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## ABSTRACT

This directory contains abstracts of approximately 250 projects funded by the Division of Innovation and Development of the U.S. Office of Special Education Programs, through September 1995. Abstracts typically provide the following information: title; principal investigator name, address, and telephone number; grant number; beginning and ending dates; purpose; method; and anticipated products. Projects are grouped into 11 sections according to the primary focus of the study. The 11 sections are: (1) assessment; (2) cultural differences; (3) infants, young children, and families; (4) instructional effectiveness, models, and learning; (5) policy and program evaluation; (6) restructuring and service delivery issues; (7) secondary education and postsecondary outcomes; (8) serious emotional disturbance and behavioral disorders; (9) severe disabilities; (10) teacher training, retention, and supply and demand; and (11) technology and software. Access to the project descriptions is provided by indexes of principal investigators, institutions, subjects, states, and competitions. (DB)

ED 392 224

# Research in the Education of Individuals with Disabilities

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## Innovation and Development in Special Education

Directory of Current Projects  
1996 Edition

U.S. Department of Education  
Office of Special Education Programs  
The Division of Innovation and Development

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EC304055

# Research in the Education of Individuals with Disabilities

## **Innovation and Development in Special Education Directory of Current Projects 1996 Edition**

**Anmarie Kallas  
Editor**

**U.S. Department of Education  
Office of Special Education Programs  
The Division of Innovation and Development**

Prepared by:  
The ERIC/OSEP Special Project  
ERIC Clearinghouse on Disabilities and Gifted Education  
The Council for Exceptional Children



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# PREFACE

To be meaningful, research must respond to the needs of the community it is meant to serve, and the focus of research must evolve as that community's priorities change. The Division of Innovation and Development (DID), the research and development arm of the Office of Special Education Programs (OSEP), has taken up this challenge by supporting closer relationships between research and practice, exchanging findings and needs with broader audiences, encouraging the development of projects in key areas, and providing direct service to researchers and users.

The work and achievements of DID have helped pioneer many common practices found in classrooms today. For example, the Division was one of the first agencies to fund research on cooperative learning and on the effects of early childhood intervention. The Division also has funded seminal work in reciprocal teaching, direct instruction, peer tutoring, learning strategies, and behavioral interventions that have led to dozens of strategies with greater success and enhanced efficiencies for children and youth with disabilities. In fact, the Division's R&D efforts have touched on virtually every aspect of teaching and learning, from exploring the influences of parents and families on learning to teacher planning; from psychosocial development to outcomes-based learning; and from understanding how to best use technology in classrooms to exploring how students use their own language and communication systems to learn. The Division has taken on many of the biggest research challenges facing education today, with results that continue to reshape how educators, policymakers, and the public think about teaching and learning.

DID is responsible for four discretionary programs, funded at nearly \$40 million in fiscal year 1995 and authorized under the Individuals with Disabilities Education Act (IDEA). A brief description of each program is provided below:

**Research** (\$20.6 million) Authorized by Part E of IDEA, the *Research in Education of Individuals with Disabilities Program* provides support to advance and improve the knowledge base and improve the practice of professionals, parents, and others providing early intervention, special education, and related services — including professionals in regular education environments — to provide children with disabilities effective instruction and enable these children to learn successfully.

**Technology, Educational Media, and Materials** (\$10.8 million) Authorized by Part G of IDEA, the *Technology, Educational Media, and Materials for Individuals with Disabilities Program* supports projects and centers for advancing the availability, quality, use, and effectiveness of technology, educational media, and materials in the education of children and youth with disabilities and the provision of related services and early intervention services to infants and toddlers with disabilities.

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**Serious Emotional Disturbance** (\$4.1 million) Authorized by Part C of IDEA, the *Program for Children and Youth with Serious Emotional Disturbance* supports projects designed to improve special education and related services to children and youth with serious emotional disturbance. Types of projects that may be supported under the program include, but are not limited to, research, development, and demonstration projects. Funds may also be used to develop and demonstrate approaches to assist and prevent children with emotional and behavioral problems from developing serious emotional disturbance.

**Special Studies** (\$3.9 million) Authorized by Part B of IDEA, the *Special Studies Program* supports the collection of data, studies, investigations, and evaluations to assess the impact and effectiveness of programs and projects assisted under IDEA.

Over the last decade, DID has supported ongoing changes in special and general education and efforts to support knowledge production and use as well as knowledge access. DID has moved toward an agenda that focuses on results—achieving better outcomes for children and youth with disabilities. This transformation was motivated by a commitment of DID leadership to assure that the research knowledge in which they have heavily invested is accessed and used by practitioners and policymakers to improve their practices, programs, and policies. This directory of project abstracts will provide an overview of the ongoing efforts of researchers supported by DID who are helping to advance DID's results-oriented mission.

**Division of Innovation and Development Staff:**

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# INTRODUCTION

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The 1996 edition of *Innovation and Development in Special Education: Directory of Current Projects* provides basic information on all research projects funded by the Division of Innovation and Development, Office of Special Education Programs, U.S. Department of Education, through September 1995.

In this edition of the directory you will find abstracts of approximately 250 projects separated into 11 sections according to the primary focus of the study. The 11 sections include: Assessment; Cultural Differences; Infants, Young Children, and Families; Instructional Effectiveness, Models, and Learning; Policy and Program Evaluation; Restructuring and Service Delivery Issues; Secondary Education and Postsecondary Outcomes; Serious Emotional Disturbance and Behavioral Disorders; Severe Disabilities; Teacher Training, Retention, and Supply and Demand; and Technology and Software.

The appendices in the back of the directory include Principal Investigator, Institution, Subject, State, and Competition indices to facilitate finding specific information. The Principal Investigator, Institution, and State indices include page numbers for each occurrence of the name of an investigator, institution, or state. The Competition index lists the title of each competition and each occurrence of a project funded under that competition. Each project appears once in the subject index according to the secondary or tertiary focus of the project. For example, a project placed in *Section 11: Technology and Software*, which is conducting research into the benefits of electronically enhanced text for students who are hard-of hearing, is cross-referenced in the Subject Index under Deaf/Hard-of-Hearing. A project included in *Section 9: Severe Disabilities*, is cross-referenced under the secondary or tertiary focus of the project, (e.g., self-management) and is not listed under Severe Disabilities in the Subject Index.

The information in this directory is taken directly from OSEP's in-house database of research grants. If any errors are found in this material, they should be reported to the ERIC/OSEP Special Project so that the database, and future editions of this directory, will be as accurate as possible.

Anmarie Kallas  
Editor

***SECTION 1:***

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***ASSESSMENT***

## Exploring the Relationship Between Curriculum-Based Measurement and Teacher Effectiveness

**PRINCIPAL INVESTIGATOR:**

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303 Administration Building  
Lincoln, NE 68583-0430  
402-472-5457

GRANT NUMBER: H023C30111

BEGINNING DATE: 4/01/93

ENDING DATE: 3/30/96

### ABSTRACT

**PURPOSE:** This project will examine the effects of curriculum-based measurement (CBM) on teacher effectiveness variables through a series of three studies.

**METHOD:** Each of the substudies planned will include 30 special education resource teachers assigned randomly to treatment and control groups, plus 60 children with mild disabilities. The first study will investigate the effects of CBM on teacher characteristics and school organizational factors important for teacher effectiveness. The second study will explore the effects of CBM on pre- and postinstructional variables which are related to teacher effectiveness. The third study will examine effects of CBM on teachers' behaviors while delivering instruction.

**ANTICIPATED PRODUCTS:** Results of this research will add to the current knowledge base regarding how to enhance and increase teacher effectiveness and thus student achievement. Scholarly articles describing research findings will be submitted to appropriate professional journals. Findings and training procedures will be shared at state and national professional conferences. Technical reports on all aspects of the project will also be written and made available upon demand.

## Link in Leisure Education

**PRINCIPAL INVESTIGATOR:**

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University of North Carolina  
Center for Recreation & Disability  
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730 Airport Road  
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Chapel Hill, NC 27599-8145  
919-962-0534

GRANT NUMBER: H023C20199

BEGINNING DATE: 10/01/92

ENDING DATE: 9/30/97

### ABSTRACT

**PURPOSE:** This investigation will focus on understanding and documenting the extent to which self-determination skills can be facilitated using an individualized leisure education planning process with students with mental retardation.

**METHOD:** The first phase of research will feature a pilot study using a quasi-experimental single subject research design. Phase 2 will incorporate a pretest/posttest quasi-experimental design using curriculum-based measures to investigate the effect of the leisure education intervention on dependent

variables. Phase 3 will focus on generalization to the regular education setting, using a sample of students with mental retardation from grades 6 through 8 who have been referred for leisure intervention services.

**ANTICIPATED PRODUCTS:** Specific outcomes expected include: (1) development of a systematic individualized leisure education planning process; (2) development of a comprehensive teacher training program promoting inclusion of leisure education as part of the special education curriculum; (3) development of a family training program to help families become active participants in their children's education; (4) documentation of the relationship of the leisure education program of self-determination and recreation participation; and (5) documentation of the role and significance of home-school collaboration and follow-up. Products will include: (1) internally printed reports and monographs; (2) articles submitted to journals and magazines; (3) presentation of results at professional conferences; (4) easy-to-read parent/family brochures and booklets; and (5) model program guidelines.

### **Performance Assessment and Standardized Testing for Students with Disabilities: Psychometric Issues, Accommodation Procedures, and Outcome Analyses**

**PRINCIPAL INVESTIGATOR:**

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Kratochwill, Thomas  
Wisconsin Center for Education  
Research  
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Madison, WI 53706  
608-262-8841

GRANT NUMBER: H023F50007

BEGINNING DATE: 9/01/95

ENDING DATE: 8/31/98

#### **ABSTRACT**

**PURPOSE:** The project will attempt to gain an understanding of how students with a wide range of disabilities perform on and react to on-demand and in-class performance assessment tasks in mathematics and science.

**METHOD:** This investigation will focus on the use of performance assessment tasks as operationalized in a statewide student assessment system and by classroom teachers, with a sample of 4th- and 8th-grade students (N=200 per year) with varying academic abilities. A two-tiered, cross-sectional group design with two levels of independent variables (nondisabled and disabled) and two levels of subject matter (mathematics and science) will be used. Students' responses to performance assessment tasks and standardized multiple-choice tests, as well as post-assessment interviews with students, will provide data to answer questions concerning psychometric issues, accommodation procedures, and the utility of different types of assessments for evaluating academic outcomes. Teachers (at least 20) involved in the administration of the performance assessment instruments will also be interviewed via a structured questionnaire to provide additional data on accommodation procedures and the functioning of students with disabilities on performance assessment tests. Data analysis will involve MANOVA, multiple regressions, correlational analyses, and descriptive or qualitative features.

**ANTICIPATED PRODUCTS:** Project results will achieve widespread dissemination through the principal investigators' writing and speaking efforts. Paper presentations and national conferences on children, assessment, and schooling as well as manuscripts submitted to journals will further enhance the impact of this project and facilitate advancement of research on performance assessment with students with disabilities.

## **Social Relations of Students with Disabilities in Mainstream Classrooms**

**PRINCIPAL INVESTIGATOR:**

Farmer, Tom  
Van Acker, Rick  
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Chapel Hill, NC 27599-8115  
919-962-0333

GRANT NUMBER: H023A50033

BEGINNING DATE: 9/01/95

ENDING DATE: 8/31/96

### **ABSTRACT**

**PURPOSE:** This project will examine characteristics of peer associates among elementary students with emotional and behavioral disabilities (EBD) and learning disabilities (LD) in general education settings. The project will examine social network factors in determining these associations, and to develop a social context assessment battery to facilitate full inclusion of these students by identifying social barriers to their social and academic success.

**METHOD:** This study will include 50 students with EBD and 50 with LD from the 4th- and 5th- grades of schools in metropolitan Chicago as well as rural, suburban, and urban areas of North Carolina. A multi-method survey design will be used to assess features of students and their classroom social networks. Group surveys will examine social cognitive maps, peer assessments of behavioral and social features, self-reports of academic, social and behavioral features, and self-reports on school conduct, academic achievement, and school violence. General and special education teachers will also rate students on academic, social, and behavioral characteristics. A semi-structured interview will be conducted with special education personnel to determine each school's strategies for inclusion. Statistical analysis will then assess similarity of associates on each social construct identified as well as demographic and social differences between students who do not have disabilities and whether or not they affiliate with students with disabilities.

**ANTICIPATED PRODUCTS:** A technical report will be prepared to outline the application of this study's findings to the training needs of general and special educators who work with students with disabilities in general education classrooms. Articles will be prepared for publication in scholarly special education, general education, and educational psychology journals. Findings will also be disseminated to community schools through workshops, written reports, and direct consultation.

## Examining Alternatives for Outcome Assessment for Children with Disabilities

**PRINCIPAL INVESTIGATOR:**

Gabrys, Robert  
Maryland State Department of  
Education  
200 West Baltimore Street  
Baltimore, MD 21201  
410-767-0236

GRANT NUMBER: H023F50008

BEGINNING DATE: 9/01/95

ENDING DATE: 8/31/98

### ABSTRACT

**PURPOSE:** This project will conduct a total of 12 studies forming a systematic research program on assessment accommodations and alternative assessment approaches that facilitate inclusion of all students in state-wide assessment programs.

**METHOD:** The planned research program will include three methodological approaches: (1) comparative studies involving a qualitative examination of the assessment systems in Kentucky and Maryland, as well as an investigation of characteristics of participating students with disabilities and their performance within those systems; (2) studies which involve secondary analyses of existing databases to address critical technical and implementation issues in the assessment of educational outcomes for students with disabilities; and (3) experimental field studies that involve the collection of new data to address several technical issues crucial to the development and modification of state assessment policies. These studies will incorporate data from approximately 40,000 students with disabilities in these states, and subsamples of students with disabilities who will be exposed to the experimental comparisons. These studies will explore the following issues: the ways in which assessment and accountability systems must be conceptualized and developed to have the range and flexibility to accommodate all students, including those with disabilities; the relationships between instructional accommodations and accommodations in assessment; issues and concerns of reliability and validity in the use of testing accommodations and adaptation, alternative assessments, and specification of standards and outcomes; and the use of alternative assessments for students with severe cognitive disabilities.

**ANTICIPATED PRODUCTS:** The work of project staff will be of immediate use to those at national, state, and local levels who are striving toward educational systems that are accountable for all students, including those with disabilities. Reports will be prepared on the synthesis and comparison of the Maryland and Kentucky systems, the summary of data from analysis of secondary data bases, and the findings from experimental field studies on the possible effects of various accommodations and assessment approaches.

## Parent and Teacher Congruency on Variations of a Screening Instrument: An Examination

**PRINCIPAL INVESTIGATOR:**

Gilbert, Sharon L.  
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Department of Rehabilitation &  
Special Education  
1234 Haley Center  
Auburn, AL 36849  
334-844-5943

GRANT NUMBER: H023B50009

BEGINNING DATE: 10/01/96

ENDING DATE: 9/30/97

### ABSTRACT

**PURPOSE:** The project will investigate whether variations in the screening instrument format influence congruence of scores among both parents and the child's teacher.

**METHOD:** The screening instrument to be used is the Developmental Observation Checklist System (DOCS). The DOCS will be varied by (1) adding pictorial illustrations and examples and (2) adding a response category to the existing response options. The sample will consist of 100 sets of parents and 100 teachers of children chronologically below the age of 6 years with and without developmental delays, drawn from early intervention and child care programs in Alabama and Georgia. A 2x2x3 mixed measure analysis of variance will be used to analyze the effects variations in screening instruments have on score congruency among fathers, mothers, and teachers. Two between-subjects factors with two levels each and one without-subjects factor with three levels will be included in this design. An equal number of mothers, fathers, and teachers will complete versions of the screening instrument, and a control group of mothers, fathers, and teachers will complete the screening instrument in its original format.

**ANTICIPATED PRODUCTS:** This project will provide current research on parental and professional assessment congruency and information on the impact of variations in the screening instrument on this congruency. Findings will be disseminated through conference presentations, journal articles and a doctoral dissertation paper.

## The Influence of Teacher Characteristics on the Academic Performance and Behavioral Adjustment of Students with Attention Deficit/ Hyperactivity Disorder

**PRINCIPAL INVESTIGATOR:**

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617-287-7250

GRANT NUMBER: H023C50118

BEGINNING DATE: 9/01/95

ENDING DATE: 8/31/98

### ABSTRACT

**PURPOSE:** The purpose of this project is improve understanding of the characteristics of teachers that influence both their interactions with students with Attention Deficit Hyperactivity Disorder (ADHD) and the behavioral adjustment and academic performance of these students.

**METHOD:** The research will be based on a three-year study involving two groups of students, one with ADHD and one of matched comparison students. In Year One, students with ADHD and matched comparisons will be identified, screened, and assessed for baseline characteristics. In Years Two and Three, the behavioral adjustment and academic performance of students will be assessed within and between two teachers and two classroom environments to determine the impact of teacher characteristics on school outcome. The study will include a multimethod assessment of teacher characteristics, student characteristics, and student outcome (behavioral adjustment and academic performance), along with observations of teacher-student interactions. Statistical analyses will include structural regression procedures based on a hierarchical linear modeling approach to examine change over time.

**ANTICIPATED PRODUCTS:** Research findings will be incorporated into inservice training workshops throughout New England, and presentations will be made at meetings of national organizations of regular and special educators, school psychologists, parents of children with ADHD, and clinical and developmental psychologists. Findings will be published in professional journals, and will also be assimilated into University of Massachusetts' masters-level programs in regular and special education, counseling, and school psychology.

### **Longitudinal Affective and Social Outcomes of Special Education Placement Options for Students with Mild Disabilities**

**PRINCIPAL INVESTIGATOR:**

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University of California at Riverside  
School of Education  
Riverside, CA 92521  
909-787-5228

GRANT NUMBER: H023C30103

BEGINNING DATE: 7/01/93

ENDING DATE: 6/30/98

#### **ABSTRACT**

**PURPOSE:** This project will assess the stability and change of the social and affective characteristics of children with mild disabilities placed in "segregated" versus "integrated" settings compared to "at-risk children" and children who are achieving normally.

**METHOD:** A total of 300 referred third graders will be randomly selected and matched in terms of age, gender, and ethnicity to 100 third graders identified as achieving normally. Measurement of social and affective outcomes will include sociometric assessments to assess peer acceptance/rejection, teacher ratings of social skills, self-concept, loneliness, school attitudes, and critical behavioral events. In addition, comprehensive assessments of students' school histories will be recorded and quantified from existing school records. The project will examine both short-term and long-term effects of various educational placements on students' social and affective development using a prospective longitudinal research design.

