Learning Agility: Still Searching for Clarity on a Confounded Construct

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DeRue, Ashford, and Myers (2012) revise the conceptualization of learning agility and propose a conceptual framework of antecedents and consequences of learning agility. Traditionally, learning agility has been defined as the ability and willingness to utilize past experiences in novel situations (De Muese, Guangrong, & Hallenbeck, 2010; Lombardo & Eichinger, 2000); however, DeRue et al. argue that past definitions of learning agility are limited by multiple problems, most notably the confounding of (a) the motivation to learn with the ability to learn and (b) success outcomes with the nature of learning agility. The authors propose a revised definition of learning agility based on processing speed (''the ability to come up to speed quickly in one's understanding of a situation'') and processing flexibility (the ability to ''move across ideas flexibly in service of learning both within and across experiences''), and argue that their definition eliminates the motivational and outcome confounds. However, clarity remains a concern because the use of processing speed is inconsistent with an understanding of cognitive aptitude, and cognitive flexibility has not been adequately developed. Furthermore, success and motivation are still implied in the representation of learning agility, but more importantly, lack of specification of learning contexts makes it difficult to differentiate learning agility from any constellation of antecedents positively related to learning outcomes.

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Processing Speed and Processing Flexibility

The first concern is how learning agility, and the argument that learning agility is distinct from ability to learn, is positioned in relation to general mental ability. In figure 1 of the focal article, DeRue et al. characterize general mental ability as a distal antecedent of the processing/perceptual speed facet of learning agility, and pattern recognition is a processing manifestation of learning agility. Processing speed and spatial ability (i.e., the ability to recognize patterns among stimuli) have long been recognized as two of many specific abilities that constitute general mental ability (e.g., Lang,

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Kersting, Hülsheger, & Lang, 2010). Specific abilities and general mental ability are rooted in biological processes and viewed as generally immutable. There are valid and reliable indicators of processing speed (e.g., variations of Stroop tests) and spatial abilities (e.g., the Block subtest of the Wechsler Adult Intelligence Test), and the relationships between processing speed/spatial ability and job performance and training performance are well established (Salgado, Anderson, Moscoso, Bertua, & de Fruyt, 2003). DeRue et al.'s model of learning agility is inconsistent with the typical understanding of the hierarchical structure of general mental ability. More importantly, DeRue et al. argue that learning agility improves with experience—''the more individuals engage in them [cognitive and behavioral processes that reflect learning agility], the more learning agile they will become.'' Such an argument implies that processing speed, a biological-based specific aptitude, improves from experience! Framing learning agility in traditional cognitive ability nomenclature without embracing the traditional understanding of cognitive ability as a disposition does not increase clarity about learning agility.

The second concern is the use of Deák's conceptualization of cognitive flexibility as the basis for the flexibility construct in learning agility. Deák (2004) defines flexible cognition as the dynamic construction and modification of representations and responses based on information (i.e., similarities, cues, and relations) selected from the linguistic and nonlinguistic environment. The focus of Deák was language development in children; Deák sought to demonstrate cognitive flexibility in children using within-subject, task-switching experimental protocols. Although the term cognitive flexibility has obvious appeal, it is incumbent on DeRue et al. to provide a clearer conceptualization of cognitive flexibility as related to learning contexts, that is, a definition that achieves the scientific specificity seen in Deák's conceptualization as opposed to dictionary definitions of flexibility or definitions where flexible is included in the definition of cognitive flexibility construct. Furthermore, whatever cognitive flexibility is, Deák is clear that empirical validation of his conceptualization of cognitive flexibility requires within-person experimental designs involving switching tasks (neuroimaging is often used to demonstrate that flexible individuals activate different areas of the brain when the experimental task switches). Given DeRue et al.'s focus on measuring learning agility, it is important to note that it is impossible to develop a valid self-report measure of cognitive flexibility aggregated across situations based on Deák's conceptualization of cognitive flexibility.

