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Does a Curriculum Improve Perceptual Decision Making?

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Abstract

One possibility that may facilitate learning difficult tasks is building a specific curriculum, i.e., to start with simpler tasks and continue with increasing task difficulty. While such curriculum learning has long been considered and investigated in educational settings, little research has been conducted on curriculum learning in well-controlled experimental settings. To fill this gap, we investigated curriculum learning in a perceptual decision-making task. Across two experiments, we tested whether different training conditions (ascending difficulty, descending difficulty, random difficulty, easy difficulty, and difficult difficulty) affected participants' performance in a subsequent testing phase. We found that participants trained on a sequence of varying difficulty (i.e., ascending difficulty, descending difficulty, and random difficulty) outperformed others from easy-only and difficult-only training. However, we found no differences during testing between the conditions with varying difficulty. These results suggest that varying the difficulty during training yields advantages when learning the random-dot-motion task.