An Exploratory Study on Remote Associates Problem Solving: Evidence of Eye Movement Indicators

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Abstract: Remote associates problems (RAP) have been widely used to measure creative processes. However, studies have rarely explored the RAP processes. The main purpose of this study was to record eye movements while solving RAP. The results show that: (1) The mean fixation duration increases throughout the problem-solving process, which indicates that more problem solvers encounter impasses. This result supports the "impasse encounter" phase of insight. (2) During the initial period of problem solving, individuals display more regression counts in the fixation region than in the key region, which supports that the impasses are caused by inappropriate initial representation. (3) During the middle period of the process, the time individuals spend gazing at the key region increases, while the time spend at the fixation region decreases. This supports the "impasse resolution and insight" phase of insight.