What We Know about Learning Styles from Research in Special Education

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The notion that individual differences can and must be accommodated by modifying instructional methods is a central tenet of special education. When I was a special education teacher, I advocated an eclectic approach, meaning that each student needed to be taught in a different way depending on his or her individual characteristics. Over the course of 10 years, however, I realized that, regardless of student characteristics, some approaches worked, and some didn't. I now have a better understanding of the problems that troubled me as a teacher. With the use of learning styles gaining popularity in general education, I fear that the mistakes made in special education will be repeated and learners, especially low-performing students, will suffer.

Learning styles is a type of aptitude-treatment interaction. Aptitude-treatment interactions suggest that a person's distinctive characteristics or aptitudes (in this case, learning style) can be matched to a specific treatment (instructional method) resulting in a statistical interaction (a more effective outcome than could otherwise have been achieved). But numerous reviews of the literature have failed to find support for aptitude-treatment interactions. They have not been supported by research in educational psychology (Berlinger and Cahen 1973, Cronbach and Snow 1977, Miller 1981) or in special education (Kampwirth and Bates 1980, Kavale and Forness 1987, Tarver and Dawson 1978, Ysseldyke 1973).

Learning styles are often used to determine methods of initial reading instruction. Frequently, holistic instruction is recommended for young, inexperienced readers, whereas phonics is proposed for better readers (Carbo 1987, Carbo et al. 1986,

Carbo and Hodges 1988). This makes little sense. It seems redundant to provide phonics instruction to students who have already mastered the code. Learning styles advocates also recommend holistic instruction for low-performing students, suggesting that the cause of their reading disabilities is a mismatch between their learning styles and the instructional methods (Carbo 1987, Carbo and Hodges 1988). However, reading disabled students have difficulty with the phonological aspects of language (Bradley and Bryant 1983; Liberman and Shankweiler 1979, 1985; Stanovich 1982, 1986) and do not unravel the decoding mystery by themselves. Holistic approaches do not give them a clue. Thus, students' chances for success in school may be jeopardized by teachers who use learning styles as a basis for determining methods of initial reading instruction.

People are different, and it is good practice to recognize and accommodate individual differences. It is also good practice to present information in a variety of ways through more than one modality, but it is *not* wise to categorize learners and prescribe methods solely on the basis of tests with questionable technical qualities. For example, the Carbo, Dunn, and Dunn (1986) model of learning styles, which currently seems to be gaining the most momentum in general education, promotes two assessment instruments: the *Learning Style Inventory* (Dunn et al. 1985) and the *Reading Style Inventory* (Carbo 1983). Both struments suffer from inadequate reliability and validity (Stahl 1988). The idea of learning styles is appealing, but a critical examination of this approach should cause educators to be skeptical.□

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