

A Measure of Adaptive Cognition for Entrepreneurship Research

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To sense and adapt to uncertainty may characterize a critical entrepreneurial resource. In this research, we employ a metacognitive lens toward the development of a 36-item inventory designed to assess cognitive adaptability, defined as the ability to be dynamic, flexible, and self-regulating in one's cognitions given dynamic and uncertain task environments. Construction of the inventory, and subsequent factor analysis, is confirmatory in nature based on five theoretically justified dimensions of metacognition. We describe the development of the instrument, discuss its implications for entrepreneurship, and finally offer suggestions for further development and testing.

Introduction

Entrepreneurship scholars suggest that cognition research can serve as a process lens through which to “reexamine the people side of entrepreneurship” by investigating the memory, learning, problem identification, and decision-making abilities of entrepreneurs (Mitchell, Busenitz, et al., 2002, p. 93). This research is positioned to further such inquiry, through the development of a measure appropriate to investigate individual differences in cognitive adaptability in an entrepreneurial context. We define cognitive adaptability as the ability to effectively and appropriately change decision policies (i.e., to learn) given feedback (inputs) from the environmental context in which cognitive processing is embedded. Research suggests that while such a cognitive task is difficult to achieve (Rozin, 1996), it is positively related to decision performance in contexts that can be characterized as complex, dynamic, and inherently uncertain (Earley & Ang, 2003). The entrepreneurial context exemplifies such a decision environment.

This article proceeds as follows. In the next section we introduce metacognition as the theoretical perspective for developing a measure of cognitive adaptability. We then describe the construction and evaluation of a 36-item “Measure of Adaptive Cognition (MAC).” We conclude with a discussion of the opportunities and limitations inherent in both the measure of MAC and methods employed in its development.

Metacognitive Theory and Cognitive Adaptability

Metacognition describes a higher-order, cognitive process that serves to organize what individuals know and recognize about themselves, tasks, situations, and their environments in order to promote effective and *adaptable* cognitive functioning in the face of feedback from complex and dynamic environments (Brown, 1987; Flavell, 1979, 1987). To think metacognitively describes such activities as “to be self-aware, to think aloud, to reflect, to be strategic, to plan, to have a plan in mind, to know what to know, to self-monitor” (Guterman, 2002, p. 280).

An Entrepreneurial Example

To differentiate metacognition from cognition, we offer an example both situated in the extant entrepreneurship literature, and also in an entrepreneurial decision context. Consider an entrepreneur who is tasked with proposing a marketing strategy for a new venture. Before the entrepreneur is prepared to evaluate alternative marketing strategies, the entrepreneur must first formulate a strategy to frame how he or she will “think” about 666 ENTREPRENEURSHIP THEORY and PRACTICE this task. This process is *metacognitive*. Suppose that the entrepreneur identifies an effectual reasoning strategy as appropriate to apply to the *cognitive task* of developing and evaluating alternative outcomes (Saravathy, 2001). Based on metacognition research, and integrated with related work in social cognition (selectively reviewed below), we conceptualize cognitive adaptability as the aggregate of metacognition's five theoretical dimensions: *goal orientation, metacognitive knowledge, metacognitive experience, metacognitive control, and monitoring*.