Success and Learning Agility

DeRue et al. argue that learning agility based on processing speed and flexibility is free from ''success contamination.'' Deleting success and synonyms of success from the definition of learning agility does not remove this success contaminant. For example, DeRue et al. describe a hypothetical, agile manager based on their definition of learning agility: ''imagine the manager who can both carry over *appropriate* [emphasis added] lessons from experience and not get overly invested (and thus carry over) *inappropriate and incorrect* [emphasis added] lessons.'' The characterization of lessons as appropriate or inappropriate implicitly links learning agility to success.

Without clear specification of learning criteria, it is impossible to eliminate contamination between learning and success. In figure 1 of the focal article, DeRue et al. characterize the primary consequences of learning agility as ''learning in and across situations,'' which lead to ''positive performance change over time.'' As seen in training research, transfer of learning is a complex and dynamic process (Baldwin & Ford, 1988), and it is a challenge to empirically identify the antecedents of learning transfer. For example, in a recent meta-analysis of training transfer, Blume, Ford, Baldwin, and Huang (2010) surprisingly found no empirical support for general

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mental ability as an antecedent of utilizing general principles in novel contexts, although this finding was based on only two effect sizes because Blume et al. excluded training evaluation studies where common method variance was an issue.

Without specification of the learning construct space, there are no clear decision criteria for the inclusion or exclusion of variables in the learning agility model. There are numerous person characteristics and contextual variables that affect learning. For example, ''transfer of learning'' is conceptualized as an individual difference related to ''the application, generalizability, and maintenance of new ideas, knowledge, and skills'' (Ruona, Leimbach, Holton, & Bates, 2002). Similarly, ''self-monitoring'' is related to the behavioral flexibility implied in learning agility (Snyder, 1974). Use of goal setting is also a situational variable that affects learning outcomes (Blume et al., 2010). The concern is *not* that DeRue et al. failed to include transfer of learning, self-monitoring, and goal setting in their learning agility model; DeRue et al. do not claim to provide an exhaustive list of individual difference antecedents of learning agility, cognitive and behavioral manifestations of learning agility, or environmental moderators. Rather, the concern is that DeRue et al. fail to specify decision criteria for including and excluding variables as antecedents of learning agility, as processing manifestations of learning agility, or as contextual moderators of individual difference–learning agility relationships or learning agility–learning outcome relationships. Without such decision criteria, it is reasonable to include in the model of learning agility *any* person antecedent, *any* cognitive and behavioral strategy, or *any* situational variable that is positively related to *any* learning outcome.

Motivation and Learning Agility

DeRue et al. argue that conceptualizing learning agility based on processing speed and processing flexibility removes the confound between the capability to be agile and the willingness to be agile. It is difficult to envision processing speed being affected by willingness, that is, an individual chooses to be less agile by slowing his or her processing speed. The willingness confound is an issue with processing flexibility, that is, an individual chooses whether to vary cognitive and behavioral strategies from one learning context to another. As with success, removing willingness from the definition of learning agility does not diminish the fact that willingness is implied in the learning agility model. Goal orientation is a proposed antecedent of learning agility; goal orientation is a model of self-regulation, that is, motivation. As the authors state, goal orientation is the ''propensity to pursue goals.'' The authors' perspective on goal orientation as a stable person characteristic implies that mastery-oriented individuals are by nature more willing to be flexible than performance-oriented individuals. Of course, it can be argued that a mastery-oriented individual can go against his or her nature and refrain from being cognitively flexible, but this argument does not change the fact that the authors' learning agility model posits that certain individuals are more willing to be flexible than other individuals, and variations in willingness to be flexible are related to learning outcomes.

Concluding Remarks

If learning agility is to be raised to the status of a scientific construct, then much work is still needed. The learning criterion space must be specified to provide decision criteria to guide the specification of learning agility. In particular, dimensions that differentiate learning situations must to be specified so as to differentiate cognitive and behavioral skills relevant to different learning contexts. Ultimately, DeRue et al.'s concept of learning agility hinges on individual abilities to recognize which cognitive and behavioral skills are useful in a given context and how effectively an individual can engage in relevant cognitive and behavioral skills. Without specification

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of the learning construct space, learning agility simply becomes a laundry list of all antecedent variables that are positively related to any aspect of learning.

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