**ANTICIPATED PRODUCTS:** Findings from this project will be targeted to have an impact in three areas: the academic community and other research activities, the cooperating school districts, the California State Department of Education, and the department's special education section. In addition to the conventional outlets of published reports and conference presentations within the research community, personnel from state school districts will be involved in education community conference presentations and publications to target educators and policymakers.

## Utility of Alternative Assessment Models for Identification of Mildly Handicapped Children

**PRINCIPAL INVESTIGATOR:**  
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GRANT NUMBER: H023C20002  
BEGINNING DATE: 7/01/92

ENDING DATE: 6/30/97

### ABSTRACT

**PURPOSE:** This project intends to establish the utility of alternative assessment vis-a-vis traditional assessment in establishing the eligibility of students with mild disabilities for special education and related services.

**METHOD:** Two interrelated studies will be performed. The first study will compare the extent to which current referral practices and alternative assessment procedures result in identification of the same "at-risk" children as would traditional assessment procedures. The first study will consist of 135 students evenly divided among three ethnic groups. The students will be studied, assessed, and referred for formal assessment using alternative assessment procedures. The second study will compare the utility of four alternative assessment models (including dynamic assessment, achievement-achievement discrepancy, neuropsychological, and behavioral models). Investigators will evaluate 204 students, again stratified among three ethnic groups, using alternative assessment model and traditional assessment models, with order of testing randomized. Degrees of coincidence and agreement among ethnic groups and between alternative and traditional models will be studied.

**ANTICIPATED PRODUCTS:** Findings from this project will inform policy makers on the utility of alternative assessment for reducing ethnic disproportions; moreover, it will permit informed decisions on the relative merits of the four commonly recommended alternatives. The project will also evaluate any ethnic bias among the models evaluated.

## **A Path to Literacy for Deaf Children through English and American Sign Language (ASL)**

**PRINCIPAL INVESTIGATOR:**

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San Francisco State University  
1640 Holloway Avenue  
San Francisco, CA 94132  
415-338-7655

GRANT NUMBER: H023C30074

BEGINNING DATE: 8/01/93

ENDING DATE: 7/31/97

### **ABSTRACT**

**PURPOSE:** The project will assess the relationship between American Sign Language (ASL) competence and English literacy among deaf school children aged 8 to 15 years.

**METHOD:** Approximately 200 students aged 8 to 15 enrolled in a residential school for the deaf will be tested annually for 3 years. ASL skills will be measured using a specially devised comprehension test, administered by videotape and requiring a nonverbal response. English literacy will be measured using the Woodcock-Johnson Psycho-Educational Test Battery--Revised and a psycholinguistic computer measure developed by the investigator. Performance IQ will also be assessed. Research questions will then address the synchronic and diachronic relationships between ASL skills and English literacy, as well as exploring at what age ASL plays its greatest role in facilitating gains in English literacy.

**ANTICIPATED PRODUCTS:** Findings of research will be disseminated via published research reports, assessment guides, diagnostic manuals, and presentations at national conferences. Results will serve as a basis for future assessment of ASL and academic performance to be carried out at participating schools to further extend the database. Follow-up research is expected to implement and evaluate a full-scale literacy program using ASL and English for deaf children in the United States. This program will serve as a model to numerous groups advocating a "bilingual/bicultural" approach for deaf children, and will therefore have a direct impact on many thousands of deaf students, their families, and their teachers.

## **A Study to Develop Braille Reading and Writing Norms and Instructional Interventions for Children Who Are Blind or Visually Impaired**

**PRINCIPAL INVESTIGATOR:**

Sharpe, Michael N.  
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GRANT NUMBER: H023C50123

BEGINNING DATE: 7/01/95

ENDING DATE: 6/30/97

### **ABSTRACT**

**PURPOSE:** The project will develop normative information on the Minnesota Braille Skills Inventory (MBSI) and establish a compilation of teaching intervention strategies for use by educators in teaching Braille reading and writing skills.

**METHOD:** Stage 1 activities will focus on collection of normative data, and will begin with a mailing to approximately 700-1000 teachers of the blind and visually impaired. Approximately 150-200 of these teachers are expected to participate in such project activities including obtaining parental consent, conducting MBSI assessments, generating effective teaching intervention strategies, and collecting related demographic and family data. Each teacher will collect this information for 3-5 students. Each student will receive family information and assessment packets, including background information and a full MBSI as well as a survey to collect information about the student's current level of academic and social-adaptive functioning. Concurrent with data collection activities, project staff will obtain technical assistance from a database development consultant to design the database, develop data entry systems, and train clerical staff to enter and conduct based analysis of information from teacher participants. As participants in Stage 2, teachers will be asked to provide a minimum of three teaching/intervention strategies they have found effective in teaching students Braille literacy. A Braille Intervention Strategies Committee will then be formed to compile these strategies and develop a teaching strategies manual.

**ANTICIPATED PRODUCTS:** Through development and dissemination of the MBSI and its companion compilation of instructional interventions for teachers, teachers of the blind and visually impaired will have access to an instrument that reliably assesses students' reading and writing skills. Parents will also benefit from access to norm-referenced, performance-based information about their child's present level of Braille literacy.

### **Commonwealth Institute ADHD Project: Effects of School, Child and Family Variables on Drug Responsiveness of Children with ADHD**

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and Family Studies  
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GRANT NUMBER: H023C30082

BEGINNING DATE: 9/01/93

ENDING DATE: 8/31/96

#### **ABSTRACT**

**PURPOSE:** This project will utilize ecobehavioral principles and concepts, within the framework of a robust experimental design, to investigate the effects of school, child, and family variables on drug responsiveness of children with attention deficit/hyperactivity disorder (ADHD).

**METHOD:** A sample of 250 children with ADHD, aged 6 to 12 years, will be enrolled in a within-subject, crossover, placebo-controlled, double-blind, dose-response study of methylphenidate, with the placebo and drug order to be determined according to a 3 x 3 Latin square design. Following a drug-free baseline, children will be randomly rotated through placebo and two active drug conditions, according to one of three experimental sequences. Drug

responsiveness will be analyzed across several variables, including academic performance and curriculum-based measures, teacher and parent ratings of social and maladaptive behaviors, child attributions of treatment effects, and side effects. Four school variables, five child variables, and four family variables will also be analyzed alongside a host of sociodemographic variables.

**ANTICIPATED PRODUCTS:** Due to the large sample size of this study, the project will be able to provide a mathematical model of drug interactions that will enable researchers to use smaller samples in future studies of this nature. The data from this study will provide the first comprehensive ecobehavioral assessment of the effects of methylphenidate on children with ADHD.

## **Stress, Social Support and Adjustment to Middle School Transition in Children with Learning Disabilities**

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GRANT NUMBER: H023C40155

BEGINNING DATE: 9/01/94

ENDING DATE: 8/31/98

### **ABSTRACT**

**PURPOSE:** The purpose of this project is to improve understanding of the stress students with learning disabilities experience during and after the transition to middle school, the social support systems they use, and the role that social support plays in the adjustment of these students to the middle school environment.

**METHOD:** Project research will focus on: (1) the extent and nature of the stress students with learning disabilities experience during the first years of middle school; (2) the extent and nature of the social support students with learning disabilities receive from family, peers and school personnel; and (3) the role that social support plays in reducing stress and facilitating the adjustment of students with learning disabilities both during and after the transition to middle school. The subjects will consist of students from the 4th grade (N=360), including 120 students identified as having learning disabilities, 120 students identified as low achievers, and 120 students identified as nondisabled average achievers. During Project Year 1, staff will select students for the 3 study groups, focusing on those students who may be exhibiting extreme behavioral problems. At this time staff will also ask teachers to complete the School Climate Inventory to assess the heterogeneity of the elementary school represented in the sample. During Project Years 2 through 4, project procedures will involve the delivery of assessment instruments to students in individual interviews, and questionnaires mailed to the students' families. Staff will use interview and questionnaire results to assess both school and family climates. In following student interviews, staff will conduct a variety of stress scale tests to focus on changes in stressors the

student is experiencing. In addition to formal assessment, project staff will monitor and track changes that may occur in family structure and composition, special education services for students, and changes within the school itself.

**ANTICIPATED PRODUCTS:** With the information gained by this research, educators will be able to focus not only on ways to reduce the stressors of middle school, but on ways to help students with learning disabilities manage their stress with social support. This knowledge will serve as a foundation for the development of plans and programs designed to facilitate transitions between public school environments.

### **Project FACILE (Functional Analysis and Contextual Intervention in Learning Environments)**

GRANT NUMBER: H023C20040

BEGINNING DATE: 8/01/92

ENDING DATE: 7/31/97

**PRINCIPAL INVESTIGATOR:**

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#### **ABSTRACT**

**PURPOSE:** Project FACILE will study individualized and system-level technologies for improving the educational experiences of students with at-risk behaviors.

**METHOD:** The project will conduct a complete functional analysis, use the analysis results to determine the possible communicative function of the behavior in question, and design an intervention to replace the behavior with a prosocial response that serves the same communicative function. These assessment and intervention procedures will be systematically tested at individual and school or system levels. Normative rates of at-risk and appropriate social behaviors and social validation data will be used to evaluate the goals, procedures, and outcomes from this project. School building personnel will be trained to screen for at-risk children, conduct functional analyses, and to design and implement contextual interventions.

**ANTICIPATED PRODUCTS:** Training materials based on empirically validated procedures will be produced to improve practitioners' ability to develop effective intervention strategies for students with at-risk behavior and reduce potential negative outcomes predicted for at-risk students who receive inadequate systematic interventions. Students with at-risk behavior will increase their prosocial skill level, thereby reducing academic and social risks. New research-validated knowledge and understanding of effective assessment and intervention strategies will be generated. Research findings will be disseminated through a variety of professional outlets.

## **Educational Implications of Surviving Acute Lymphoblastic Leukemia**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023C50058

BEGINNING DATE: 7/01/95

ENDING DATE: 6/30/00

### **ABSTRACT**

**PURPOSE:** The project will attempt to describe and understand, from the multiple perspectives of the survivor and parents, siblings, teachers, and the medical team, the educational and psychosocial consequences of surviving cancer. The project will also consider the problems student survivors encounter upon returning to school.

**METHOD:** In the first study, the sample will be individuals who were diagnosed with childhood leukemia at age 5-7 years, survived, and are now at least 18 years of age. These youth and their families will share their experiences, including the roles school and schoolwork played during and after treatment, including the response of the school to the illness and any learning difficulties that arose. A second study will examine survivors at 10-12 years of age, five years after diagnosis. This study will focus on subjects' recent re-entry experiences, and school personnel will be drawn into the interview sample. This study will explore what preparations (if any) were made for the child's return to school after treatment and what problems were encountered. The third study will follow survivors and their families as they experience school re-entry. Staff will observe students in their classrooms to understand the complex social and psychological issues associated with reintegration.

**ANTICIPATED PRODUCTS:** A concerted effort will be made to ensure that research findings and products are widely disseminated and useful to diverse targeted audiences. The organization and summaries of findings in the preparation of conference presentations, reports to parents, reports to schools, reports to medical teams, submissions to refereed journals, submissions to teacher magazines, and other materials will therefore be tailored to address the interests and needs of parents, physicians, classmates, teachers, policymakers, and researchers.

**Project Target: Criterion-Referenced Physical Fitness  
Standards for Adolescents with Handicapping  
Conditions**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023C30091

BEGINNING DATE: 6/01/93

ENDING DATE: 5/31/98

**ABSTRACT**

**PURPOSE:** The project will establish and validate criterion-referenced physical fitness test items and standards for adolescents with selected disabilities.

**METHOD:** Approximately 2,100 adolescents with sensory, orthopedic, or mental disabling conditions will be trained and/or tested on selected physical fitness parameters. Tests to be employed will include PHYSICAL BEST, the health-related test of the American Alliance for Health, Physical Education, Recreation, and Dance Fitnessgram; and the physical fitness test of the President's Council on Physical Fitness and Sport. Findings from these tests will be used as the basis for the statistical validity of developed criterion-referenced standards. In addition, a criterion-referenced Project Target Test of Physical Fitness and a corresponding educational program for the development of physical fitness would be created.

**ANTICIPATED PRODUCTS:** As a result of project activities, four national tests of physical fitness will be made more valid, useable, and accessible for adolescents with disabilities. The project will extend the nation's current emphasis on criterion-referenced testing and programming to school-aged youngsters with disabling conditions.

***SECTION 2:***

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***CULTURAL  
DIFFERENCES***

## **Promoting Literacy through Ecobehavioral Assessment and ClassWide Peer Tutoring for Racial/Ethnic Limited English Proficient Minority Students with Disabilities**

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GRANT NUMBER: H023C40064

BEGINNING DATE: 6/01/94

ENDING DATE: 7/31/97

### **ABSTRACT**

**PURPOSE:** This project will investigate and validate instructional practices that will maximize the literacy and academic achievement gains of racial and ethnic limited English proficient (LEP) minority and majority students with disabilities in self-contained, resource, and regular education settings.

**METHOD:** Staff will utilize ecobehavioral assessment and analysis procedures as a research tool for identifying procedures associated with effectiveness criteria, and evaluating ClassWide Peer Tutoring (CWPT) as an intervention for LEP students with or without disabilities. The first of five project studies will utilize ecobehavioral assessment procedures to measure the classroom environment to determine ways to naturally facilitate literacy and academic progress in mainstream regular and special education classrooms. A total sample of 180 students will be selected for classroom observations that will be divided among self-contained, resource room, and regular education settings. Measures used will include demographic measures, process measures, and product measures. During Year 2, staff will conduct Studies 2 and 3 in order to evaluate the effectiveness of CWPT as an instructional procedure that facilitates literacy and academic progress. In each treatment group, 2 students will receive tutoring in reading, 2 in spelling and 2 in math. Data will continue to be collected on the literacy, academic and language performance as a reflection of CWPT procedures. Study 3 will replicate Study 2 findings using a larger sample of students. During Year 3, staff will conduct Study 4, in which 24 students without disabilities will serve as partners in tutoring target students in reading, spelling, and math. At this time, staff will also conduct Study 5 to verify procedures from Study 4, refine those procedures, and implement CWPT programs with a larger sample.

**ANTICIPATED PRODUCTS:** This project will result in new knowledge concerning the ecobehavioral features of instruction, systematic replication, adoption of an effective instructional procedure (CWPT) to a new population, and the translation of research to practice.

**Puerto Rican Families Who have Children with  
Disabilities: A Comparison Between Families Living in  
Puerto Rico and Families Living in Florida**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023B50023

BEGINNING DATE: 9/01/95

ENDING DATE: 8/31/96

**ABSTRACT**

**PURPOSE:** The project will identify factors that contribute to the understanding of Puerto Rican families, particularly as those factors relate to the delivery of intervention services of young children with disabilities.

**METHOD:** This study will survey 40 Puerto Rican mothers of children ages birth through five with disabilities currently living in Puerto Rico and another 40 living in the United States. Variables of interest will include family factors (such as socioeconomic status and parental education), child characteristics (including extent of disability), and family resources (such as family support systems and religiosity). All mothers will participate in a set of structured data collection activities designed to provide a comprehensive view of family needs and support systems. The sample will include married, single, and divorced mothers. Quantitative procedures to be used will include T-tests, ANOVA, and Multiple Stepwise Regression Analyses to determine which variables influence families' expressions of need for help.

**ANTICIPATED PRODUCTS:** Descriptions of the project, details of project findings, position papers, digests, summaries, fact sheets, news releases, and research reports will be generated by project staff to disseminate findings. Results will be disseminated through state and national professional conferences and related professional journals, as well as ERIC and the SpecialNet Electronic Bulletin Boards and databases. Findings will also be disseminated in Puerto Rico through presentation at state conferences and publication in local educational journals.

## **Advancing and Improving the Knowledge Base on Content/Scaffolded Reading Comprehension Strategies with Parental Involvement: An Asian LEP+LD Student Perspective**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023A50081

BEGINNING DATE: 7/01/95

ENDING DATE: 6/30/96

### **ABSTRACT**

**PURPOSE:** The project will advance and improve the research knowledge base on serving Asian students who are limited English proficient (LEP) and who have learning disabilities (LD). The project will explore the extent to which a research-based content/scaffolded reading comprehension intervention that has been previously found effective with Spanish speaking students who have learning disabilities and speak English as a second language (ESL), can be generalized to students from distinctly Asian backgrounds.

**METHOD:** The research design will include parental involvement among two groups of 30 third- through fifth-grade students from Asian backgrounds who have learning disabilities. Phase I is designed to prepare LD resource specialists so they will develop adequate knowledge of the content/scaffolded reading (CSR) intervention strategies through working with non-target students. While data on these students will not be collected and analyzed, information and insights gained from this stage will be incorporated into the second phase of the study. In Phase II, the CSR intervention will be delivered by participating LD resource specialists who facilitate the scaffolding, eventually leading reciprocal teaching. Phase III, Peer- and Parent-Facilitated Intervention, is designed to facilitate target students' practicing and maintaining of CSR comprehension strategies and content knowledge through in-class peer-mediated cooperative learning groups and within-home parent-mediated practices through use of students' native languages. A combination of descriptive, quantitative, and qualitative measures and data analysis will be utilized to address research questions on student change over time and comparison of Asian students' change against that of English-speaking students with learning disabilities.

**ANTICIPATED PRODUCTS:** Both the research processes and products will advance the current knowledge base with respect to: (1) educational needs of Asian students who are limited English proficient and have learning disabilities; (2) professional needs of monolingual English speaking LD resource specialists; (3) needs of parents for training and support in forging meaningful partnerships with teachers; and (4) needs of schools to promote parental involvement in their child's school learning, particularly inner-city Asian parents who are limited English proficient. Project findings will be

incorporated into the Project Director's presentations at state, local, national and international conferences, journal article publications, professional development workshops, and teaching of method courses in both special and bilingual special education teacher training programs.

## **Pihana Na Mamo: The Native Hawaiian Special Education Project**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H221A50002

BEGINNING DATE: 9/01/95

ENDING DATE: 8/31/00

### **ABSTRACT**

**PURPOSE:** The purpose of this project is to improve special educational services provided to children and youth of native Hawaiian ancestry with special needs.

**METHOD:** This project will focus on: (1) the development of comprehensive and culturally appropriate instructional models to effectively serve special education students of Hawaiian ancestry in the least restrictive environment; and (2) on meeting the needs of students at risk of being identified as needing special education in regular classroom settings. Project staff will implement a state-wide parent and community involvement component to encourage and support the participation of parents in school programs. Parent involvement staff will be hired to coordinate efforts within each community to increase parental participation. Staff development activities will be sponsored to support the use of direct instructional practices. Through the funding of master teachers and part-time teachers, support will be provided for development and implementation of school-wide plans.

