

ABSTRACT

The Modifiability of Cognitive Style and its
Relationship to Achievement in Biology

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Cognitive styles are modes of information-processing that have been shown to have educational implications. Nine style dimensions have been identified, each defined by two bi-polar extremes. Every individual lies at some point along the continuum between these extremes, for each of the nine styles. The Breadth of Categorization cognitive style, represented by broad and narrow categorizing, is the cognitive style investigated in this study.

The thesis examines the nature of the relationship between breadth of categorization and biology achievement for secondary school biology students, as well as, the extent to which this cognitive style could be modified by instruction.

Analysis of the data revealed that for females in the sample, a positive correlation between biology achievement and broad categorizing, was obtained when IQ was controlled. The analysis also revealed a significant treatment effect as evidenced by increased breadth of categorization scores for an experimental group.