

**Table 1**

Characteristics of Expert Problem-Solvers

1	Experts tend to recall more relevant information from their domain of expertise than novices, although becoming an expert goes beyond mere accumulation of knowledge. Experts are adept at breaking down information into smaller pieces and reorganizing them into meaningful units, which become part of their working memory.
2	Experts are able to use “deep-structural representations” <sup>a</sup> in solving problems, whereas novices tend to remain on the surface of a problem.
3	Experts devote more time to developing a global approach before attempting to sift through the details of the problem. They reflect on the nature of the problem before tackling it and rely on explanation, whereas novices often jump into immediate problem-solving responses without first examining the background or context.
4	Experts perform problem solving faster and more efficiently than novices. Over time expertise builds, and the process of moving through identifiable problem-solving steps accelerates.

*Source:* Sternberg, Robert J., and Talia Ben-Zeev. *Complex Cognition: The Psychology of Human Thought*. New York: Oxford University Press, 2001.

Sternberg, Robert J., and Talia Ben-Zeev. *Complex Cognition*, p. 156.