**ANTICIPATED PRODUCTS:** Outcomes from the project will include: improved educational performance among special needs students of Hawaiian ancestry; increased participation of Hawaiian parents and community leaders in schools; improved school-level and district-level capacity to serve Hawaiian students in the least restrictive environment; and increased public awareness of the educational needs of Hawaiian students.

**Parameters of Effective Instruction for  
Language-Minority Students with Disabilities and Those  
at Risk for School Failure: Research Synthesis and  
Dissemination**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023E50013

BEGINNING DATE: 7/01/95

ENDING DATE: 6/30/97

**ABSTRACT**

**PURPOSE:** The project will begin to develop a professional knowledge base on effective teaching practices for language minority students with mild disabilities or who are at risk for school failure.

**METHOD:** This study will focus on instructional issues, specifically classroom practices which demonstrate the greatest promise for improving the academic achievement of language minority students with disabilities. Practices which break down barriers between school and home and those which assist in establishing proactive collaboration between educators and families will be targeted. Staff will combine Slavin's (1986) best-evidence synthesis and Ogawa and Malen's (1991) multi-vocal approach in order to better grasp the wide range of studies within the literature bases that will have relevance for addressing the working hypotheses. The technical quality of each piece of literature will be assessed. The overall synthesis will be based on a set of working hypotheses generated from earlier research and modified and refined with input from a wide range of stakeholder constituencies.

**ANTICIPATED PRODUCTS:** A series of audience-specific products will be developed collaboratively with OSEP. The project will utilize input from the constituency groups and from a national forum.

**Transition from School to Work and Community Living:  
Asian-American Students with Disabilities and Their  
Needs in Transition**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023N40016

BEGINNING DATE: 9/01/94

ENDING DATE: 8/31/97

**ABSTRACT**

**PURPOSE:** The project will investigate parents' expectations and students' needs for transition among students with developmental disabilities across six ethnocultural subgroups.

**METHOD:** Ethnocultural subgroups of Asian-American students will include Chinese, Filipino, Japanese, Korean, Vietnamese, and other Asians. The project, will study the level of their awareness of available transition services. The project will also provide information about parent and student rights and available transition services in their own language. It will equip education professionals with important information for appropriate and effective transition planning, reflecting a child's cultural values, future employment preferences, and living arrangements. Ten families of Asian-American students between 16 and 22 years of age from each subgroup will be recruited from six school districts and through public announcements on ethnocultural radio and television broadcasting systems in the greater Los Angeles area. Community leaders from the six highlighted ethnocultural subgroups will be invited to take part in dissemination activities. A secondary demographic data analysis will be conducted, followed by a study of parents' expectations and needs in transition using interview and survey methods.

**ANTICIPATED PRODUCTS:** A brochure in six different Asian languages, technical reports, and peer-reviewed journal articles will be prepared as final products of this project.

## Predicting Minority Parent Participation

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023C50038

BEGINNING DATE: 4/01/95

ENDING DATE: 3/31/96

### ABSTRACT

**PURPOSE:** The project will enhance the level of service to traditionally underserved minority group deaf or hard-of-hearing children by identifying parent characteristics that do not meet the expectations of current service delivery systems.

**METHOD:** Hispanic, African-American, and Caucasian families (N=220 total) in five cities, who have young children who are hard-of-hearing or deaf, will participate in this study. A two-tiered attempt will be made to collect information from this population through phone interviews, followed by home visits where necessary. The theoretical framework for the study will address three general areas of mismatch between the value systems of those who design family services and traditionally underserved families: social support systems, family cohesion, and family decision making. Analysis of data will address two questions: first, the degree and nature of minority parent involvement in the education of their deaf and hard or hearing children; second, the degree to which involvement is reduced as a function of membership in a minority group versus specific family traits and dynamics. Once characteristics of parents with higher or lower levels of involvement in their children's services and

education are identified, this information could be used to identify children who might be better served through alternative methods. For example, some children might be better served if information and training normally earmarked for parents was rerouted to some other individual more likely to assist the child.

**ANTICIPATED PRODUCTS:** The primary outcome of this work will be to expand contact with underserved populations by giving practitioners a way to respond to families who don't fit current models of service delivery. Initial dissemination will take the form of presentations at annual meetings of major research, education, and special education, organizations and those representing individuals who are deaf or hard of hearing, followed by subsequent dissemination through the submission of articles to relevant journals. Additional dissemination will take place through Gallaudet University's Pre-College Outreach unit, which provides information and services nationwide through workshops for service providers.

### **Effects of Use of Authentic Assessment Procedures on Literacy Development of Bilingual and Monolingual Students with Learning Disabilities**

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GRANT NUMBER: H023C50097  
BEGINNING DATE: 10/01/95

ENDING DATE: 9/31/98

#### **ABSTRACT**

**PURPOSE:** The project will explore the assessment procedures that teachers use in order to make decisions about the literacy instructional services of students, and to better understand learner characteristics which may often mask second language acquisition problems when compounded with learning disabilities.

**METHOD:** This will be an exploratory and descriptive investigation using the case study approach as the main research strategy from an ethnographic perspective. Three school sites within the Chicago Public Schools will represent one case study each. By studying the three educational settings as well as key figures within each (including teachers, students, parents, and other school staff), it is expected that the particular culture of each school will illuminate larger issues about special education teachers' assessment practices. Teachers will be interviewed regarding their theories of learning disabilities, their beliefs about literacy instruction and learning, and their knowledge of writing process and reading development. Meanwhile, research staff will engage in classroom observations and videotaping to establish an ethnographic baseline understanding of teachers' practices prior to intervention. Teachers will then receive training and technical assistance in such assessment techniques as portfolio assessment,

student self-evaluation, and reflecting on both process and product aspects on student work. In addition to describing in detail all participating school and classroom cultures, comparative analyses will be conducted to examine shared characteristics of teachers' assessment procedures.

**ANTICIPATED PRODUCTS:** Findings will be incorporated into development of a series of videotape and other training materials on authentic assessment as it informs literacy instruction. Ethnographic findings on interrelationships between second language acquisition and learning disabilities will be disseminated through these training materials as well as journal publications.

### **Accessibility to and Utilization of Intervention Services in the First 6 Years: A Longitudinal Study of African-American Families and Services and Service Agencies**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023C40083

BEGINNING DATE: 9/01/94

ENDING DATE: 8/31/97

#### **ABSTRACT**

**PURPOSE:** The project will examine the factors that influence early intervention service accessibility and utilization within African-American families with children who are developmentally disabled.

**METHOD:** This research is based upon a conceptual framework that links service utilization to three major components: the personal, familial, and cultural characteristics of potential users, dimensions of the service delivery system, and the socio-political context within which service delivery and utilization take place. The first of two longitudinal components entails a survey of early intervention and related service agencies, designed to obtain data on: (1) the representation of African-American families in intervention programs; (2) agency policies and actions regarding the recruitment of families from underserved populations; and (3) policies and practices regarding the delivery of culturally sensitive and appropriate services. The longitudinal design will enable the research team to ascertain changes occurring in all three areas over the 3-year period of the study. The second component entails a study of the intervention experiences of African-American families of children with disabilities during the first 6 years of the child's life. The design for this component encompasses two cohorts of families (45 in each), one with children in the birth to 3-year range and the other in the 3- to 6-year range. Qualitative analyses will provide a holistic context for understanding responses to the various scales and questionnaires, while quantitative analyses will be used to explore the extent to which relationships implied in the conceptual model can

be validated statistically. Analysis will also include determination of the appropriateness, reliability, and validity of the various measures employed in the study so that the study's underlying conceptual model can be subjected to rigorous empirical testing in subsequent work.

**ANTICIPATED PRODUCTS:** Through this project, researchers will learn the extent to which existing early intervention and other related services are accessible to African-American families of children with developmental disabilities, identify barriers to service accessibility and utilization, and draw implications for policy, practice, and future research.

### **Discourse Analysis of Culturally and Linguistically Diverse Students with Exceptionalities**

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GRANT NUMBER: H023B50020

BEGINNING DATE: 8/01/95

ENDING DATE: 7/31/96

#### **ABSTRACT**

**PURPOSE:** The project will conduct an in-depth analysis of bilingualism and sociolinguistic influences in various contexts. This analysis will provide insight into the experiences of culturally and linguistically diverse students with exceptionalities.

**METHOD:** The research site, La Mesa Elementary School, serves 408 students from rural communities in southern New Mexico. Approximately fifty percent of the school's students speak Spanish as their primary language. Classroom activities will be observed three times per week for seven months, and interviews will be conducted with students, teachers, and family members. Student records will also be analyzed. Through classroom observations, videotaping, and interviews, project staff will identify classroom discourse and language use. The resultant data and documentation will also be analyzed to identify effective teaching strategies and unique educational and sociocultural needs of students. Emergent themes and grounded local theories will be identified, and findings will then be disseminated.

**ANTICIPATED PRODUCTS:** Research findings will be disseminated through various channels, including: presentations at appropriate conferences; publication in refereed journals; information sharing with colleagues through computer networks; and inclusion of findings in coursework at New Mexico State University. A 20-minute videotape will also be made of various classroom discourse contexts; this videotape will be used for presentations, teacher training, and instruction.

## **An Examination of the Effect of Three Spanish Reading Approaches on the Reading Achievement of Limited English Proficient (LEP) Students with Learning Disabilities and LEP Students At-Risk for Learning Disabilities**

### **PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023B50036

BEGINNING DATE: 9/01/95

ENDING DATE: 8/31/96

### **ABSTRACT**

**PURPOSE:** This project will examine the effectiveness of three instructional methods delivered in Spanish for teaching 1st grade students who are limited English proficient (LEP) and who have learning disabilities (LD), and for teaching 1st grade students who are LEP and at risk for LD.

**METHOD:** The first method, Literature-Based Spanish Reading Approach (LB-SRA), is based on characteristics of effective reading instruction for students who are limited English proficient and have LD. The LB-SRA approach attempts to teach meaning by using a strong literature component and combining reading, writing, and oral language. The LB-SRA does not teach phonics or phonological awareness. The second method, Systematic-Integrated - Spanish Reading Approach (SI-SRA), which teaches explicit phonic and phonological awareness as well as meaning, will integrate the characteristics of effective early reading instruction for students who are LEP and who have learning disabilities with characteristics of effective early literacy instruction that have already been validated through previous research with English-speaking students. The third method, General-Education-Spanish Reading Approach (GE-SRA) will be the standard reading instruction already provided in the general education classroom, and can be described as a program teaching meaning and implicit phonological awareness and phonics. 120 1st grade students who have limited proficiency in English, from four schools in Los Angeles, California, will be selected to participate in this study. Children will be randomly assigned to one of the three methods of instruction. Treatment will include two weeks of baseline, followed by 20 weeks of daily, 60 minutes per day intervention, ending with one week of followup intervention. A between-groups design will be used to examine effectiveness of different approaches. Method of instruction will be the independent variable and the dependent variable will be student performance. Student progress also be monitored twice weekly using curriculum-based measurement, as well as letter naming and letter sound fluency tasks. Student progress will be examined using a Hierarchical Linear Modeling analysis.

**ANTICIPATED PRODUCTS:** Planned project products include an annual project report and a number of research papers, a handbook reporting on project procedures, a teacher handbook, and other publications of project outcomes. Dissemination activities will include inservice consultations, guest lectures, site visits, and presentations at professional conferences.

## **Project SERVE LD: Successful Early Recognition of Variables in the Evaluation of Learning Disabilities**

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GRANT NUMBER: H023C30010

BEGINNING DATE: 10/01/93

ENDING DATE: 9/30/96

### **ABSTRACT**

**PURPOSE:** This project will attempt to reduce the theory-practice gap in identification of and preparation of remediation plans for students with learning disabilities by analyzing the decision process and identifying the salient variables that ultimately result in final diagnosis and interventions for teachers, resource specialists, and psychologists working with children with learning disabilities.

**METHOD:** Beginning with stated definitions and policies for disability determination and the development of treatment plans, the project will study what actually happens in practice for approximately 10,000 African-American, Asian, Caucasian, Filipino, Latino, Indochinese, and Native American children who will be referred and evaluated for all types of learning disabilities in the diverse San Diego City System. Through regression analysis, factor analysis, and discriminant analysis applied to approximately 100 variables per child, the program will analyze the decision process, determine the variables that are actually employed to qualify a child as learning disabled, describe the characteristics of children referred for, but not qualified as learning disabled, summarize the process of developing treatment recommendations, and examine how treatment plans are implemented.

**ANTICIPATED PRODUCTS:** Information gained through this study will be systematically communicated to teachers, resource specialists, psychologists, administrators, and parents in order to have an immediate positive impact in terms of streamlining the process of learning disability determination and the development of treatment plans. Findings will be further disseminated via reports to school administrators and parents in communities involved, through a monograph to be developed and sent to local, state, and national agencies and to researchers in the field, through symposia presentations at professional conventions, and through publications in major journals.

## A National Study of State Education Policies for Language Minority Students with Disabilities

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023B50037

BEGINNING DATE: 9/01/95

ENDING DATE: 8/31/96

### ABSTRACT

**PURPOSE:** The project will: (1) identify State policies regarding educational services for students with disabilities who are also identified as language minority students; and (2) synthesize experts' recommendations for improvements of these policies through a Delphi procedure.

**METHOD:** Current state policies for serving language minority students with disabilities will be identified through document review and content analysis. Existing special education policies, including statutes, rules, and regulations and state plans will be reviewed for the 50 states and the District of Columbia. State Education Agencies (SEAs) will also be contacted to obtain copies of relevant policy documents. Next, an expert panel will review the policies found and make recommendations for improvements, using a Delphi procedure. This technological forecasting technique collects the opinions of experts for analysis, and brings their opinions to consensus. The panel will include 15 representatives from the areas of bilingual education, special education, bilingual special education, and educational policy. Electronic communication media will be used to facilitate this process.

**ANTICIPATED PRODUCTS:** This research will provide recommendations to states that have not developed specific policies and to those revising policies for educational programs for language minority students with disabilities. Copies of the project report will be made available to professional organizations and databases, as well as special education representatives at each SEA and members of the Delphi expert panel (who represent colleges and universities nationwide.)

***SECTION 3:***

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***INFANTS,  
YOUNG CHILDREN,  
AND FAMILIES***

## **A Longitudinal Study of Young Children with Fragile X Syndrome and Their Families**

GRANT NUMBER: H023C30081

BEGINNING DATE: 7/01/93

ENDING DATE: 6/30/98

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### **ABSTRACT**

**PURPOSE:** This project will conduct a longitudinal study of the development of at least 100 boys with Fragile X syndrome between birth and 72 months of age.

**METHOD:** Using growth curve analysis the project will characterize developmental patterns and document the attainment of key developmental milestones in five domains: cognitive, communicative, social, adaptive, and motor skills. The project will also document stability and change in temperament and behavioral characteristics. Interviews and surveys will be used to describe unique family contexts among subject children. A final component of the study will determine clinicians' perceptions of the unique learning styles and instructional or therapeutic strategies needed for young children with Fragile X syndrome.

**ANTICIPATED PRODUCTS:** The project hopes to provide a foundation for future proposals including a longitudinal life span study of persons with Fragile X syndrome and their families, as well as other research linking biological and environmental factors to developmental outcomes. Dissemination efforts will include promotional brochures, a monthly newsletter, curriculum materials, and handbooks.

## **Age of Peers and Its Effects on the Social Interactions of Preschoolers with Disabilities**

GRANT NUMBER: H023C20168

BEGINNING DATE: 10/01/92

ENDING DATE: 9/30/97

### **PRINCIPAL INVESTIGATOR:**

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919-966-4250

### **ABSTRACT**

**PURPOSE:** This project involves a 5-year series of studies that will investigate the extent to which age of peers influences the development of social skills among preschoolers with disabilities.

**METHOD:** In the first 2 project years, 80 3- and 4-year-olds with mild disabilities will be paired with four different play partners for two play sessions each. Sessions will be analyzed for level, complexity, and nature of social interactions. The second series of studies will examine whether or not repeated opportunities for dyadic play with a younger child improve

generalized social skills of 4-year-old children with disabilities, as has been observed to be the case with nondisabled children with low rates of social interaction. Thirty 4-year-olds with mild disabilities will be randomly assigned to dyadic play with a same-age peer, dyadic play with a younger child, or a control group.

**ANTICIPATED PRODUCTS:** These studies will increase understanding of how peers influence social interactions of young children with disabilities. Important information on the need to consider peer characteristics when designing early intervention programs to promote social competence will result. Project findings will be disseminated through journal publications, presentations at conferences, and development of guidelines for teachers in child care settings serving young children with disabilities.

### **Elementary School and Boys with Fragile X Syndrome**

GRANT NUMBER: H023C50034

BEGINNING DATE: 7/01/95

ENDING DATE: 6/30/00

**PRINCIPAL INVESTIGATOR:**

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#### **ABSTRACT**

**PURPOSE:** This project will conduct the elementary school portion of a longitudinal, life-span study of boys with Fragile X syndrome.

**METHOD:** Project staff are currently conducting the early childhood portion of this study, gathering data on the early development, temperament, behavior, and patterns of family coping and adaptation of 100 boys. During the elementary phase, research questions will focus on: (1) developmental, functional, and school achievement growth patterns; (2) factors that influence development and achievement; (3) the development of social competence and peer relations; (4) factors influencing social competence and peer relations; (5) the nature and quality of school experiences provided during the elementary years; (6) the needs and concerns of teachers working with boys with Fragile X syndrome; (7) effective strategies for enhancing achievement and social competence; and (8) patterns of family coping and adaptation during the elementary years. Eighty boys and their families will be followed between 1st and 5th grade to answer these questions. Mixed method designs and hierarchical linear analyses will be used to chart patterns of growth and change, identify correlates of change, and determine successful educational and intervention strategies.

**ANTICIPATED PRODUCTS:** Research findings will be submitted to leading journals for peer review and publication, and also presented at state, regional, and national conferences related to child development, education, and family support. Specific project publications will include: a manual for parents describing in simple language the early development and needs of

children with Fragile X syndrome; a guide for teachers and therapists who work with these children and their families; and a professional guide summarizing findings from the survey of professionals, which will also describe important factors to consider in working with families.

## **Parent-Child Interaction Systems: A Long Term Evaluation**

**PRINCIPAL INVESTIGATOR:**  
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Center for Persons with Disabilities  
Logan, UT 84322  
801-750-1179

GRANT NUMBER: H023N30028

BEGINNING DATE: 10/01/93

ENDING DATE: 9/30/96

### **ABSTRACT**

**PURPOSE:** This project will use an existing parent-child interaction data set to improve the usefulness of parent-child interaction scoring systems, and to further the knowledge of the nature and effects of the mother-child interaction.

