When pressure’s on, here’s how master adaptive learners respond

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It’s the duty of all physicians to study the art and science of medicine throughout their careers. One framework for lifelong learning—the master adaptive learner (MAL) process—outlines the thought processes that typify physicians with the make-or-break quality that enables them to develop genuine expertise.

Following are highlights from “Which cognitive processes are involved in the master adaptive learner process?”, Chapter 5 of *The Master Adaptive Learner*, an instructor-directed textbook designed to help faculty engender the habits of mind for lifelong learning in medicine in their students. It is the first book in the AMA MedEd Innovation Series, which provides practical guidance for local implementation of the education innovations tested and refined by the *AMA Accelerating Change in Medical Education Consortium*.

Critical thinking is the baseline

“Master adaptive learners distinguish themselves by going into a ‘theory-building mode’ to build new schemas when the features of a problem do not fit their knowledge structures,” wrote the authors, Klara K. Papp, PhD, professor of health learning, and Patricia A. Thomas, MD, vice dean of medical education, at Case Western Reserve University School of Medicine.

“They go through the effort of asking ‘why’ questions and seeking to understand what is not explained by what they know,” they added. “They go through the mental effort of trying to understand all of the features of unknown problems rather than attempting to fit problems into existing schemas.”

Critical thinking is central to this process, and one of the main lines of research into it involves dual process theory, which includes two types of concurrent cognitive processes.

Type 1—intuitive—is employed when the physician recognizes the clinical problem. It is “automatic,
fast, nonconscious, effortless and contextualized,” the authors wrote.

Type 2—analytic—is called on when the clinical problem isn’t recognized. This process is “slower, conscious, effortful, reflective, deliberate, cogitative, decontextualized and conceivably normatively correct.”

These can also be thought of in terms of time and rigor. Intuitive thinking is fast and effortless, whereas analytic thinking is slow and effortful. But the two are not discrete—it’s best to think of them as two poles on a continuum. In fact, effective clinical decision-making involves toggling between the two.

“The optimum functioning is in the middle ranges, with challenges occasionally and opportunities for numerous successful encounters with patients,” the authors wrote. “This may be considered the Optimal Adaptability Corridor.”

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Another core attribute of the master adaptive learner is metacognition, which "involves awareness of or vigilance for cues that things could be better and a sense that they can be improved,” the authors wrote. “Learners might think of metacognitive skills as ‘balcony views’ of their own behaviors, attitudes, thoughts and emotions.”

Identifying and improving these skills will help learners “achieve continuous self-improvement and identify opportunities for practice-based learning and improvement resulting in higher-quality patient care,” they added.

The chapter also explores the contrasts between expert-like and nonexpert-like learners and lays out six clusters of forces that influence clinical decision-making: clinician factors, metacognition, emotional factors, systems factors, illness factors and patient factors.

“There will always be a clear mandate to educate doctors who are able to think critically about patient problems and recognize and avert errors of all kinds,” the authors wrote. “The Master Adaptive Learner model provides an important framework illuminating the ways to achieve these goals.”

Discover more about envisioning the adaptive learner.