Using computer applications to facilitate motor planning in pre-writing and writing skills for children ages 4-8 at risk for delays in fine motor skills.

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ABSTRACT

Pre-writing and writing skills are fine motor tasks that receive cursory attention in early childhood and primary programs. Often, these skills are assumed in tact or to be emerging at various developmental stages. Pre-writing and writing tasks require both motor planning and integration of visual perception and fine motor skills. While it appears that continued research is focused on the cognitive linguistics component of the writing process, there remains a cadre of young children who present with motor planning problems yet function within their current chronological age parameters in cognitive/linguistic area of writing, yet present with motor planning problems.

This study examined this motor planning process of pre-writing and writing in young children enrolled in preschool and early primary programs. These children functioned within normal limits (6 months plus or minus) below Chronological Age as measured by the Brigance Inventory of Early Development. Each, however, presented with a 12-24 month delay in the area of integrating visual and fine motor skills. A total of 18 children (12 males and 6 females ages 4.0-7 yrs 10mos) participated in this study whose time frame included two 16 week university semesters.

The home language for all children was English. This was an important factor in this study as a different set of parameters may exist for children who are integrating fine motor writing skills with English language instruction.

A combination of multimodality pre-writing and writing tasks were practiced with all children both individually and in small groups two times per week for 30 minute sessions each. plus computer program training addressing the cognitive planning process of pre-writing and writing skills were examined. Student gains of 3-6 months were observed for all children in post-testing of pre-motor and motor tasks of the Brigance Inventory of Early Development skills. A list of developmentally appropriate strategies to facilitate motor planning were developed.