**METHOD:** In addition to identifying parent and child behaviors that correlate with measures of child development, research will identify parent and child characteristics and parents' perceptions of stress, social support, and resources that best correlate with parent interaction behaviors. After the existing data set has been coded to measure both mother and child behavioral dimensions in order to examine the bidirectionality of the interaction, a number of analyses will be performed, including: a factor analysis to determine factor structures of all relevant systems, analyses to demonstrate criterion and predictive validity, and analyses to establish the relationship between the variables set forth in project objectives. The stability and change within dyads of parent-child interaction will further be examined over time.

**ANTICIPATED PRODUCTS:** By establishing criterion-related and predictive validity of coding systems employed, staff will enable clinicians, practitioners, and researchers to better choose and employ the coding system best suited to their needs. A monograph will be produced by project staff and consultants during the final year. Summaries of findings will be disseminated through a newsletter and computer bulletin boards.

## **An Analysis of the Effectiveness of Staffing Patterns for Young Children Attending Natural Group Environments for Early Intervention**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023C30072

BEGINNING DATE: 10/01/93

ENDING DATE: 9/30/96

### **ABSTRACT**

**PURPOSE:** This project will examine the effects of different service delivery structures on the development of toddler-age children with disabilities (and their families) receiving early intervention within natural group environments.

**METHOD:** The study will compare four different service delivery structures within natural group settings with toddler-age children with disabilities receiving services under the Department of Mental Retardation. Children will be assigned staff and services through the Individualized Family Service Plan (IFSP) process. The four service delivery structures to be evaluated will include: (1) a full-time teacher within the group environment the entire time the child attends and therapy (as needed) delivered within the group environment; (2) a full-time teacher within the group environment the entire time the child attends and therapy delivered (as needed) outside the natural group environment; (3) a teacher attending the natural group environment at least once a week for consulting purposes and therapy delivered (as needed) within the natural group environment; and (4) a teacher attending the natural group environment at least one time a week for consulting purposes and therapy delivered outside the natural environment. Evaluation of these service structures will occur on a 3-month basis during a 12-month enrollment period for each child.

**ANTICIPATED PRODUCTS:** The project will expand the current knowledge base on the effects of receiving early intervention in natural group environments in a number of ways. Findings will be presented at state, local, and national conferences, and articles and descriptions of service delivery practices will be prepared for journals and newsletters. Research monographs will be generated on methodology and findings, and training manuals will be prepared on service delivery practices found to be effective.

**Longitudinal Study of Risk and Protective Factors  
Affecting the Development of Children Prenatally  
Exposed to Illicit Drugs and Alcohol**

**PRINCIPAL INVESTIGATOR:**

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Juniper Gardens Children's Project  
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Kansas City, KS 66102  
913-321-3143

GRANT NUMBER: H023C50111

BEGINNING DATE: 7/01/95

ENDING DATE: 6/31/00

**ABSTRACT**

**PURPOSE:** The project will investigate early elementary school experiences and developmental outcomes of children with documented exposure to illegal drugs during pregnancy.

**METHOD:** Cohorts of both drug-exposed and nonexposed children ages 5 - 9 years (N=60 children in each cohort) will be followed during their early schooling. Within each cohort, 40 children will have had prenatal exposure to illegal drugs and/or alcohol and the remaining 20 will be a comparison group with no documented exposure. For the first cohort, the work represents a four-year extension of a completed two year developmental study. For the second cohort, this study provides an opportunity to replicate and cross-validate developmental trajectories and findings from the earlier research with Cohort 1. Since a wide variety of factors have been found to influence student outcomes and adjustment, measures of prenatal drug exposure; family risk and protective factors, developmental status, child behavior at home and school, environmental factors, academic achievement, and social/emotional adjustment will all be used. Individual testing, observations in the classroom and on the playground, and school archival record searches will be employed to gather data for these measures. Data analyses will be conducted to: (1) examine differences between groups; and (2) explore the variance; accounted for by drug exposure, independent of other variables, in the prediction of later school success and failure.

**ANTICIPATED PRODUCTS:** Results of the first analytical study (of Cohort 1 from ages 3-9) will be incorporated into preservice training in graduate university coursework. Annual reports will be developed and presentations will be made at national and regional gatherings of professionals, researchers, and educators, as well as articles submitted to professional journals to reach this same audience.

## Committee on Prevention of Reading Difficulties in Young Children

**PRINCIPAL INVESTIGATOR:**

Denning, Douglas  
National Academy of Sciences  
2101 Constitution Avenue  
Washington, DC 20418  
202-334-3377

GRANT NUMBER: H023S50001

BEGINNING DATE: 11/15/95

ENDING DATE: 11/14/97

### ABSTRACT

**PURPOSE:** The project will conduct a thorough study of contemporary research on the development of pre-reading and reading skills, the assessment of factors associated with reading problems, and the comparative effectiveness of formal and informal interventions for young children who are at risk for developing reading problems.

**METHOD:** The study will be carried out by a committee of experts in cognitive science, developmental psychology, neuroscience, teaching and learning, literacy, and special education. The research that will be reviewed includes advances in cognitive psychology, early childhood development, neurology, ethnography, and related fields. Promising methods for early identification of reading problems will be examined, as will the scientific bases and effectiveness of various educational and other interventions for particular groups of children, including those with cognitive or neurological deficiencies, those from impoverished or minority subcultures, and perhaps those with limited English proficiency.

**ANTICIPATED PRODUCTS:** At the study's conclusion, the committee will issue a scholarly report identifying effective approaches to assessment, prevention, and intervention in a range of settings including schools, preschools, Head Start programs, child care centers, social service agencies, doctors' offices, health care clinics, and the home. In addition, the committee intends to develop a series of concise publications tailored to specific audiences, and will explore the possibility of separately funded dissemination venues, including public media.

## **A Longitudinal Study of Developmental Patterns of Children Who are Visually Impaired**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023C10188

BEGINNING DATE: 6/01/92

ENDING DATE: 9/30/96

### **ABSTRACT**

**PURPOSE:** This study will examine the sequence and rate of development of children, ages birth to 6, who are blind or visually impaired. Measures of visual acuity, behavior, temperament, and environment will be obtained in an effort to determine first, if there are differences between development of blind and sighted children and, if there are, what variables might be identified as predictors or correlates to development.

**METHOD:** This longitudinal study will be accomplished through a collaborative effort of Teachers College, Columbia University, and a national consortium of six service providers that will be established to cooperate in the collection of data. An assessment battery will be selected by the project Technical Advisory Committee, which will cross the three domains of child variables (such as developmental quotient, visual acuity, and health status), family variables (such as socioeconomic status, demographics, and mother-child interaction), and program variables (such as home vs. hospital, support services, and curriculum). Project staff will conduct training of two project evaluators from each participating program who will collect data in their programs. Subjects will be children with visual disabilities who are referred to and served by the programs participating in this study; it is foreseen that the study will include a sample size of 300 children per 1-year cohort. Yearly analyses will be conducted of the patterns emerging in the three sets of variables, their interaction, and their influence on child competence and family adaptation. The normative data collected in this study will be analyzed by measures of central tendency, factor analysis, and discriminant analysis.

**ANTICIPATED PRODUCTS:** Annual data will be pooled with previous data and reported to the field by means of project reports. Dissemination efforts will include these annual reports, journal articles, and a final report.

**PRINCIPAL INVESTIGATOR:**

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## Research on Treating Aggression in Young Children

GRANT NUMBER: H023N40039

BEGINNING DATE: 10/01/94

ENDING DATE: 9/30/97

### ABSTRACT

**PURPOSE:** The project will systematically replicate and extend the findings of a pilot investigation, in which the rate of aggression across four children decreased to normative levels through the use of observational learning of high status peers, individualized training scripts, and a self-evaluation paradigm.

**METHOD:** Staff will develop an observation system and a computerized system of situation descriptions. Replication studies of pilot research will then be conducted, followed by two additional studies with Native American subjects. In a small group setting, children will watch high status peer models discriminate between positive and negative examples of social interactions, state positive alternatives to aggression, and practice positive social interactions using puppets. Following study of peer models, subjects will practice these same responses and will be tested with novel scenes for knowledge acquisition. Following training, the effects of a self-peer-teacher evaluation procedure to enhance generalization from training settings to observational settings will be tested.

**ANTICIPATED PRODUCTS:** This research will create a training methodology which will: (1) reduce the probability of young children being placed in special education and support friendships and long-term inclusion in general class settings; and (2) reduce aggressive behaviors in young Native American children attending tribal public school, day care, and/or Head Start. In addition to dissemination of the computer program, observation system and training package, findings will be disseminated via a series of journal articles and conference presentations as well as a final report for the funding agency.

## Early Intervention Benefit/Cost Longitudinal Study

GRANT NUMBER: H023C20066

BEGINNING DATE: 7/01/92

ENDING DATE: 6/30/97

### ABSTRACT

**PURPOSE:** This project will provide credible evidence on the benefits and costs of early intervention programs, including programs that vary by intensity, the degree of parent involvement, and age at start.

**PRINCIPAL INVESTIGATOR:**

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Utah State University  
Early Intervention Research Institute  
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801-797-3125

**METHOD:** Data will be examined from a benefit-cost follow-up study of 430 children with a variety of disabilities including visual impairments, intraventricular hemorrhage, medical fragility, and others who received early intervention from the Early Intervention Research Institute from 1985-1990. Subjects were randomly assigned to control and experimental groups where both groups of children received treatment. Experimental treatment either began earlier, was more intensive, or added a parental involvement component in addition to the control services. By following both groups of students longitudinally, the study will estimate benefits to families and society that result from the early intervention received.

**ANTICIPATED PRODUCTS:** By comparing dollars spent with dollars saved, this project will provide a perspective previously unavailable in the field of early intervention for children with disabilities and will help to answer questions regarding which early intervention programs serve children and the community best.

### **Prevention of Antisocial Behavior Patterns Among Children Grades K-3**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H237B20024

BEGINNING DATE: 10/01/92

ENDING DATE: 9/30/96

#### **ABSTRACT**

**PURPOSE:** This project will develop, evaluate, and disseminate a model program for the early identification and primary prevention of conduct disorders and antisocial behavior patterns in kindergarten-level children.

**METHOD:** The project will consist of four phases of approximately 1-year's duration each, as follows: (1) Feasibility Study; (2) Intervention and Longitudinal Tracking; (3) Replication and Longitudinal Tracking; and (4) Longitudinal Tracking and Follow-up. The model intervention program to be developed will have a dual focus on direct child intervention and family support and intervention. A state of the art early intervention program will be developed for delivery by school-based consultants and a model family support component will also be developed focusing on: (1) improving target parents' effective parenting practice; and (2) accessing needed services available from community and state social service agencies.

**ANTICIPATED PRODUCTS:** The components of this model program will be packaged in year 4 and selected, key school district staffs in the state of Oregon will be trained in them. The final package will be broadly disseminated to the field and made available to professionals for the cost of reproduction and mailing. Training and technical assistance to potential

model program adopters will be negotiated as appropriate with interested school districts and programs.

## **Programming Integration of Preschoolers (Project PIP): Developing Peer Relationships Between Children With and Without Developmental Disabilities**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023C10167

BEGINNING DATE: 7/01/91

ENDING DATE: 6/30/96

### **ABSTRACT**

**PURPOSE:** The study will investigate the effects of interventions designed to enhance social-communicative interaction among preschoolers with developmental disabilities.

**METHOD:** At least 40 preschoolers with developmental disabilities, and an equal number of nondisabled classmates will participate. Exchange theory will be applied to analyzing interaction patterns and to generating strategies for modifying interaction patterns to produce more acceptable outcomes for social partners and lessen the desire to terminate interactions and relationships. Some basic characteristics of peer-mediated intervention tactics will be modified, such as spreading interventions across the day, rather than conducting concentrated training sessions. Interventions will involve: (1) teaching typical peers to use ecobehaviorally-derived strategies for interaction with their disabled classmates; (2) teaching fundamental social skills to children with disabilities; and (3) a treatment package based on the functional components of these interventions. In addition, longitudinal effects will be monitored and investigations of intervention components that appear necessary to ensure that children with disabilities continue to interact with typical classmates and develop peer relationships in subsequent educational placements will be conducted. Single-subject experimental designs will be used to evaluate outcomes. The effects of intervention will be assessed with observational, sociometric, and teacher and parent rating measures. In addition to analyses of changes in the rates of social behavior demonstrated by children, conditional probability analyses of sequential data will be used to continue the process of identifying strategies that prove particularly effective in promoting sustained interaction.

**ANTICIPATED PRODUCTS:** The experimental procedures developed and validated in the studies will form the basis for two training manuals on: (1) daily intervention to promote constructive social-communicative interaction in integrated preschools, and (2) facilitating social adaptation of children with disabilities during transitions from preschool. Dissemination efforts will include publication of the training manuals, research papers,

papers focusing on the clinical procedures, and training workshops for practitioners.

## **Longitudinal Assessment of Emerging Behavior State Patterns Among Infants and Children with Severe and Profound Disabilities**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023C30029

BEGINNING DATE: 8/01/93

ENDING DATE: 7/31/98

### **ABSTRACT**

**PURPOSE:** This project will systematically investigate changes in state during the first few months and years of life, and will identify variables and conditions that potentially impact the emergence of various state organization patterns.

**METHOD:** A longitudinal research design will measure state behavior across early months and years of life among 25 infants at high risk for profound and severe disabilities. Additionally, a General Systems Theory approach will be adopted to investigate the process of emerging state patterns in relation to other interacting variables, such as: levels of cognitive, motor, and social development; quality and frequency of rhythmic patterns; communicative skills; social interactions with caregivers; and medical interventions and health status.

**ANTICIPATED PRODUCTS:** Results of this research will provide intervention programs with important information for assisting in the development of more stable and adaptive state patterns in persons with profound and multiple disabilities. Findings from the project will have additional implications for the assessment and treatment of traumatic brain injury, and the behavioral changes and physical losses associated with aging.

## The Impact of Federal Policy and Resulting Legislation on Family Systems

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023C10103

BEGINNING DATE: 12/15/91

ENDING DATE: 12/14/96

### ABSTRACT

**PURPOSE:** This project will study how early intervention provided to infants and toddlers impacts families, and specifically, how families perceive these services. The study will examine three assumptions: (1) families need and welcome these services and supports; (2) early interventionists know how to validly assess family needs and develop programs to meet them; and (3) these services will enhance the developmental potential of infants and toddlers who are disabled or at risk.

**METHOD:** Researchers will collaborate with the University of Oklahoma Medical Center in the early identification of approximately 36 families of neonates who are at significant risk due to genetic/congenital conditions, birth trauma or prematurity, and/or combinations of maternal risk factors (e.g. age, substance abuse, AIDS, etc.). Over a 5-year period, qualitative methodologies will be used to probe the perceptions and experiences of parents (and when appropriate, siblings) of infants, toddlers, and preschoolers. Twelve families will be identified in year 1 and followed over 3 years. Twelve new families will be added each of the first 3 years. A total of three intensive, audiotaped interviews will be conducted per year for each family, including interviews conducted with a significant other outside the family, but involved in the family system in order to triangulate the data collected. The first interview will be designed to probe the issues of: (1) initial communications with professionals from a variety of disciplines; (2) transitions from hospital to home; (3) contacts from and referrals to additional services and resources; (4) realizations and adjustments to the infant's needs; (5) self-perceptions and coping; and (6) perceptions of assistance received from professionals and interpersonal networks. Follow-up interviews will further document the nature of services, supports and/or resources provided to or sought by the families.

**ANTICIPATED PRODUCTS:** Products will include five annual research reports, a final monograph, book, and field guidelines for parent involvement in early intervention.

## **A Longitudinal Follow-up of Graduates from Two Contrasting Preschool Instructional Models: Phase 2**

### **PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023C30007

BEGINNING DATE: 7/01/93

ENDING DATE: 9/30/97

### **ABSTRACT**

**PURPOSE:** This project will study the lasting effects of two approaches to preschool education as well as the course of development of preschool graduates as they progress from childhood to adolescence, passing through two critical school transition periods.

**METHOD:** The subjects of the study will be 197 elementary and middle school children who qualified for special education and participated in a previous preschool intervention study. These children, who have mild to moderate delays in cognitive and language skills, received either an academically based Direct Instruction model or a cognitively based Mediated Learning model for between 1 and 3 years of intervention. Subjects will be followed through another five years of schooling and the associated transitions. Evaluation instruments will include a variety of cognitive, academic, social, adjustment, school placement, and employment measures. Data analysis will vary according to the research question addressed, and include repeated measures analysis of variance, multiple regression, survival analysis, and growth curve analysis techniques.

**ANTICIPATED PRODUCTS:** The project will generate much-needed information on: the ability to match instructional programs to students; long-term effects of numerous models for early intervention, with some retrospective information on children's readiness to learn as a result of either model; key periods in school when children with developmental delays are at risk for difficulty, or ready to experience a developmental growth spurt; the relationship and mechanisms between early cognitive and linguistic functioning and later skill development; and validity of initial judgments of risk based on early assessments.

## **Facilitation of Intersubjectivity to Remediate Language Delay of Preschool Children with Mental Retardation**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023C20077

BEGINNING DATE: 10/01/92

ENDING DATE: 9/30/96

### **ABSTRACT**

**PURPOSE:** This 4-year project will investigate the effectiveness of interventions to facilitate language development of toddlers and preschoolers with mental retardation. The premise underlying the six studies in the project is that intersubjectivity must be established in order for the child with disabilities to utilize the verbal and nonverbal information from others with whom he or she interacts. The project will describe and test experimental efforts to facilitate the establishment of joint referential states for communicative exchanges.

