, ** p<.01

Table 12. Convergent Validity for Healthcare Sample

Learning Agility Measures		
	Resistance to Change	Learning Goal Orientation
Flexibility	-.28** N=208	.47** N=280
Speed	-.38** N=208	.47** N=280
Experimenting	-.31** N=207	.33** N=280
Performance Risk-Taking	-.32** N=208	.39** N=280
Interpersonal Risk-Taking	-.24** N=208	.27** N=280
Collaborating	-.26** N=208	.37** N=280
Information Gathering	-.21** N=208	.46** N=280
Feedback Seeking	-.17* N=207	.28** N=279
Reflecting	-.24** N=208	.43** N=280
Learning Agility Overall Score	**-.37** N=207**	**.53** N=279**

* p<.05, ** p<.01

Discriminant Validity. Measures that were not expected to correlate with Learning Agility and its subscales were also incorporated to help establish that Learning Agility is a unique construct. The measures included Risk Aversion and Reactance. Overall learning agility had significant negative correlations with both Risk Aversion and Reactance; these correlations were rather small, showing a weak negative relation with learning agility.

Risk Aversion. Correlations with Risk Aversion also showed discriminant validity as the correlations tended to be nonsignificant or small. The three exceptions being Performance Risk-Taking, Experimenting and Collaborating. However, this is expected as those who are risk averse are less likely to risk their performance, experiment with new things and extend themselves to collaborate with others. There is a significant correlation with Learning Agility Overall Score and Risk Aversion because this score includes the items from Performance Risk-Taking, Experimenting and Collaborating, which are negatively correlated with Risk Aversion, thus resulting in a negative correlation for Learning Agility Overall Score and Risk Aversion. It is important to note that this correlation is of a smaller magnitude than those found for both Performance Risk Taking and Experimenting. Overall these data support the Burke LAI's discriminant validity.

Table 13. Discriminant Validity for Online Convenience Sample

Learning Agility Dimensions	Risk Aversion
Flexibility	-.14* N=194
Speed	-.13 N=194
Experimenting	-.23** N=194
Performance Risk-Taking	-.38** N=193
Interpersonal Risk-Taking	-.07 N=194
Collaborating	-.20** N=194
Information Gathering	-.14 N=195
Feedback Seeking	-.08 N=194
Reflecting	-.11 N=195
Learning Agility Overall Score	**-.21** N=193**

* p<.05, ** p<.01

Reactance. Correlations with Reactance also showed discriminant validity as the correlations tended to be nonsignificant or small.

Table 14. Discriminant Validity for Healthcare Organization Sample

Learning Agility Dimensions	Reactance
Flexibility	-.11 N=210
Speed	-.19** N=210
Experimenting	-.09 N=209
Performance Risk-Taking	-.01 N=210
Interpersonal Risk-Taking	-.05 N=210
Collaborating	-.11 N=210
Information Gathering	-.14* N=210
Feedback Seeking	.-.08 N=209
Reflecting	-.11 N=210
Learning Agility Overall Score	**-.14*** **N=209**

*p<.05, ** p<.01

Criterion Validity

In terms of criterion-related validity, a study performed on a sample of 130 candidates for executive-level positions in the wealth management industry found a positive correlation of .42 (p<.05) between self-rated learning agility scores and a rating of the probability of success in an executive-level position – as evaluated by an executive recruitment firm – (Burke, Roloff, and Mitchinson, 2016). This indicates initial support for a relationship between learning agility and high-level performance in executive leadership roles.

A second study conducted in 2017 examines the Burke LAI in relation to performance measures. Data were collected from a major midwestern healthcare organization whose employees completed the Burke LAI as a part of a leadership development program. The sample was comprised of mid-level and senior leaders at the organization. Burke LAI data were collected over a five-month period (October, 2016 – February, 2017). Performance data were collected from participants' supervisors in March of 2017. This resulted in 74 participants with ratings on both the Burke LAI and supervisor ratings of performance. The sample included 64.9% Female ($n = 48$) and 35.1% Male ($n = 26$). The sample was 89.2% White ($n = 66$), 6.8% Asian ($n = 5$), 2.7% African American ($n = 2$), and 1.4% Hispanic ($n = 1$).

Performance was measured using an 8-Item measure that was completed by each participant's supervisor. The eight items included the dimensions of performance, transformation leadership, results orientation, continuous learning, financial and operational performance, service orientation, service quality, drives or enables growth and overall performance. See appendix 1 for definitions of performance dimensions.

