On Measuring the Difficulty of Scrabble-like Problems

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Abstract: Scrabble-like tasks have increased in popularity as a means of exploring cognitive phenomena, such as embodied problem solving, mastery, and creativity. Many of these tasks make assumptions about the key factors driving relative difficulty of word-finding problems; these factors include average frequency of words produced, number of words produced, and number of readily apparent bi-grams in the initial presentation of the letters. This study measures the effects of each of these factors on cognitive load by systematically and empirically exploring such factors, comparing how these various attributes influence the number of words participants produce in different circumstances.