**METHOD:** The studies will examine both descriptively and experimentally the integration of cognitive, affective, social, communicative, and language skills during the first 5 years of life. In Study 1, extant videotapes from at least 200 mother and infant dyads (infants ranging in mental age from 10-18 months) will be coded in real time to indicate their attentional state vis-a-vis both objects and their mothers. The development of joint attentional state will be described from this cross-sectional sample of young children in comparison to published reports on normally developing children. Seventy-six children will be involved in the remaining five longitudinal experimental studies. Studies 2, 3, and 4 will utilize prototypic interactive computer games for sensorimotor skills and storybooks as one context to compare to more typical dyadic play and storybook contexts in terms of the establishment of joint reference and communication. In Study 2, teachers will attempt to establish joint reference with young children with disabilities in the context of an object permanence computer game ("Find the Bunny") or during play with mechanical toys. Study 3 will be a replication of Study 2 except that parents and their children with disabilities will be involved. Ongoing analysis of videotapes of teaching sessions will provide the empirical basis for suggestions about ways to facilitate joint attention and communication within these contexts. A computer controlled videotape analysis system will be used with both keyboard and voice input to expedite the tape rating and feedback process. In Study 4, parents will be provided with interactive, computerized storybooks or regular storybooks to examine the utility of reading activities as joint referential and communication contexts. Study 5 will broaden the study to establishment of joint reference and language production in a small group setting (3 children, 1 teacher) in which simple play scripts are enacted (e.g., snack time, putting a baby to bed). Half of the children will be involved in a small group with one child

who does not have disabilities and half will be in contexts including only children with disabilities. In Study 6 the investigation of interventions to facilitate joint referential states and language production will be conducted in large group free play situations in a structured classroom which is integrated with children who do not have disabilities or in one that includes only children with disabilities. An intensive collection of data on language use and sensorimotor skills will ensure comparability across the 276 subjects involved in these cross-sectional and longitudinal studies.

**ANTICIPATED PRODUCTS:** In addition to the findings from the studies, an outcome of the project will be the development of an observational technology from which complex social process descriptions can be completed, analyzed, and used as the basis for suggestions on how to modify interactions with young children with disabilities. The studies will provide evidence about the relative effectiveness of new language intervention techniques for early childhood special educators who work with children who have both developmental and language delays.

### **Using Behavioral Momentum to Increase Children's Instructional Engagement**

**PRINCIPAL INVESTIGATOR:**

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Utah State University  
Department of Special Education &  
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GRANT NUMBER: H023A50093

BEGINNING DATE: 8/01/95

ENDING DATE: 7/31/96

#### **ABSTRACT**

**PURPOSE:** The project will determine the effects of behavioral momentum on children's instructional engagement within naturalistic instructional contexts.

**METHOD:** In Study 1, high-probability mands will be interspersed with low-probability mands. Children's attempts to respond to low-probability mands, correct responses to low-probability mands, and duration of time children are engaged in learning activities will be examined using a multiple probe design. Four students in a classroom averaging 12-15 preschool students will participate in Study 1 during center-time activities. Mand testing will be conducted using high-interest, thematically-based sets of toys. In Study 2, high-probability mands will be used prior to introducing low-probability response situations (response situations in which a child response is not required). Children's attempts to respond and their correct responses will be examined in these situations with low-probability behaviors and with high-probability behaviors. Study 2 will utilize similar students and preschool settings, but subjects will be provided with low-probability response contexts (teacher self-questioning) instead of high-probability contexts.

**ANTICIPATED PRODUCTS:** Research reports and manuscripts will be prepared for professional journals in special education. Research results and information on behavioral momentum will also be presented at state professional conferences, and will be integrated into the Department of Special Education and Rehabilitation's teacher training program for early childhood special educators.

## **An Exceptional Analysis of Teacher/Parent Mediated Interventions for Preschoolers with Behavioral Problems**

**PRINCIPAL INVESTIGATOR:**  
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GRANT NUMBER: H023C20172  
BEGINNING DATE: 9/01/92

ENDING DATE: 8/31/97

### **ABSTRACT**

**PURPOSE:** This research project will empirically investigate the efficacy of an expanded intervention approach involving behavioral consultation with parents and teachers of preschool children who are at risk for social-emotional difficulties

**METHOD:** Children experiencing social withdrawal and isolation and children experiencing conduct difficulties will be identified, treated, and monitored for approximately 3 to 5 years, from preschool through early elementary school transitions. Screening procedures and teacher referrals will identify 120 3-5 year-olds in Head Start programs. Children selected for the project will be assigned randomly to experimental and control conditions. In the experimental group, children will be further assigned randomly to baselines in a multiple baseline design. Consultants trained in behavioral consultation will work with parents and teachers to deliver a treatment package either for social withdrawal or for conduct disorders. Treatment programs will include social skills interventions supplemented with parent and teacher behavior management strategies. Consultants will also monitor students' progress as they make the transition into elementary school.

**ANTICIPATED PRODUCTS:** In the area of practice, products will include: (1) treatment packages for socially withdrawn and preschool students with mild conduct disorder; (2) treatment integrity checklists and rating scales for monitoring the implementation of specific treatments; and (3) foundation of an effective preschool consultation and intervention model put in place in a county Head Start organization. Contributions to research will increase understanding of effects of conjoint behavioral consultation with teachers and parents.

## Investigations of Early Motor Intervention Procedures

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023C30127

BEGINNING DATE: 9/01/91

ENDING DATE: 8/30/96

### ABSTRACT

**PURPOSE:** The project will investigate the relative effectiveness of two motor intervention approaches for children with Down syndrome and children with cerebral palsy: the Neurodevelopmental Therapy (NDT) approach, and the Peabody Developmental Motor Program (PDM).

**METHOD:** Interventions will be conducted with 60 children with Down syndrome children and 60 children with cerebral palsy children (ages 6 to 12 months at the beginning of the study) during the first 3 years of their lives. Subjects will come from approximately 12 different sites from the southeastern portion of the United States, each of which provides only one of the two treatment models being investigated. Treatments will be administered by the regular interventionists at these sites, who have been trained to proficiency in the model they are required to implement. The study is based on a pre- post multifactorial design that will assess the relative contribution of several variables to two major outcomes of intervention services: (1) the level of family involvement with their child after 12 and 24 months of services, and (2) the fine and gross motor gains that the children have attained after 12 and 24 months of intervention. Four factors will be used to assess family involvement in the child's intervention program including the amount of time that primary caregivers engage in therapeutic motor exercises with their child, and the style of the primary parent/caregiver during interacting with the child. Both quantitative and qualitative procedures will be used to assess motor outcomes that children attain. In addition, the study will determine whether the effects of these curricula are replicable across sites. A cost benefits analysis will examine the magnitude of motor gains that children attain in motor intervention programs as a function of the monetary and family resource expenditures that are required to produce these gains.

**ANTICIPATED PRODUCTS:** Dissemination activities will include a technical report to be advertised for distribution after 12 months of intervention data, state and national conference presentations, and journal articles.

## **Prenatal Cocaine Exposure and Social Development of Young Children: A Field Initiated Research Project**

### **PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023C10092

BEGINNING DATE: 9/01/91

ENDING DATE: 8/30/96

### **ABSTRACT**

**PURPOSE:** This project will conduct a 5-year program of descriptive and intervention-based research that increases both knowledge regarding social and other developmental outcomes for young children exposed prenatally to cocaine and resources for providing early intervention to this group.

**METHOD:** Subjects for all studies will be infants and young children (6 months to 6 years of age) who were exposed to cocaine prenatally and (for Study 1, the longitudinal study, only) non-exposed matched controls. Cocaine-exposed children will be recruited primarily by contacting mothers served by the Mother Baby Chemical Health Program of Group Health, Inc., in the Minneapolis-St. Paul metropolitan area. Throughout the seven studies, specific instruments have been selected to provide three different types of measures of the social development of children exposed prenatally to cocaine: (1) a general, performance-based outcome measure of social competence; (2) measures of the type, quantity, and quality of social interactions in home and care/school settings; and (3) direct assessment of other aspects of the child's development. Study 1, involving 50 drug-exposed children and 50 non-exposed matched controls, will consist of a 5-year, longitudinal descriptive analysis of social and other developmental outcomes. Four experimental studies (focusing in turn on environmental arrangements, teacher-mediated interventions, affection training activities, and parent training to promote social interaction competence) will each produce a set of empirically valid intervention procedures. In the final 2 years of the project, these separate intervention procedures will be combined into a comprehensive treatment package, and the effects of this package will be evaluated for both short- and long-term effects on the social interaction of young children. Data analysis will include ANOVAs and MANOVAs, and multiple baseline across subjects designs for the intervention studies.

**ANTICIPATED PRODUCTS:** Dissemination activities will be directed at early intervention personnel and researchers and will include journal articles, conference presentations, training materials, and teacher manuals.

## **Maximizing Effective Teacher-Mediated Intervention in Inclusive Preschools Implementing Developmentally Appropriate Practice**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023N40015

BEGINNING DATE: 9/01/94

ENDING DATE: 8/31/97

### **ABSTRACT**

**PURPOSE:** This project will develop and validate a package of teacher-mediated intervention strategies that can be effectively used to teach preschool children with developmental delays and disabilities. The children involved in the study are enrolled in inclusive preschool programs implementing developmentally appropriate practices.

**METHOD:** The studies combine single subject methodology, eco-behavioral measures, a national survey, and social validity measures to examine: (1) the effectiveness of the teacher-mediated intervention package across a variety of participants and target skills, specifically addressing skill acquisition, generalization, and maintenance; (2) the comparative effectiveness of the full teacher-mediated intervention package with two subcomponents of the package, including each interventionists' effect on child outcomes and their acceptability to the interventionist; (3) the effects of implementation of the package on subjects' level of engagement, interactions with peers, and selected variables within the classroom; (4) the extent to which a cumulative training package is effective in teaching preschool teachers to implement the package for the purpose of teaching skills to children with developmental disabilities; (5) perceptions of preschool teachers who have implemented the combined intervention package; and (6) the perceptions of parents of preschool children concerning the procedures and outcomes of intervention.

**ANTICIPATED PRODUCTS:** Project results will be disseminated through publication of research reports to early childhood and special education journals, as well as presentations at national conferences. A cumulative Effective Teacher-Mediated Intervention training manual will also be developed and disseminated along with a trainers' guide.

## **Teaching Styles in Early Intervention: Responsiveness and Directiveness**

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GRANT NUMBER: H023C40015

BEGINNING DATE: 7/01/94

ENDING DATE: 6/30/99

### **ABSTRACT**

**PURPOSE:** This project will research the extent to which teachers of infants, toddlers, and preschoolers with disabilities should teach by: (1) responding to child initiations; (2) giving them directions; and (3) combining responsiveness and directiveness.

**METHOD:** Staff will conduct research in three stages to address relevant issues: (1) naturalistic inquiry in classrooms; (2) experimental inquiry in classrooms; and (3) experimental inquiry in one-on-one teaching situations. Ten teachers and their students (N=60: 20 with disabilities; 40 without disabilities) at a university child care center will be used in Study 1. The naturalistic inquiries will provide information about the current state of practice in a small sample of teachers and children, which will guide procedures and measurement systems for controlled experiments. The first controlled experiment, again with a small sample, will guide the development of procedures for a large field-based controlled experiment. Four substudies in the first 2 years will be implemented to conduct the naturalistic inquiry. First, the effects of teaching style on child engagement will be investigated. Second, the antecedents of teaching styles will be studied. Third, the long-term outcomes differentiated by teaching style will be researched. Fourth, the classroom atmosphere will be investigated with qualitative procedures. The second major study, conducted in Year 3, will consist of training teachers to use three different styles and analyzing child engagement. The third major study, conducted in Years 4 and 5, will investigate engagement and task performance of children in teacher-child dyads exposed to specific teaching styles.

**ANTICIPATED PRODUCTS:** The results of this research will expand the knowledge base regarding the relationship between teaching and child behavior in the field of early intervention, provide information of use to teachers and parents as they implement interventions, and guide preservice and inservice efforts to train teachers to use developmentally appropriate and effective methods.

## Research on Behavioral Momentum with Preschool Children with Disabilities

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GRANT NUMBER: H023B50056

BEGINNING DATE: 8/01/95

ENDING DATE: 7/31/96

### ABSTRACT

**PURPOSE:** The project will examine variables that may influence the effects of high-probability response situations on low-probability response situations.

**METHOD:** This study will examine the effects on long and short inter-trial intervals between high-probability response opportunities. High probability responses to mands (i.e., obligated commands that call for child response) will be followed by low-probability mands. Children's attempts to respond to low-probability response mands, correct responses to low-probability response mands, and duration of time children are engaged in learning activities will be examined within an alternating treatments design. In addition, three early childhood special educators will be asked to subjectively evaluate the instructional procedures using a questionnaire. Participating subjects will be ten preschool-aged children with developmental delays attending various local preschool programs. The study will be conducted during center-time activities in the selected classrooms or at Head Start.

**ANTICIPATED PRODUCTS:** This research will begin to identify systematic instructional procedures in the natural environment that early childhood special educators may use to increase young children's instructional engagement and teach them new skills and behaviors. During this project, systematic teaching procedures will be identified and disseminated through ERIC, journal publications, a state conference presentation and in early childhood special education courses at the research university.

## **The Identification of Educational and Emotional Support Needs for Teen Fathers of Infants with Special Needs: A Survey of Service Providers for Teen Parents**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023B50006

BEGINNING DATE: 9/01/95

ENDING DATE: 8/31/96

### **ABSTRACT**

**PURPOSE:** The purpose of this project is to assist service providers in meeting the needs of teen fathers of infants with disabilities by identifying needs for training, available services, major obstacles, and current levels of involvement of teen fathers in caring for their children.

**METHOD:** Project staff will begin with a comprehensive mail and telephone survey to identify agencies which provide support programs for teen parents, including fathers, with a special focus on programs that provide special programs to meet the parent training and emotional support needs of this population. Information gained from a review of the literature will then be analyzed to develop a survey instrument. After pilot testing in Pennsylvania, this survey instrument will be revised and sent to random agencies from a nationwide list of agencies providing parent training and emotional support programs for teen parents. Based on evaluative information gathered from this nationwide survey, a plan for a model program will be developed. This model is expected to consist of a menu of services and approaches to parent training and emotional support for teen fathers of infants with special needs, and will be reviewed by at least two agencies prior to finalization. The final model will draw on the strengths and experience of all agencies responding to the survey, and details of the model will be made available to each identified agency.

**ANTICIPATED PRODUCTS:** In addition to feedback to participating agencies, project findings will be disseminated through a variety of media. A presentation abstract will be prepared and submitted to a national conference on special education, and a brief summary of project findings will be sent to newsletters for teen parenting and early intervention programs. A journal article on project findings will also be submitted to a peer-reviewed special education journal.

**PRINCIPAL INVESTIGATOR:**

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**Studies of Infants and Toddlers Prenatally Exposed to Cocaine**

GRANT NUMBER: H023C30079

BEGINNING DATE: 7/01/93

ENDING DATE: 6/30/98

**ABSTRACT**

**PURPOSE:** This project will investigate the effectiveness of several intervention models for serving infants and toddlers prenatally exposed to cocaine.

**METHOD:** The project will include 3 intervention models: (1) a center-based program that will provide participating children with 25 hours per week of early intervention services with transportation provided; (2) a home program which will provide participants with 3 hours per week of home visits; and (3) a follow-up program which will not include any planned intervention programs. Children in all three groups will receive medical monitoring and developmental assessments. A parallel qualitative research effort will employ a case study methodology to provide an in-depth analysis of all three models. Three further studies will include: (1) a comparison of motor intervention models; (2) an investigation of play and language development; and (3) a study of effects of early intervention models on the emergence of nonverbal communication. Costs of intervention models will also be studied.

**ANTICIPATED PRODUCTS:** Expected outcomes of the field-initiated research effort will include definitive knowledge of the early development of children prenatally exposed to cocaine, the effects of three intervention service models on child outcomes, and the cost effectiveness of the three models.

**Validation and Field Trial of a Multiple Gating Approach to Preschool Screening for Behavior Problems**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023C30017

BEGINNING DATE: 10/01/93

ENDING DATE: 9/30/97

**ABSTRACT**

**PURPOSE:** This research will assess the psychometric characteristics and validity of a multiple gating screening procedure designed to identify at-risk preschool children, ages 3 through 5.

**METHOD:** Researchers have developed a screening system known as Preschool Screening for Behavior Problems (PSBP) that uses multiple gating. Procedures used by PSBP consist of three interrelated stages cross-validating results. Stage one involves preschool teachers ranking students using objective criteria for both externalizing and internalizing behavior dimensions. Children identified in this stage are then targeted for teacher-completed behavior rating measures in the second stage. Students exceeding normative criteria on stage two measures pass this gate and are assessed further on stage three behavioral observation measures. These direct observations will be recorded in the classroom. Six separate studies in the first year will establish the reliability and validity of the PSBP process. In the second year researchers will establish normative databases, cutoff scores, and decision criteria for stage two rating scales and stage three observational measures. In year three the efficacy and social validity of the PSBP will be assessed. The fourth and final project year will focus on disseminating results.

**ANTICIPATED PRODUCTS:** This research will produce systematic, cost-effective procedures and instruments for the early identification of preschool students exhibiting behavioral profiles that put them at risk for more severe behavior disorders. The validated PSBP will be a psychometrically sound, field tested procedure that can be easily implemented by preschool personnel.

### Evaluation of Part H Child Find

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GRANT NUMBER: H159A40001

BEGINNING DATE: 1/01/95

ENDING DATE: 12/31/96

### ABSTRACT

**PURPOSE:** This project will evaluate the effectiveness of child find operations in Hawaii, what gaps and barriers may be impeding success, and how the child find component could be strengthened.

**METHOD:** Data from recent years will be collected from existing agency records. In an effort to identify children "missed" by child find, records will be studied by sampling approximately 400 of the 4000 children certified eligible each year. Impact data will be collected through surveys and interviews. The coordinating council (HEICC) and the Evaluation Advisory Group will create initial standards against which to evaluate the effectiveness of child find. Interviews, focus groups, and surveys of families, program staff and administrators will identify gaps and barriers to a more effective child find program. Samples of 40 families will be drawn from program records. A Project Advisory Group will consider these identified gaps and barriers, and describe ways to improve policy and

practice. Necessary resources and impacts will be studied with input from program and families.

**ANTICIPATED PRODUCTS:** Information about Hawaii's process and service utilization will be summarized in a report that will provide a basis of comparison for other states as they generate their own data. A Guide for Conducting Evaluations of Part H Child Find will be produced. The guide will describe a model of evaluation of child find that can be adopted to examine and improve any state's system of services.

### **Project VOCABULARY: Understanding Early Growth & Remediation Effects for Students with Disabilities or At Risk of Reading Failure**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023C50121

BEGINNING DATE: 9/15/95

ENDING DATE: 9/14/00

#### **ABSTRACT**

**PURPOSE:** The project will increase understanding of the early vocabulary growth of children with disabilities or at risk of reading failure; and investigate parsimonious and efficacious means of remediating vocabulary delay.