Pearson correlation analyses were conducted to determine the relationship of the Burke LAI to performance outcomes. Our findings demonstrate "Overall Score" on the Burke LAI correlates with the performance measure "Results Orientation" (driving aggressive goals to strategic targets) for mid-level and senior leaders ($r = .31$ $p < .01$ $N = 74$). Similarly, the Overall Burke LAI score correlates with "Drives or Enables Growth" ($r = .25$ $p < .05$ $N = 74$). The Burke LAI is made up of nine dimensions. Seven of the nine dimensions correlated with at least one of the eight leadership attributes used to evaluate leadership success (correlations ranged from $r = .23$ to $.39$; $p < .05$ to $p < .01$; n = 74). "Information Gathering" and "Feedback Seeking" correlated with "Continuous Learning" ($r = .31$, $p < .01$; $r = .36$, $p < .01$; respectively). "Speed" was shown to be one of the more robust correlates of performance outcomes, correlating with "Results Orientation", "Service

Quality", "Drives or Enables Growth" and "Overall Performance" ($r = .39$, $p < .01$; $r = .24$, $p < .05$; $r = .26$, $p < .05$; $r = .27$, $p < .05$; respectively). "Performance Risk Taking", "Interpersonal Risk Taking", and "Collaborating" also correlated with "Results Orientation" ($r = .23$, $p < .05$; $r = .24$, $p < .05$; $r = .33$, $p < .01$; respectively). "Experimenting" correlated with "Drives or Enables Growth" ($r = .28$ $p < .05$ $N = 74$).

Results indicated that neither "Flexibility" or "Reflecting" predicted any of the performance outcomes.

Table 15. Criterion Validity Table

Learning Agility Measures	Performance Measures							
	Transformational Leadership	Results Orientation	Continuous Learning	Financial and Operational Performance	Service Orientation	Service Quality	Drives or Enables Growth	Overall Performance
Flexibility	-.13 N=74	.18 N=74	.03 N=74	-.14 N=73	.01 N=74	-.04 N=74	.14 N=73	-.02 N=74
Speed	.07 N=74	**.39**** N=74	.20 N=74	.06 N=73	.20 N=74	**.24*** N=74	**.26*** N=73	**.27*** N=74
Experimenting	.00 N=74	.21 N=74	.05 N=74	.01 N=73	.15 N=74	.19 N=74	**.28*** N=73	.09 N=74
Performance Risk-Taking	-.01 N=74	**.23*** N=74	.08 N=74	-.06 N=73	.10 N=74	.13 N=74	.17 N=73	.03 N=74
Interpersonal Risk-Taking	-.04 N=74	**.24*** N=74	-.03 N=74	.03 N=73	.12 N=74	.03 N=74	.19 N=73	.08 N=74
Collaborating	-.01 N=74	**.33**** N=74	.14 N=74	-.08 N=73	.01 N=74	.03 N=74	.18 N=73	.04 N=74
Information Gathering	-.02 N=74	.21 N=74	**.31**** N=74	.18 N=73	.11 N=74	.09 N=74	.21 N=73	.21 N=74
Feedback Seeking	.13 N=74	.20 N=74	**.36**** N=74	-.07 N=73	**.24*** N=74	.16 N=74	.20 N=73	.19 N=74
Reflecting	-.20 N=74	.05 N=74	.13 N=74	-.22 N=73	-.10 N=74	-.02 N=74	-.09 N=73	-.13 N=74
Learning Agility Overall Score	-.02 N=74	**.31**** N=74	.20 N=74	-.04 N=73	.15 N=74	.12 N=74	**.25*** N=73	.13 N=74

* $p < .05$ ** $p < .01$

Summary

This review of relevant literature positions learning agility as a multifaceted concept, as demonstrated by a range of behaviors that broadly allow individuals to seek out, manage, understand, and ultimately learn from new and challenging experiences. This review suggests that learning agile individuals display an enthusiasm for learning, proactively seeking out challenges, new experiences and feedback from others. Further, an individual must also be able to effectively take in and process relevant information, integrating new ideas with previous perspectives, reflecting on new insights, generating multiple solutions to problems based on data, and experimenting with new ways of doing things. Finally, in order for this learning to be possible, an individual must be able to effectively manage the situation at hand, creating conditions that will allow learning to occur. Such individuals will persist even when outcomes are unclear, remain calm when faced with challenging situations, stay positive when confronted with failure and ultimately perform well under new conditions.

Points for Discussion

As noted earlier agile learners shape their environments in a manner that produces opportunities for learning. But how do they accomplish this? Buss (1987; 2009) has suggested three ways people can affect their own environments — evocation, selection, and behavioral manipulation.

Evocation: The simple presence of an individual in a social setting shapes their environment. As our lay psychologist, Woody Allan, has said, 80% of success in life is merely "showing up." But showing up in what way? Tall men evoke different reactions from others than short men do. Women evoke different reactions than men. These different evocations can aid learning by paying attention to others' reaction and how these behaviors provide information that might be useful for learning, for example, a tall man putting people at ease rather than intimidating them so that they will be more forthcoming and say things they might not otherwise say. This greater openness from others can provide, particularly for those in leadership positions, useful information for actions to take that will lead to new and different situations to learn further from….and the cycle can continue.

