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## Predictors of Music Sight-Reading Ability in High School Wind Players

In *Frames of Mind*, Gardner (1983) proposed that intelligence was not a single, monolithic property of mind. Instead, Gardner proposed multiple separate intelligences, each with its own unique symbol system. A variety of studies, however, have shown that near-transfer effects (e.g., training in one intelligence may enhance performance in another) occur, especially in the case of literacy-based music instruction (Gromko & Poorman, 1998; Hetland, 2000; Rauscher, Shaw, Levine, Wright, Dennis, & Newcomb, 1997). According to near-transfer theory (Salomon & Perkins, 1989), individuals who develop musically, for example, may draw on, and thereby develop, their spatial and kinesthetic intelligences as well. Because music sight-reading involves audiation of tonal and rhythmic patterns, comprehension of a graphic notation system with both spatial and textual qualities, and highly coordinated kinesthetic action in performance, the development of musical intelligence may encompass a

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### Abstract

The purpose of this study, grounded in near-transfer theory, was to investigate relationships among music sight-reading and tonal and rhythmic audiation, visual field articulation, spatial orientation and visualization, and achievement in math concepts and reading comprehension. A regression analysis with data from four high schools (N = 98) in the American Midwest yielded a 4-variable model that included reading comprehension, rhythmic audiation, visual field articulation, and spatial orientation,  $F = 21.26$ ,  $p < 0.001$ , accounting for 48% of the variance on music sight-reading. The results support previous studies in music education, cognitive science, and neuroscience that have shown that music

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