**METHOD:** Strand I (Measuring and Monitoring Vocabulary Growth) consists of four studies designed to develop and validate a classroom-based measure of vocabulary to monitor growth over the critical period of kindergarten and first grade. The relationship between early vocabulary growth and reading acquisition will also be examined. Strand II (Evaluating the Effects of Strategic Intervention) is comprised of two studies examining the independent and combined effects of incidental and explicit methods of vocabulary learning. This strand of research will further investigate the level and type of intervention necessary to promote and sustain vocabulary growth in students with disabilities or at risk of reading failure. Research will be conducted over a five-year period. Two distinct geographic regions will be included to increase the generalizability of findings. Twenty-four to thirty kindergarten and first grade teachers will participate in each year of the project. Each teacher will nominate four students with learning disabilities or vocabulary delay and four average achieving students. Vocabulary performance will be correlated with the Peabody Picture Vocabulary Test-Revised. Published norm-referenced tests will be used to assess receptive and expressive vocabulary. A classroom-based measure of vocabulary knowledge will be used to assess the depth and breadth of words sampled from project classrooms. The Language Sample Analysis will be used to assess important vocabulary indices emitted by students during natural speech, including mean length of utterance, number of different

words, and total number of words. Finally, measures of reading fluency and comprehension will be used to assess reading achievement.

**ANTICIPATED PRODUCTS:** Outcomes of this project will include: (1) a relevant and useful measure for gauging vocabulary growth in children with disabilities or vocabulary delay; (2) more thorough understanding of the vocabulary knowledge of children in relation to curricular expectations; (3) validated methods to enhance vocabulary growth; and (4) methods of strengthening and supporting vocabulary growth over time. These outcomes will be disseminated through research reports, inservice workshops, curricular materials, and a classroom-based index of vocabulary growth

### **Efficiency and Efficacy of Phonological Awareness Instruction for Pre-Readers At-Risk for Reading Disabilities**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023B50012

BEGINNING DATE: 7/01/95

ENDING DATE: 6/30/96

#### **ABSTRACT**

**PURPOSE:** The project will extend the research base for children at risk of reading failure by: (1) experimentally evaluating the efficacy and efficiency of two instructional approaches through a combination of formative and summative measures of phonological awareness; and (2) investigating the developmental appropriateness of two sizes of phonological units of instruction.

**METHOD:** From six kindergarten classrooms in two schools, approximately 150 children will be screened to determine those at risk for reading disabilities. Pre-intervention levels of phoneme segmentation ability will be defined with two standardized normative and formative measures: scores from a standardized phonemic segmentation instrument; and comparisons of school building segmentation norms and individual levels of phonemic segmentation. Children falling below the 25th percentile in phonological awareness will be assigned to one of two instructional approaches for ten weeks of intervention; phonemic segmentation, or onset-time segmentation as a scaffolded step prior to phonemic segmentation. A control group of peers will be taught phonological awareness from current basal curricular materials. An experimental design with multiple methodologies will be used including measurements of time to proficiency, pre/post experimental control, and time series. Efficiency, the primary dependent variable, will be measured by comparing the levels in phonemic segmentation over time to the number of sessions required to achieve proficiency. Efficacy will be determined by pre/post comparisons of

phonemic segmentation ability and a phonemic segmentation maintenance test two weeks after intervention.

**ANTICIPATED PRODUCTS:** Primary outcomes from this study will include: (1) extension of the research base identifying efficient and effective methods for teaching phonological awareness to prereaders at risk for reading failure; (2) profile analysis of individual children's responses to phonological awareness instruction through formative assessment; and (3) professional conference and inservice presentations and journal articles articulating the relationship between design principles and efficiency, efficacy, and intensity in phonological awareness instruction for prereaders at risk for reading failure.

### **Social Relationship Development in Community Contexts for Young Children with Severe Disabilities**

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GRANT NUMBER: H023C50169

BEGINNING DATE: 7/01/95

ENDING DATE: 6/30/98

#### **ABSTRACT**

**PURPOSE:** This project will conduct research to investigate the social relationships experienced by young children with severe disabilities.

**METHOD:** The project will undertake a series of studies which will focus on: (1) demonstrating the efficacy of intensive, longitudinally-applied intervention tactics; (2) understanding how young typical children's attitudes and behaviors can be made more facilitative of relationship-building with peers who have disabilities; and (3) determining how and why consumers adopt and use effective instructional practices in the social relationship domain. The first study will provide community-based social relationship intervention for young children with autism. Study Two will include a psychometric study of existing methodology for assessing the presence or absence of preschoolers' stereotyped views of persons with disabilities in community contexts. An intervention study will then aim at maximizing positive and supportive attitudes and behaviors as expressed by young children, who are not disabled, in community settings. The third study will solicit the concerns of potential adopters of intervention plans regarding the issues, incentives, and disincentives associated with adopting best practices. This assessment information will be followed by targeting community providers for adoption of the interventions developed in the first two studies.

**ANTICIPATED PRODUCTS:** The project will develop: (1) empirically-based articles/chapters; (2) conceptual articles/chapters; (3) white papers synthesizing related policy issues; (4) intervention manuals for direct-line staff; (5) news segments; and (6) yearly monographs on the state of practice related to relationship-building interventions.

## Examining Child Care Providers' Attitudes Toward Substance Exposed Children and Their Families

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GRANT NUMBER: H023B50051

BEGINNING DATE: 1/01/95

ENDING DATE: 12/31/96

### ABSTRACT

**PURPOSE:** This project will examine child-care providers' self-perceived knowledge and skills, as well as their attitudes toward working with children who have been exposed to controlled substances and their families.

**METHOD:** Two surveys will be employed: Self Rating of Professionals' Knowledge and Skills and Attitudes Toward Special Populations Survey. The latter survey will also assess attitudes toward children with Down syndrome and chronically ill children for comparison purposes. These surveys will be administered to 100 child care providers recruited from public, private religious, and private secular child care settings prior to a two-hour training session. The purpose of the training session is to increase providers' knowledge of the physical, psychosocial, and educational impact of substance exposure on infants and toddlers. It is hypothesized that child care providers' attitudes toward working with substance-exposed families are poorer than toward working with children with chronic illness or Down syndrome; it is also hypothesized that these attitudes are related to self-perceived level of knowledge and skills in working with this population, and extent of prior training in issues surrounding children with such exposure.

**ANTICIPATED PRODUCTS:** Examining care providers' attitudes toward families with a history of substance-abuse will be useful in assessing training needs, and in estimating the effectiveness of such training as a form of intervention, and a change agent in adjusting providers' attitudes. Project results will be disseminated to other practitioners and researchers through publication of articles in scientific journals and through presentations at national, state, and local conferences.

## Specific Language Impairment: Language and Generalization

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GRANT NUMBER: H023C40118

BEGINNING DATE: 10/01/94

ENDING DATE: 9/30/97

### ABSTRACT

**PURPOSE:** This project will attempt to gain a better understanding the poor bound-morpheme acquisition (BMA) of children with specific language impairment (SLI) in preschool students through a variety of bound-morpheme learning tasks.

**METHOD:** A variety of bound-morpheme learning tasks will be administered to children with SLI (N=120) and children with normal language development (N=120), 40 each per project year. The task variations will be designed to explore the three components of the BMA process: vocabulary learning, bound-morpheme learning, and bound-morpheme generalization. In Project Year 1, the effects of vocabulary learning on bound-morpheme learning and generalization will be assessed. In Project Year 2, the effects of phonological versus semantic enhancements on bound-morpheme learning and generalization will be examined. In Project Year 3, the effects on generalization of reducing vocabulary load as well as emphasizing the affix versus emphasizing the contrast between affixed and unaffixed forms will be investigated. In each of the three project years, a set of associated tasks that assess skills likely to be pertinent to children's BMA performance will also be administered. These tasks investigate sentence memory, nonverbal rule induction, utilization of known bound-morphemes and phonological and semantic similarity effects. Statistical techniques, such as multiple regression analyses, will be used to examine the results of the bound-morpheme learning task, as well as their relationship to those of the associated tasks.

**ANTICIPATED PRODUCTS:** The combined results of these studies will clarify whether theories of storage/access deficits or rule-induction deficits better predict subject-group differences. In addition, the results will determine which components of the BMA process (vocabulary learning, bound-morpheme learning, and/or bound-morpheme generalization) should be the focus of clinical intervention.

## Strategies for Promoting Social Relationships Between Young Children with and without Disabilities

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GRANT NUMBER: H023N50009

BEGINNING DATE: 8/21/95

ENDING DATE: 8/20/98

### ABSTRACT

**PURPOSE:** This project will extend the line of research on attitudes toward preschoolers with mild to severe disabilities, and will develop naturalistic and economical strategies for effectively promoting social relationships among preschool children with and without disabilities.

**METHOD:** Over a three year period, 17 kindergarten teachers and 15 special educators, 250 kindergarteners, and 124 preschoolers with mild to severe multiple disabilities from Memphis City Schools will participate. Study One will use a randomized group design to examine the effects on social contact, children's books, and guided discussions on the attitudes of kindergarten children toward children with disabilities. In Study Two, a component analysis will be used to examine the effectiveness of individual components of the intervention package. Study Three will examine the feasibility and effectiveness of the intervention package as a class-wide program for promoting acceptance of individuals with disabilities.

**ANTICIPATED PRODUCTS:** Products will include a new, validated approach to promoting social relationships among nondisabled, kindergarten-age children and young children with disabilities, including a set of procedures within a training manual for teachers and support staff to use the methods developed and researched through this grant activity.

## **Second Generation Research in Early Intervention: Long-Term Outcomes in Children and Their Families**

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GRANT NUMBER: H023C50171  
BEGINNING DATE: 10/01/95

ENDING DATE: 9/30/00

### **ABSTRACT**

**PURPOSE:** The project will conduct a second generation research study to examine the long-term effects of early intervention on children and their families.

**METHOD:** This study will involve the long-term follow-up of 300+ children and their families who participated in the Family, Infant, and Preschool Program (a family-centered model) between 1981 and 1985. Data on participating children, now between 14 and 16 years of age, has already been collected. Multiple regression analyses by sets will be the principal means of assessing long-term outcomes, and a regression analysis by sets will be used to relate several sets of independent variables to the dependent variable of interest. Independent variables will include: parent and family characteristics; child characteristics; social support factors; child diagnosis/development; and intervention features. Long term outcomes variables will include: child's social adaptive level; independent behavior; school achievement; intelligence quotient; school placement; mainstreaming outcomes; parent well-being, family well-being; level of social support; parental sense of control over services; and parental satisfaction with services.

**ANTICIPATED PRODUCTS:** This investigation will yield the first long-term follow-up data on family-centered intervention practices. A nontechnical report will be disseminated to state and federal legislators, State Education Agency (SEA) staff in all 50 states, the administrators of local public school systems and other agencies responsible for early intervention services. Findings will also be published in newsletters serving primarily administrative and policy-making audiences. In addition, research findings will be submitted to a variety of journals and conferences serving both researchers and educators.

## Longitudinal Study of the Impact of Early Intervention Services on Infants and Toddlers with Disabilities

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GRANT NUMBER: H159E50001

BEGINNING DATE: 9/30/95

ENDING DATE: 9/30/00

### ABSTRACT

**PURPOSE:** The project will examine the extent to which Part H is being implemented at the local level and examine the relationships between the extent of implementation and the child and family outcomes achieved.

**METHOD:** This study will document the developmental trajectories of 1,800 children in the first five years of life and examine the relationships between the growth experienced by children with different disabling conditions and the early intervention services they receive. Subjects will represent urban, suburban, and rural communities, including communities with high proportions of minority group families, in 18 communities located in 12 states. Multiple areas of child and family functioning will be measured. Child and family outcomes will be assessed when the child enters early intervention and at each 1-year anniversary thereafter until the child reaches 36 months of age. All children will be assessed and family outcome data collected at 36 months and again at 60 months. Data gathered will address the provider, nature, quantity, quality, and cost of early intervention services received by each child and family. The study will also collect information about the nature of Part H implementation at both community and state levels. Information on behavior and services in preschool special education and kindergarten will be collected as children age and enter new educational settings. Hierarchical linear modeling will be used to examine the growth trajectories of children with different disabilities and to determine the relationship between child growth and Part H services.

**ANTICIPATED PRODUCTS:** Project findings will be disseminated to potential audiences, including policymakers, federal, state, and local administrators, researchers, practitioners, parents of children with disabilities, advocates, and professional organizations. Findings will be disseminated in several formats, including: annual comprehensive reports at the end of Years 3, 4, and 5; brief reports in each of these years; short summaries of key findings; articles submitted for publication in professional journals; and conference presentations and briefings.

## Using Instructive Feedback to Promote Future Learning

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GRANT NUMBER: H023A50013

BEGINNING DATE: 10/01/95

ENDING DATE: 9/30/96

### ABSTRACT

**PURPOSE:** The project will evaluate the use of expansion instructive feedback in small group and low-structure activities and to assess its effects on the efficiency of future instruction.

**METHOD:** Two studies will be conducted using expansion instructive feedback with between 12 and 20 children with disabilities ages 4 to 8 years. A parallel treatments design will be used. Study 1 will be based in small group instructional contexts, while Study 2 will focus on low-structure, child-directed activities. These low-structure activities may include free play, art, and snack time. Behaviors to be taught will be individualized for each child, but will focus mostly on discrete responses from functional academic and communicative domains. Two behavior sets will be taught in alternating daily sessions, one set with and one set without instructive feedback. In instructional conditions of both studies, a constant time delay procedure will be used involving ensuring the child's attention, presenting a stimulus and task direction, using a control prompt immediately, presenting a short response interval, providing consequences and instructional feedback, and presenting an inter-trial interval. Student behavior will be observed and assessed, and the role of instructional feedback in improving future instruction will be evaluated.

**ANTICIPATED PRODUCTS:** Project staff will submit three manuscripts for publication in professional literature. An instructional manual will be developed, evaluated, and disseminated for preparing teachers to use instructive feedback, and findings will be submitted to two national conferences. A fact sheet describing instructive feedback research will be mailed to a large mailing list of interested practitioners. Notices regarding the manual and fact sheet will also be posted on electronic bulletin boards.

## **Evaluation of Transition-Based Teaching and Embedded Instruction On Learning by Preschoolers with Disabilities**

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GRANT NUMBER: H023A50004

BEGINNING DATE: 10/01/95

ENDING DATE: 9/30/96

### **ABSTRACT**

**PURPOSE:** This project will compare the effects of combining transition-based teaching and embedding instruction within activities to each technique as employed separately.

**METHOD:** Two studies will be conducted comparing transition-based teaching and embedding instruction within activities on children's learning of individualized goals. The studies will involve 10-16 children, between 3 and 6 years of age, with disabilities. Researchers will employ a parallel treatments design. Students will be taught behaviors from their individualized education plans (IEPs), and both the rate of their learning and the extent of their learning will be compared to those of students receiving only one or the other of the teaching methods being examined.

**ANTICIPATED PRODUCTS:** Project findings will be disseminated to teachers, teacher trainers, investigators, and families. Staff will submit three manuscripts for publication in professional journals; develop and disseminate an instructional manual for teachers interested in using these strategies; submit the results of the studies to two national conferences; mail a fact sheet on these strategies to families of preschoolers with disabilities; and place notices concerning the manual and fact sheet on electronic bulletin boards.

## The Effects of a Writing Intervention on the Development of Phonological Skills in Primary Grade Children with Learning and Reading Disabilities

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GRANT NUMBER: H023B50024

BEGINNING DATE: 1/01/95

ENDING DATE: 10/31/96

### ABSTRACT

**PURPOSE:** The project will provide and evaluate results of instruction emphasizing both phonological and sound-to-letter skills while students are engaged at a meaningful task rather than a skill and drill practice task.

**METHOD:** Students with learning disabilities in first through third grades (N=16-20) will be given opportunities to use the writing process as a means of developing both phonology and letter-sound skills. Students will write daily in their own journals and will be encouraged to attend to the phonology of the language system by using invented spellings for words they cannot spell correctly. It is expected that students will make gains in phonological awareness, spelling, and reading skills. A multiple-probe, single-subject research design will be employed, and curriculum-based measures in phonological awareness, spelling, and reading will be taken weekly. Multiple probe measures will be graphed to monitor ongoing progress, and will be shared with students' teachers. In addition, special education teachers will be interviewed three times to examine their perceptions about using the writing process as a literacy intervention.

**ANTICIPATED PRODUCTS:** An information packet will be developed for dissemination to special education teachers and teacher trainers. The packet will provide useful information about the reading process and will suggest ways to use writing activities to facilitate development of reading skills. Samples from study participants' journal writings and teacher interviews will be featured in the packet.

## **Generalized, Transitional, and Longitudinal Effects of Prelinguistic Communication Intervention**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023C20152

BEGINNING DATE: 1/01/93

ENDING DATE: 12/31/97

### **ABSTRACT**

**PURPOSE:** This project will investigate effects of prelinguistic communication intervention on: (1) children's generalized prelinguistic communication skills; (2) parents' use of behaviors that facilitate children's language development; and (3) children's language development and linguistic communication.

**METHOD:** Sixty children with communication delays who are at risk for related disabilities will be seen five times over a 2-year period. Half of the subjects will serve as a contrast group, while the other half receives staff-implemented intervention. Treatment group subjects will remain in intervention for 6 months or until they meet five mastery criteria. Treatment goals include: action and vocal imitation of familiar and unfamiliar models, participation in social routines, requesting, commenting, and comprehension and expression of vocabulary that encodes the key word for what the child was communicating nonverbally. Intervention techniques will include contingent imitation, scaffolded modeling, environmental arrangement, and violations of routines.

**ANTICIPATED PRODUCTS:** If parents in the experimental group use more behaviors facilitating language development, such findings will support the important bidirectional assumption of the family-systems approach to intervention and the transactional theory of development, two theoretical models undergirding Public Law 99-457, Part H. After determining the effectiveness of intervention, results and validated intervention procedures will be disseminated to practitioners and researchers.

## **Activity-Based Assessment: A Functional Approach to Determining Eligibility of Young Children with Disabilities**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023B50028

BEGINNING DATE: 8/01/95

ENDING DATE: 7/31/96

### **ABSTRACT**

**PURPOSE:** The project will investigate the effectiveness and utility of Activity-Based Assessment for determining eligibility of young children with disabilities for early intervention services.

**METHOD:** The research consists of two studies, each using a mixed factorial design. In Study 1, 20 parents of children who are referred to state agencies for evaluation of eligibility for early childhood special education programs will be selected as subjects. This study will examine (1) the functionality of test items as measured by parents using the Functional Skills Checklist (FSC), and (2) parental satisfaction with their role and involvement in the assessment process as measured by a Parental Satisfaction Questionnaire. Study 2 will select 20 early interventionists as subjects, and will examine (1) the functionality of test items as measured by early interventionists using the FSC and (2) the degree of linkage between eligibility assessment information of the Activity Based Assessment and intervention programming versus a traditional assessment measure using the Intervention Linkage Checklist. This study will be designed for replication to further define effects of the alternative eligibility assessment procedure with different subjects, locations, and test comparisons.