***Selection*:** We make choices all of the time and enter one situation or environment rather than another. Choosing to place ourselves in a new environment, requiring different behavior on our part, can provide a rich opportunity for learning. From the standpoint of learning being passive about potential choices is not likely to enhance one's agility. Key to this enhancement is actively making selections that will provide new opportunities for learning rather than continuing with the "tried and true" for oneself.

***Manipulation*:** There are times, of course, when we do not seem to have a choice and we are stuck with the situation we find ourselves in. Yet we can influence our environment. The positive psychology literature is filled with examples. Other examples come from the literature on the self-fulfilling prophesy, that is, holding certain expectations one can behave in a manner that elicit from others the behaviors that will confirm those expectations. If opportunities for learning do not appear to be available, the learning agile person will create them. Simple examples include changing one's work schedule, meeting new people, attending conferences, initiating teamwork, and finding time to reflect are just a few examples.

To this list of three ways to affect one's environment, Kihlstrom (2013) has added a fourth.

Cognitive transformation: The three that Buss has defined refer to changing the environment via overt behaviors. Kihlstrom's fourth way is covert rather than overt, that is, changing one's *subjective* environment. "Through cognitive transformations, people can change their internal mental representations of the external physical and social environment – perceiving it differently, categorizing it differently, giving it a different meaning than before. In cognitive transformation, the objective features of the environment remain intact…[instead] the cognitive transformation has altered the environment *for that person only* (Kihlstorm, 2013) For the learning agile person time for reflecting provides opportunities to learn from cognitive transformations.

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Appendix

American Psychological Association, American Educational Research Association, & National Council on Measurement in Education (Joint Committee). (2014). *Standards for Educational and Psychological Testing.*

Criterion Validity Performance Measure

The following are the items on which supervisors rated participants in the criterion validity study. Each item was rated on the following scale and the following instructions were provided.

RATING SCALE

Please familiarize yourself with the following rating scale and use it to evaluate the person being rated on the <u>leadership dimensions</u> listed below. *<u>Review and apply this rating scale closely</u>*; it is a *<u>non-traditional</u>* format used to distinguish among higher performers.

<u>Please avoid any natural tendencies to use mostly "middle of the line" ratings.</u> For example, if you are trying to decide between a "6" or "7," you are encouraged to choose "7." If you are trying to decide between a "3" or "2", you are encouraged to choose "2."

7 – GREATLY EXCEEDS EXPECTATIONS | Delivers performance that consistently exceeds and often far exceeds performance expectations and goals – *delivers performance in this area greater than <u>90%</u> of all others in comparable levels/roles at the Company.*

6 –

5 –

4 – MEETS EXPECTATIONS | *Consistently* performs in a manner which meets *the Company* standard performance expectations and meets challenging goals which are set to exceed company targets – *delivers performance in this area greater than 50% of all others in comparable levels/roles at the Company.*

3 –

2 –

1 – DOES <u>NOT</u> CONSISTENTLY MEET EXPECTATIONS | Does <u>not</u> consistently meet performance expectations and may fall short of one or more critical performance goals.

DK – DON'T KNOW | I do not have enough information on this person to offer a rating on this item.

RATING ITEMS

1. **TRANSFORMATIONAL LEADERSHIP**: Uses influence rather than direct/coercive power to build teams and gain desired results. Holds self and others to high standards. Constructively initiates and manages change.

2. **RESULTS ORIENTATION**: Drives performance and accountability by setting aggressive goals. Challenges team members to focus energy and resources onto key metrics and strategic targets.

3. **CONTINUOUS LEARNING:** Sees change as a valuable tool to success. Puts effort into acquiring information relevant to the success of the Company. Is open to trial and error approaches.

4. **FINANCIAL AND OPERATIONAL PERFORMANCE:** Allocates financial and human resources to achieve business goals and <u>makes changes, as needed,</u> to ensure long-term success for the Company.

5. **SERVICE ORIENTATION:** Drives others to prioritize service excellence and create the best experience for those we serve and our employees. Uses service metrics and aggressive goals to drive improvement.

6. **SERVICE QUALITY:** Drives team focus onto exceeding targets for service quality. Coordinates service delivery and accountability to create break-through performance or improvement in quality outcomes.

7. **DRIVES OR ENABLES GROWTH**: Anticipates organizational challenges and continuously changes approaches to optimize the use of resources in order to serve more markets, customers, and/or employees.

8. **OVERALL PERFORMANCE RATING**: Please provide a rating based on the person's overall performance in his/her current role.