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## ABSTRACT

A 3-year research project, employing qualitative inquiry in a pair of preschool and primary grade classrooms (one self-contained and one integrated at each level), was undertaken to examine the literacy learning difficulties of school-aged children with developmental disabilities. The multi-site case studies of the first phase of the project used the constant comparative method of data collection and analysis. Analysis of the first year of the project reveals two primary themes: technology, and inclusion. Technology facilitated literacy learning opportunities when: (1) it was available; (2) teachers were competent users and programmers of the devices; and (3) teachers had ample time to adapt materials. Inclusion facilitated learning when: peers had a clear understanding of and experiences with their roles; and the individual needs of all students were considered. The roles these factors, as well as others, play in literacy experiences will be clarified as the project continues. (RS)

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## Uses of Technology and Educational Media in Literacy Instruction for Children with Developmental Disabilities

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Few children with developmental disabilities (DD) read and write as well as their non-disabled age peers (Koppenhaver & Yoder, 1992; Katims, 1991). Research into the literacy learning difficulties of school-aged children with DD suggests that: (1) difficulties are widespread across disabilities; (2) assistive technology is widely viewed as an important tool in accommodating learning differences in individuals with disabilities; and (3) little is known about the availability, quality, use, and effectiveness of technology and educational materials in addressing illiteracy among individuals with disabilities. A three-year research project, employing qualitative inquiry in a pair of preschool and primary grade classrooms (one self-contained and one integrated at each level), was undertaken in order

to advance the knowledge in these areas.

The first phase of the project utilized qualitative inquiry within a pair of preschool and primary classrooms (one self-contained and one integrated at each level). A socio-communicative model of language and literacy use (Pappas, Kieffer, & Levstik, 1990) and a comprehensive model of the study of classroom teaching (Duncan & Biddle, 1974) serve as the frameworks driving this research.

The multi-site case studies were conducted using the constant comparative method (Glaser & Stravss, 1967) of data collection and analysis. Constant comparison was selected because of its generative approach to theory development. The essential steps of the constant comparative method include: collection of data; searching data for key issues and recurrent events or activities on which to focus; collection of data to provide diverse examples of the categories of focus; developing written descriptions to describe and account for the diverse examples; examining the data and emerging model for basic social processes and relationships and further refining the core categories through sampling, coding, and writing (Glaser, 1978). While the list above represents a list of steps to be carried out, it is important to note that these steps occur in a

recursive manner. Additionally, this is a method most commonly used in multi-site participant observation studies such as this one.

This three-year research project began in January, 1993 and is ongoing. Subjects during Year 1 were children with DD, ages 3-9, their families, and the professionals (i.e., regular classroom teachers, special educators, therapists, and other support personnel) who address their literacy-learning needs. Each research site was visited one-to two times per week over an eight-week period in the Spring and Summer of 1993, resulting in between ten and fifteen two-hour observations per site. Initially, classrooms were visited for much of the school day and , as key literacy events emerged, reduced to two hour visits during those key event periods. Videotaping occurred at the sites approximately once per week. Additionally, teachers, parent, and support personnel were repeatedly interviewed both informally and in structured interviews to provide additional information which helped to confirm or disconfirm emerging themes. Researchers engaged in a medium level of participant observation.

Analysis of this pilot data revealed two primary themes: technology, and inclusion. Literacy learning

opportunities of the children with DD were influenced by the nature of these two factors. Technology served to facilitate literacy learning opportunities when: (1) it was available; (2) teachers were competent users and programmers of the devices; and (3) teachers had ample time to adapt materials. Inclusion served to facilitate literacy learning opportunities when: (1) peers had a clear understanding of and experience with their roles; and (2) the individual needs of all students were considered. As this research continues, we will attempt to further clarify the roles these factors, as well as others, play in the literacy experiences of children with developmental disabilities.

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