**ANTICIPATED PRODUCTS:** The project plans to complete the following dissemination activities: presentations at professional conferences and university seminars, journal publications, monographs and administration manuals, and inservice technical assistance and consultation.

***SECTION 4:***

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***INSTRUCTIONAL  
EFFECTIVENESS,  
MODELS,  
AND  
LEARNING***

## Auditory Training for Spatial Orientation in Children with Visual Impairment

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GRANT NUMBER: H023C40107

BEGINNING DATE: 9/01/94

ENDING DATE: 8/31/97

### ABSTRACT

**PURPOSE:** The project will study how children with visual impairments can use naturally occurring auditory information to maintain their spatial orientation while moving about.

**METHOD:** For the first project area, staff will conduct a functional assessment of sound localization. A practical, standardized test for the precision of sound localization will be developed for use by mobility instructors. This test will be assessed for its ability to predict problems with travel skills. For the second component, staff will study the guidance of locomotion via sound fields. A training procedure will be developed to enhance sensitivity to reflected sound and "sound shadows" in a safe environment allowing repeated practice. The procedure will be standardized and made available to mobility instructors using inexpensive materials. For the third component, staff will focus on spatial orientation from dynamic listening. A procedure will be developed for training children about room layout by listening to moving sound sources. The procedure draws on recent advances in audio recording for three-dimensional playback. The sample will be children with visual impairments (N=200) and children without visual impairments (N=16) aged 6 to 12 years. For the assessment, the 16 children without visual impairments will participate. The classroom-based procedure will use portable equipment designed to be easily moved, and will produce computer-generated speech noise. The testing procedure will require children to judge the position of a sound relative to a reference position that is straight ahead at ear level. Staff will later use results of these studies to explore a procedure for making an audio tape recording that will portray the spatial layout of the training room when played back over earphones.

**ANTICIPATED PRODUCTS:** This project will produce two standardized assessment and intervention procedures to contribute to the orientation and mobility training of children with visual impairments. Results will be published in professional journals, workshops, and manuals.

## The Development and Evaluation of an Early Intervention Program for Nonreaders and Nonwriters

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023C50089

BEGINNING DATE: 8/16/95

ENDING DATE: 8/15/99

### ABSTRACT

**PURPOSE:** This project will collaborate with teachers on the development, implementation, and evaluation of an integrated curricular approach designed to teach the self-regulated use of comprehension and composition skills and strategies to primary grade students with mild disabilities. The project will focus specifically on those who are nonconventional readers and writers in grades 1-4.

**METHOD:** In the first study, comparative and normative data will be collected on primary-grade students with mild disabilities in order to provide baseline information for measuring effects of the experimental curriculum. Over the course of three years, 13 teachers and their 130 students with mild disabilities will participate. Analyses will focus on the short-term and multi-year effects of the curricular approach on teacher's instructional practices, and their special education students' reading and writing achievement, and metacognitive and strategy knowledge. Staff will also study whether gaps between students in the experimental group and their nondisabled peers diminish over time. In the second study, the experimental curricular approach will be embedded in language arts and content area subjects to evaluate the effectiveness of the curriculum when it is presented as part of the regular education curriculum. Four regular education teachers in the primary grades, their 16 mainstreamed students with mild disabilities, and all associated regular education students will participate in this study. The performance of mainstreamed students will be contrasted with that of students who continue to receive the curricular approach in special education settings. Pretest and posttest data will be analyzed to determine the effects of the experimental curriculum on the achievement of students with learning disabilities, metacognitive and strategy knowledge, and self-perceived competence. Specific consideration will be given to data providing information on the extent to which cognitive strategies in the experimental curriculum can be incorporated as part of the "regular" curriculum, and the relative effectiveness of the curriculum employed in regular education versus special education settings.

**ANTICIPATED PRODUCTS:** At the conclusion of this research project, a disseminable curricular approach will be available to advance

teachers' knowledge and practice related to the improvement of literacy instruction and the learning of young students with mild disabilities. Annual reports will be prepared and disseminated to academicians and teaching professionals. An ongoing series of executive summaries will be distributed to administrators and other key personnel of schools in the local service area. Project staff will be present findings through conference presentations and journal articles. They will also be available for consultation with local school districts.

## **PROMISE: Practitioners and Researchers Orchestrating Model Innovations to Strengthen Education**

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GRANT NUMBER: H023G50005

BEGINNING DATE: 9/01/95

ENDING DATE: 8/31/99

### **ABSTRACT**

**PURPOSE:** This project will develop, validate, and disseminate a model for practitioner-researcher collaboration and staff development, resulting in cutting-edge, successful practices that are implemented and sustained in schools.

**METHOD:** Research will conduct two "generations" of research activity aimed at developing instructional procedures that help teachers accommodate students with disabilities during mainstream reading activity. In Years 1 and 2, staff will implement the PROMISE collaborative research model with one school and a traditional "expert" model with a second school. Both qualitative and quantitative methods will be used to examine the effects of these two contrasting research models on teacher beliefs and values, school culture, teacher practice, fidelity of treatment implementation, and student outcomes. In Years 3 and 4, staff will study the effects of the research model in participating schools in terms of whether (and if so, how long) these innovations are sustained. In addition, staff will replicate the process initiated in Years 1 and 2 and contrast collaborative versus expert models in two additional schools. Again, the project will generate information about the efficacy of further refined reading instruction. In replication of Year 1 and 2 research, teachers in the first generation of schools will be responsible for staff development in the second generation of schools.

**ANTICIPATED PRODUCTS:** PROMISE is expected to have national impact through the development of otherwise unavailable products and knowledge including: (1) the creation of a model for school-university research collaboration that bridges between practice

and research; (2) a manual and videotape designed to disseminate this model; (3) validated methods for including students with disabilities in general education for reading instruction; (4) a training manual and videotape explicating and illustrating the reading methods; (5) research reports on the relative effects of collaborative versus expert research models, on reading treatment components, and on specifying a model for school-university research partnerships.

## **Project BRIDGE: Bridging Research and Instruction through Dynamic and Ground Exchange**

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GRANT NUMBER: H023G50021

BEGINNING DATE: 9/01/95

ENDING DATE: 8/31/99

### **ABSTRACT**

**PURPOSE:** The project will develop, field-test, and evaluate a model of elementary literacy education that is: (1) considerate of and sensitive to the regularities, routines, and resources of individual schools; (2) grounded in the dynamic and equitable exchange between professionals practitioners and researchers; (3) sufficiently defined to generalize to other schools and produce replicable findings; and (4) sustainable by faculty most proximal and responsible for bringing about change.

**METHOD:** Research will be conducted over a four-year period. Forty general education teachers, 8-10 special education teachers, and four school principals will participate along with four university faculty. All students with identified reading disabilities, two children identified as at risk for reading failure, and two average-achieving peers will participate from each classroom for a projected total of 280-300 children over the four year funding period. Each school will establish two teams per school that will be responsible for developing specific mechanisms and strategies of the BRIDGE model for their respective sites. One of these teams will represent K-2 classes, the other grades 3-5. A modified multiple-case replication design will be used to evaluate the effects and sustainability of the model. School culture, climate, and student literacy achievement, engagement, and attitudes will be assessed through a framework of measures to be determined at the local school level. In addition to technical adequacy criteria, these measures will be proximal to school culture and climate and will provide a cadre of common assessment instruments across schools.

**ANTICIPATED PRODUCTS:** Research reports from the first two project years will examine the reading literacy growth of students with disabilities within the context of several bridging mechanisms and options at the school-building level. Curricular materials and reports from Years 3 and 4 will provide the theoretical base and practical implications for designing and implementing a model for bridging research and practice that benefits students with disabilities and those at risk for reading and academic failure.

## PROJECT RILT

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GRANT NUMBER: H023G50033

BEGINNING DATE: 10/01/95

ENDING DATE: 9/30/99

### ABSTRACT

**PURPOSE:** This project will develop, implement, and evaluate the Research Instructional Lead Teacher (RILT) system, a model for bridging the gap between research and practice in the education of children with disabilities in general education classrooms.

**METHOD:** The RILT model will address implementing effective, research-based instructional strategies for teaching students with learning disabilities, mild behavior disorders, and students with mild, moderate, severe, and profound disabilities in regular education elementary classrooms. Using an AB design, three time series experiments will be conducted to assess: (1) procedural reliability of implementation of the RILT model, (2) procedural reliability of teacher implementation of selected strategies, (3) learning of students with disabilities during implementation of the RILT process, (4) learning of students without disabilities who receive remedial educational programs, and (5) teacher instructional and student responding (ecobehavioral) variables during implementation. Three ethnographic case studies will be conducted from the emic perspective to identify influential belief systems impacting selection and use of instructional strategies. Five studies using single subject experimental designs will be conducted to study the effectiveness of RILT. Results of a school climate survey will be examined to determine differences (if any) on variables measured in schools after participation in RILT. The RILT model will then be replicated in another school using local resources and action research data collection procedures.

**ANTICIPATED PRODUCTS:** The project will develop: (1) an RILT model implementation module describing module components, roles of key research teachers, procedures for implementation and training, and results of implementation in various settings; (2) "teacher-friendly"

intervention modules describing research-based interventions, step-by-step procedures for implementing interventions in general education classrooms, adaptations made in different classrooms, and manageable data collection procedures. The project will also develop disseminable materials for professional journals and conferences. These reports and modules will be made available to a variety of professional institutes, clearinghouses, and technical assistance organizations.

### **Visual Involvement in Literacy: Reading and Discussing Books with 3- to 8-Year Old Students Who are Deaf and Hard-of Hearing**

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GRANT NUMBER: H023N40040

BEGINNING DATE: 8/01/94

ENDING DATE: 7/31/97

#### **ABSTRACT**

**PURPOSE:** The purpose of this project is to perform a sociolinguistic study of successful involvement strategies in a visual modality that are used by teachers of varying backgrounds and styles. The subject of the study will be equally divided between both hearing and deaf users of Manually Coded English (MCE) and American Sign Language (ASL).

**METHOD:** The project initially involves transcription and analysis of 10 videotaped reading activities by teachers and 10 videotaped discussion activities by teachers and students. First, five teachers (three hearing and two deaf) will be asked to read with their class one of two picture books, "Too Much Noise," which uses many words connected with sounds. Second, they shall be asked to involve their students in discussing the first book after hearing the story. The same five teachers will then read a second book, "Five Chinese Brothers," which uses many words connected with vision, again followed by a discussion of the story with the class. The total number of students will be 52, and students shall be videotaped as well.

**ANTICIPATED PRODUCTS:** This project will provide an empirical basis for the transcription and analysis of successful involvement strategies; the transcription and analysis of teachers' and students' interaction in discussion; and an understanding of how the involvement strategies are impacted by the teacher's target language and audiological background. The result will be a research-based model for developing inservice training for teachers, parents, and others who wish to read and discuss with students, to develop or enhance techniques for creating interpersonal involvement as well as more involvement in discussion in a visual modality.

## Is Learning Disabilities Nothing More than an Oversophistication of Low Achievement? A Quantitative and A Qualitative Synthesis

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023E50004

BEGINNING DATE: 9/01/95

ENDING DATE: 8/31/97

### ABSTRACT

**PURPOSE:** The project will develop a definitive statement of whether, and to what extent, students with learning disabilities differ from peers who are low-achieving and who do not have learning disabilities.

**METHOD:** A meta-analysis will be conducted, addressing the following questions: (1) In terms of standard deviations, how does performance by low-achievers compare to that of students with learning disabilities? (2) What magnitude of difference separates the two groups in terms of social acceptance and classroom behavior? and (3) Are student grade levels, race, and socioeconomic factors relevant to intergroup differences? A comprehensive review of published and unpublished literature will be conducted. These studies will then be coded along various methodological and demographic dimensions and critiqued for technical quality. The staff will then calculate individual effect sizes for comparisons between the two groups of students (learning disabled/low achieving) and analyze individual effect sizes along dimensions such as academic performance, achievement/performance discrepancies, social acceptance, and school behavior. In addition to the meta-analysis, staff will analyze a subset of studies meeting the highest standards of scientific rigor as part of a qualitative, best-evidence synthesis approach. Finally, findings will be submitted to a panel of experts for formative feedback, followed by further analyses based on their feedback.

**ANTICIPATED PRODUCTS:** Project findings will be made available as quickly as possible through submission of prepublication reports to the Educational Resource Information Center (ERIC). Results will also be published in relevant journals, including a possible special issue on the subject to include both the meta-analysis and the best evidence synthesis. The final report will be published as a monograph, and presentations will be made to scholarly audiences at national gatherings.

## Accommodating Student Diversity in General Education Classrooms: A Downward Extension of Class-wide Peer Tutoring

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023N30003

BEGINNING DATE: 9/01/93

ENDING DATE: 8/31/96

### ABSTRACT

**PURPOSE:** This project will reorganize 1st- through 3rd-grade reading instruction to enhance regular educators' abilities to accommodate a wider range of academic diversity in the mainstream.

**METHOD:** In Year 1, staff will develop and pilot Class-wide Peer Tutoring (CWPT) strategies for beginning readers in six 1st grade classrooms in two schools. Procedures will make use of strategies and principles of effective reading instruction. The impact of these procedures will be carefully monitored by means of curriculum-based measurement. In Year 2, staff will examine experimentally the effectiveness and feasibility of the downward extension of the strategies with different types of students in mainstream 1st-grade classrooms. Participants will include 20 1st-grade teachers and 120 children, half of whom will be either at risk for or already involved in special education services. In Year 3, the downward extension of the program will be used to permit teachers to tailor CWPT experiences to student's individual needs. Decisions about CWPT placement will be aided by computer-managed curriculum-based assessment, which will be implemented class-wide.

**ANTICIPATED PRODUCTS:** Concrete products of the program will include a new, validated tutoring system in reading suited to needs of various levels of readers and a manual for training teachers and support staff to use the methods developed through the program.

## **Investigation of Sequence of Reciprocal Interactions within Behavioral Episodes of Problem Behavior**

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GRANT NUMBER: H023N50004

BEGINNING DATE: 9/01/95

ENDING DATE: 8/31/98

### **ABSTRACT**

**PURPOSE:** The project will develop and validate a conceptual model of the sequence of reciprocal interactions within behavioral episodes (explosive escalating sequence of behaviors) of problem behavior.

**METHOD:** Project staff anticipate gathering data on 500 to 600 behavioral episodes of problem behavior exhibited by a stratified sample of 100 to 110 elementary-aged students diagnosed as seriously behaviorally disabled, learning disabled, and/or developmentally disabled. Prior to direct observations of behavioral episodes, a scatterplot analysis will be completed by educators on each student to identify those times in which there is a high probability that behavioral episodes will occur. Data will be summarized descriptively for the entire sample through simple univariate statistics. Logistic regression techniques will be conducted to explicate the sequence of reciprocal interactions within behavioral episodes of problem behavior. These techniques will also be used to explore the conditional probabilities among the behaviors associated with each interaction.

**ANTICIPATED PRODUCTS:** The project expects to develop products such as: presentations at national, state and regional conferences; professional articles, book chapters, and manuscripts; and dissemination through electronic networks to reach parent and practitioner networks.

## Deaf Students as Readers and Writers: A Mixed-Mode Research Approach

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GRANT NUMBER: H023T30006

BEGINNING DATE: 10/01/93

ENDING DATE: 9/30/96

### ABSTRACT

**PURPOSE:** This project will examine the acquisition of reading and writing skills in deaf and hard-of-hearing children based on a quantitative study of child characteristics and a qualitative study of the classrooms they attend.

**METHOD:** The quantitative study of student outcomes will include measures of student language, reading and writing skills, in two age-matched groups of deaf and hard-of-hearing students in two schooling settings. This study will also include institutional variables of the settings where they receive their schooling, and analyses of associations between the students' performances and these institutional variables. The qualitative study of instructional practices will examine two distinct settings which exemplify different modes of communication during reading and writing instruction. This study will be coupled with analysis of deaf and hard-of-hearing students' responses to instructional language as documented in their interaction and engagement with instruction, in their reading and writing practices, and in their written products.

**ANTICIPATED PRODUCTS:** Key research personnel will include activities to disseminate project findings through their writing and publishing.

## Synthesis of Intervention Research

### PRINCIPAL INVESTIGATOR:

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GRANT NUMBER: H023E40014

BEGINNING DATE: 10/10/94

ENDING DATE: 9/30/96

### ABSTRACT

**PURPOSE:** The purpose of this project is twofold: (1) to analyze through a meta-analysis and a synthesis of single-subject research, as well as a narrative, instructional programs that have produced data on populations with learning disabilities; and (2) to integrate research findings across a diverse study of instructional interventions for students with learning disabilities.

**METHOD:** For the first phase of the project during Year 1, a search of the relevant literature will include at least four on-line databases including: (1) the Educational Research Information Center (ERIC); (2) Psych Lit, a review of psychological journals; (3) Med-line, a review of all medical literature; and (4) Comprehensive Dissertation Abstracts. Search descriptors will include learning disabilities, reading disabilities, and dyslexia. In the second phase of Year 1 all group design intervention studies will be analyzed via a meta-analytical procedure. Analysis will primarily consist of individual study units and careful selection of studies for inclusion on methodological and conceptual criteria. Analysis will include: (1) the collection of published studies; (2) coding of study characteristics; (3) calculation of effect size as common measures of study outcomes; and (4) search for relations between study characteristics and study outcomes. Studies used in the intervention synthesis will include students with learning disabilities in the sample who receive intervention over a minimum period of time; will be retrievable from university libraries, ERIC, or from University Microfilms International; will measure treatment outcomes quantitatively; and will show no severe methodological flaws. For the group design studies, meta-analysis will be conducted through five methods: (1) outcomes will be transformed to a common metric; (2) the study will be used as a unit of analysis and dependent measures will be analyzed separately; (3) a meta-analysis will be performed using a probability method; (4) all studies will be pulled together to test for homogeneity; and (5) studies will be pulled to look for sampling errors. The final phase of Year 2 will focus on hypothesis testing, data analysis, writing and presenting the outcomes of the quantitative analysis.

**ANTICIPATED PRODUCTS:** This project will provide a comprehensive analysis of all published intervention research with students with learning disabilities and will clarify and integrate relevant research findings across diverse study characteristics. The analysis developed from this project will be incorporated in textbook chapters, disseminated in articles, and presented to state departments and professional conferences.

