CHALLENGE

Divergent thinking is a core competency required of all intelligence professionals, enabling them to better incorporate alternative interpretations into their products as required by analytic tradecraft standards. Divergent thinking is the ability to flexibly generate useful, alternative solutions to a problem. These alternatives include uncommon solutions that require overcoming biases and combining information elements in novel ways.

Divergent thinking is part of critical thinking; however, good divergent thinking is difficult due to mental fixation, group think, high stakes, time pressure, and missing information. CASL’s researchers are working to provide intelligence professionals with evidence-based learning materials for improving their divergent thinking.

SOLUTION

CASL has developed and validated a divergent thinking course that improves the flexibility and originality of analysts’ divergent thinking. In the course, analysts learn to adopt various cognitive strategies for overcoming tunnel vision and identifying relevant alternative solutions.

CASL’s research has also led to the discovery of measurable brain processes that shape a person’s divergent thinking ability. Important neural factors include the brain’s attention control mechanisms, a person’s neurophysiological state as reflected in brain waves, and differences in left- and right-brain hemisphere processing.

Researchers are currently exploring whether divergent thinking training improves not only analysis-relevant hypothesis generation but also language learning. The hypothesis is that vocabulary learning is more robust when the learner actively generates a greater variety of interpretative contexts for each word.

ADDITIONAL READING

Remote associates test and alpha brain waves (February 2012)

The efficacy of a divergent thinking course for analysts (November 2012)

The efficacy of a brain-inspired method for improving verbal divergent thinking (November 2012)

More at www.casl.umd.edu/divergent