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## The Effects of Testing the Relationships among Relational Concepts

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### Abstract

Many concepts are defined by their relationships to one another. However, instructors often teach these concepts individually, neglecting their interconnections. For instance, students learning about statistical power might learn how to define alpha and beta, but not how they are related. This study examines whether there is a benefit to training subjects on relations among concepts. All subjects studied material on hypothesis testing, half were subsequently quizzed on relationships among these concepts, and the other half were quizzed on their individual definitions. Subjects were then tested on both types of questions, and three conceptually related question types. Subjects trained on relations performed better on relational test items than did subjects trained on definitions, whereas definitional test items showed the reverse pattern. No performance differences were found between the groups on the other question types, suggesting that training yields a corresponding selective advantage that does not transfer to related concepts.

*Keywords:* Relational Learning, Retrieval Practice, External and Internal Structure, Knowledge Transfer, Training Specificity.