## **The Development and Use of Cheremic, Graphemic, and Phonological Coding in Deaf High School-Aged Readers**

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GRANT NUMBER: H023B50050

BEGINNING DATE: 9/01/95

ENDING DATE: 8/31/96

### **ABSTRACT**

**PURPOSE:** The project will determine the short-term memory (STM) strategies used by deaf individuals in contrived and real-world reading situations, and to explore the correlation of these strategies with (1) individual factors such as reading level, level of hearing loss, and age of onset, and (2) with educational and family characteristics, including communication mode and language, parent adaptation, involvement, permissiveness and expectations, and early reading, sign, and speech experiences.

**METHOD:** Subjects will include 20 high school students who are severely or profoundly prelingually deaf high school students, half of whom will be poor readers. Half of each reading group's subjects will have hearing parents, the other half having deaf parents. Deaf subjects will be compared to 20 hearing students who have scored below-average on STM and reading comprehension tasks. Subjects will complete two measures of STM, designed to elicit confusion among like stimuli and to thus reveal preferred coding strategies. Semi-structured interviews with deaf subjects and their deaf or hard of hearing parents will be videotaped. Student interviews will include role-play, reporting of everyday strategies, review of test results and examiner observations, and discussion of word-play materials. Parent interviews will focus on parent attitudes, expectations, and the child's early communication and education experiences. Analysis will determine if there are significant differences between coding strategies used by the different groups of subjects on readers on STM tests. Correlations will also be explored between deaf readers' primary coding strategies and their scores on three informal speech-related measures, age of onset, and levels of hearing loss. Finally, staff will correlate coding strategy and reading group to the interview data from subject and parent interviews.

**ANTICIPATED PRODUCTS:** The information to be gained from this research will have significant impact on both programming decisions and philosophies as well as on strategies for teaching reading. Project staff will disseminate findings in writing and through presentations at conferences and workshops. Journal articles are planned for submission to several journals related to reading and special education.

## **Synthesizing and Communicating a Professional Knowledge Base on Positive Behavioral Support**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023E50001

BEGINNING DATE: 10/01/95

ENDING DATE: 9/30/97

### **ABSTRACT**

**PURPOSE:** The purpose of this project is to synthesize and broadly disseminate current research on positive behavioral support for students whose behaviors include self-injury, aggression, tantrums, property destruction, and self-stimulatory behavior.

**METHOD:** Based on a literature review resulting in an anticipated sample of 100-150 papers, staff will prepare a monograph which will include: (1) a list of articles composing the final review sample; (2) dimensions of functional analysis and assessment reported; (3) proactive nature of intervention; (4) aspects of change in social systems; (5) ecological validity of intervention agent and setting; (6) types of interventions employed and degree of skill improvement; (7) outcome effectiveness with respect to initial reduction in problem behavior; and (8) dimensions of social validity. This monograph will also address trends across time, factors related to intervention effectiveness, and gaps in the literature base. The research synthesis monograph will be translated into four monographs summarizing "what works". The four monographs, as well, will be written with the following audiences in mind: (1) federal, state and local policy makers and general and special education administrators; (2) teachers, families, and related service providers; (3) students with problem behavior; and (4) friends, peers, and community citizens.

**ANTICIPATED PRODUCTS:** Following the development of the monograph and manuals, a forum on Positive Behavioral Support will be convened, with members of all stakeholder groups invited to attend.

## **Integrative Synthesis of Instructional Grouping Practices for Reading Instruction for Students with Disabilities**

**PRINCIPAL INVESTIGATOR:**

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305-284-6611

GRANT NUMBER: H023E50005

BEGINNING DATE: 8/15/95

ENDING DATE: 8/14/97

### **ABSTRACT**

**PURPOSE:** The project will examine the types of within-class grouping patterns that general and special education teachers use for reading instruction for students with disabilities and the social and academic outcomes associated with these grouping practices.

**METHOD:** The project will implement a systematic, objective, integrative review incorporating best practices for integrative reviews and meta-analysis procedures. Research from a broad spectrum of grouping practices will be synthesized, and studies of instructional practices imbedded in specific in-class grouping patterns (such as peer tutoring and cooperative learning) will also be incorporated into this review. Research in both general and special education settings will be examined, as will both academic and social outcomes of grouping patterns.

**ANTICIPATED PRODUCTS:** The project will develop disseminable products including: (1) papers and monographs to inform the research community of the state of current knowledge on this topic; (2) brochures for parents; and (3) professional development materials for inservice and preservice special and general education teachers providing instructional guidelines for procedures and activities for within-class grouping practices for students with disabilities.

## **Research on Grouping Practices for Mainstreamed Special Education Students**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023C30013

BEGINNING DATE: 8/15/93

ENDING DATE: 8/14/96

### **ABSTRACT**

**PURPOSE:** This project will conduct an investigation of academic, social, and instructional outcomes as they relate to literacy instruction for students with learning disabilities mainstreamed in regular education classrooms organized either homogeneously or heterogeneously.

**METHOD:** The first study year will include a comprehensive survey of teachers', parents, and students' perceptions of grouping practices. Subjects will include 300 elementary teachers in grades 3 through 5, as well as one student with learning disabilities, one low achieving, one average achieving, and one high achieving student for each teachers' classrooms, as well as one of the parents of each of these students. Years 2 and 3 of the study will consist of longitudinal studies to follow third-graders from each of the four student groups. In addition to quantitative analysis of data, individual students and teachers will be identified for more in depth case studies using qualitative methodology.

**ANTICIPATED PRODUCTS:** This study will result in the following benefits: (1) a more comprehensive understanding of grouping practices as they relate to academic and social functioning of mainstreamed students; (2) a better understanding of teachers' beliefs and knowledge relating to the literacy instruction of students with disabilities; (3) a more complete picture of parent and student attitudes toward grouping practices; and (4) a better understanding of grouping practices that effectively meet the needs of all students without inhibiting the progress of other students.

### **Interpretation of Narrative Theme and Students with Learning Disabilities**

**PRINCIPAL INVESTIGATOR:**

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Teachers College  
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GRANT NUMBER: H023C30126

BEGINNING DATE: 9/01/93

ENDING DATE: 10/31/96

#### **ABSTRACT**

**PURPOSE:** This project will investigate the ways in which students with learning disabilities, compared with peers who are not disabled, comprehend complex text that focuses on a content domain of fundamental importance, namely, human social interactions. The project will also determine what types of instruction are effective in promoting comprehension and generalization of comprehension.

**METHOD:** The general methodology to be followed will be modeled on the general strategy of clinical interviews, using sets of 20 students with learning disabilities and equal numbers of age-matched and reading-ability-matched students who are not disabled. Initial questions will be open-ended and students will be encouraged to talk freely. Detailed probe questions will be employed to extract further information. A coding scheme will be developed for the analysis of the resulting protocols. Statistical analysis will use primarily analysis of variance and covariance.

**ANTICIPATED PRODUCTS:** The project expects to generate the following products: selected and evaluated reading materials that focus on a small set of issues that are interesting, important, and useful for students with learning disabilities; guidelines for effective instructional strategies; an instructional program developed on the basis of these guidelines; and an evaluation of the instructional program.

***SECTION 5:***

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***POLICY  
AND  
PROGRAM EVALUATION***

## **A National Evaluation of Residential Camp Programs Serving Persons with Disabilities**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023C30002

BEGINNING DATE: 7/01/93

ENDING DATE: 6/30/96

### **ABSTRACT**

**PURPOSE:** The project will conduct a national evaluation of residential camp programs serving persons with disabilities.

**METHOD:** The investigation will include 14 residential school and/or summer camp programs serving children with disabilities, to include a total of roughly 1,500-2,000 total cases nationwide. A pre-post measurement will be employed to determine campers' affective growth resulting from their exposure to residential camp programming. These measurements will be conducted by parents and caregivers to better measure program generalization and impact beyond the camp experience. A second test will be administered to determine effects of particular components of outdoor programming on skill acquisition of campers. A case study approach will also be employed using interviews and observations of a representative sample of campers from each regional site.

**ANTICIPATED PRODUCTS:** The study will contribute significantly to the understanding of the value of planned outdoor programming for children with disabilities, address the benefits of residential camping experiences for persons with varying levels of disability, and provide professionals with validated and comprehensive procedures for evaluating residential camp programs serving children with disabilities.

## **Technical Assistance in Data Analysis, Evaluation, and Report Preparation**

**PRINCIPAL INVESTIGATOR:**

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301-251-1500

GRANT NUMBER: HS92035001

BEGINNING DATE: 9/30/92

ENDING DATE: 10/01/96

### **ABSTRACT**

**PURPOSE:** This project will create a Center for Data Analysis, Evaluation and Report Preparation to support Office of Special Education Programs (OSEP) in meeting its responsibilities for the collection, synthesis, and dissemination of information for program management, administration, delivery, and effectiveness.

**METHOD:** The Center will assist OSEP in developing the capacity to collect and analyze valid, reliable, and comparable data for reporting, program planning, and evaluation. Studies will be conducted to analyze significant and emerging issues in special education, and the Center will assist OSEP in providing guidance to state and local educators regarding educational reform issues. Assistance will also be provided to states working to build the capacity to collect valid and reliable data and to perform under the Individuals with Disabilities Education Act (IDEA). The Center will facilitate information exchanges among federal, state, and local special educators to discuss common concerns and goals. Information from multiple sources will be obtained, organized, and analyzed for reporting on the status of IDEA implementation, and the impact and effectiveness of IDEA implementation.

**ANTICIPATED PRODUCTS:** The Center will provide information dissemination, technical assistance, and liaison functions, and demonstrate a commitment to stakeholder involvement. Instruments of the technical assistance component will include individual technical assistance activities, semi-annual forums, information packets, reference materials, and a research instruments database.

## Center for Special Education Finance

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H159G20002

BEGINNING DATE: 10/01/92

ENDING DATE: 9/30/97

### ABSTRACT

**PURPOSE:** The Center for Special Education Finance will provide policymakers and administrators at the federal, state and local levels, data, analyses, expertise, and opportunities for information sharing regarding complex and critical special education finance issues.

**METHOD:** The Center will compile special education expenditure statistics with a data system that will produce nationally representative data tying fiscal analysis to program descriptions. This system will be replicable and will include the construction of a core database that will serve as the basis for the fiscal research to be conducted by the Center. Special education finance policy studies will be conducted through collaborative arrangements with many of the country's leading researchers in special education school finance. Information on state special education finance systems will be aggregated and updated as well.

**ANTICIPATED PRODUCTS:** The Center will provide much-needed information on how much is being spent on special education services and will assess patterns of resource allocation. Dissemination products will include a

descriptive brochure, an annotated list of Center reports, policy briefs, data summaries, the core database along with documentation, summaries of Center technical reports, and press releases.

## The Rhode Island School Support System

**PRINCIPAL INVESTIGATOR:**

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Rhode Island Department of  
Education  
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GRANT NUMBER: H159F50004

BEGINNING DATE: 7/01/95

ENDING DATE: 6/30/96

### ABSTRACT

**PURPOSE:** This project will determine the feasibility of implementing a School Support System approach to monitoring that continues to examine compliance with regulatory requirements, evaluates the effectiveness of special education programs and services, and identifies and provides technical assistance and support.

**METHOD:** Following a thorough review of the literature (including other state practices and a survey of service providers), staff will review local education agency (LEA) statements of assurances to comply with regulatory requirements. The LEA application process will also be reviewed to minimize repetition in describing how regulatory requirements are to be met. School Support System data gathering instruments will be examined and a database will be created containing information to be gathered using these instruments. School Support Team members will be surveyed concerning the effectiveness of compliance data gathering instruments. The available literature on the attainment of IEP goals as indicators of effectiveness will then be examined, and a review will be conducted of other states' activities in determining indicators of program and service effectiveness. Five regional focus groups will be established in the state, and group reviews and discussions of potential indicators of effectiveness will be conducted. A sample of effectiveness indicators will thus be developed, and effectiveness data collection instruments will be prepared and implemented. The data collected through these instruments will be compiled and analyzed, and findings will be reviewed with members of School Support Teams.

**ANTICIPATED PRODUCTS:** The School Support System will provide for continued LEA compliance with regulatory requirements while incorporating an evaluation of service effectiveness with a focus on benefits to students. A mechanism to identify needs and provide technical assistance and supports to the LEA with a focus on systemic change will also be included.

## **A History of Special Education: Nashville, Tennessee, 1940-1990**

### **PRINCIPAL INVESTIGATOR:**

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Vanderbilt University  
Peabody College  
Department of Special Education  
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615-343-4782

GRANT NUMBER: H023N50013

BEGINNING DATE: 9/01/95

ENDING DATE: 8/31/98

### **ABSTRACT**

**PURPOSE:** The project will conduct research and publish a history of special education policy and practice in Nashville, Tennessee since 1940.

**METHOD:** Data collection will employ both archival sources and oral history. Archival sources will include: published articles and reports by local researchers; articles in local newspapers; records of the Nashville Board of Education; records of legal cases involving special education in Nashville; records of hearings, bills, and legislative history; and records of the executive branch in Tennessee regarding the history of public policy concerning special education and mental retardation. Materials held by current and former employees of Nashville public schools, materials held by parents and former students, and materials held by the special education offices of city public schools will all be included in the study as well. Archival and oral history evidence will be evaluated for authenticity and credibility, and a database of catalog links will be created to store and organize findings.

**ANTICIPATED PRODUCTS:** Products will include the following: a manuscript and a research report describing the history of special education in Nashville, analyzing the practical influence of research and advocacy on the education of individuals with disabilities in Nashville; a hypertext version of this report including additional material from oral history interviews; a manuscript placing the local history of special education in Nashville within a national context; and a set of oral history tapes and transcripts available for the use of other researchers.

### **Information Transfer**

GRANT NUMBER: HS94017001

BEGINNING DATE: 10/01/94

ENDING DATE: 9/30/97

### **ABSTRACT**

**PURPOSE:** The project will assist the Office of Special Education Programs in the transfer of information and data from major studies, currently reported at the federal level in technical reports into consumable, commercially disseminated products.

### **PRINCIPAL INVESTIGATOR:**

Dumas, Dale  
Capital Consulting Corporation  
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Suite 2135  
Fairfax, VA 22031-2135  
703-876-0400

**METHOD:** The contractors shall review available literature on information transfer as the term is used in the context of social marketing and the field of education. The five-step approach to marketing the contractors have used in the past will be applied to this project, with major steps being as follows: defining a clear purpose for each dissemination product; identifying, qualifying, and quantifying target audiences; designing content and format; determining most appropriate media; and establishing a means of evaluating results. Following market research, contractors will develop a database of publishers and producers who will be contacted regarding dissemination needs. Final publishers of selected products will be selected from this list.

**ANTICIPATED PRODUCTS:** Deliverables shall include: a list of OSEP reports on major studies for which a potential market is believed to exist; a synthesis of literature based on the literature review; market research plans in various drafts; the prioritized list of dissemination materials; and monthly administrative reports.

## Goals 2000 and the Inclusion of Students with Disabilities

**PRINCIPAL INVESTIGATOR:**

Feuer, Michael  
National Academy of Sciences  
2101 Constitution Avenue, N.W.  
Washington, DC 20418

GRANT NUMBER: H023U40001

BEGINNING DATE:

ENDING DATE:

### ABSTRACT

**PURPOSE:** As requested under Section 1015 of the Goals 2000: Educate America Act, this project is intended to conduct a "comprehensive study of the inclusion of children with disabilities in school reform activities assisted under the [Act]."

**METHOD:** The National Academy of Sciences (NAS) will establish a Study Committee of up to 15 experts which will design and carry out a set of activities, including conducting site visits, holding a workshop, and commissioning scholarly papers. Components will include: (1) An evaluation of the National Education Goals and objectives, curriculum reforms, standards, and other programs intended to achieve the goals. The intent will be to ask how less emphasis can be placed on process requirements and more on program quality, while maintaining adequate safeguards. (2) A review of assessments and measures, and other methods to collect data on educational progress of students with disabilities. Issues may include whether separate standards, thresholds, outcomes, or assessments should be developed for some students with disabilities; the comparability of modified and unmodified assessments, "flagging" of modified assessments; adapting performance-based assessments. (3) An examination of what incentives or assistance might be provided to states to develop improvement plans that adequately address the needs of children with disabilities. Issues will include incentives to classify children as disabled and various instructional and organizational approaches.

(4) The relation of Goals 2000 to other federal laws. Issues will include comparisons of Goals 2000 and IDEA and how they can be brought into greater harmony. (5) Such other items as NAS considers appropriate.

**ANTICIPATED PRODUCTS:** As required by the Act, The National Academy of Sciences will submit an interim report of its findings and recommendations to the President and Congress not later than 12 months from the beginning of the project, and the final report not later than 24 months from the date.

### **A Study to Determine the Current Levels of Outcome Attainment of Students with Specific Learning Disabilities (SLD) and Students with Severe Disabilities**

GRANT NUMBER: H159A40007

BEGINNING DATE: 9/01/94

ENDING DATE: 8/31/96

**PRINCIPAL INVESTIGATOR:**

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#### **ABSTRACT**

**PURPOSE:** The purpose of this project is to establish a baseline data pool with which to demonstrate the current level of outcomes attained by North Carolina students served under the Individuals with Disabilities Education Act (IDEA).

**METHOD:** The first year of the study will focus on two groups of students with disabilities (students with learning disabilities and students with severe impairments). The second project year will expand the study to include all students receiving services under IDEA. Data will be collected across the following domains: (1) participation outcomes; (2) enabling outcomes; (3) academic outcomes; and (4) post-school outcomes. A previously conducted feasibility study has indicated that these data can be collected with reliability using the AUEN system. Six North Carolina school systems have been invited to participate in the project, three of which participated in the previous feasibility study.

**ANTICIPATED PRODUCTS:** The long-range goal of the project is to establish a state-wide evaluation system to be used by all public schools in North Carolina. With this system, the public schools of North Carolina will be able to make judgements about the effectiveness of their programs for special needs students and make decisions for improving ineffective programs.

## **State and Local Education Efforts to Implement the Transition Requirements in the Individuals with Disabilities Education Act**

**PRINCIPAL INVESTIGATOR:**

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Burlington, VT 05405-0160  
802-656-2936

GRANT NUMBER: H159D50001

BEGINNING DATE: 3/01/95

ENDING DATE: 2/28/98

### **ABSTRACT**

**PURPOSE:** The project will establish and implement a research agenda designed to investigate state and local education efforts to implement the transition requirements in the Individuals with Disabilities Education Act (IDEA).

**METHOD:** The University of Vermont Center for Transition and Employment, the University of Illinois Center for Instructional Research and Curriculum Evaluation, the University of Minnesota National Transition Network, and the National Association of State Directors of Special Education (NASDSE) are collaborating in this three-year effort to establish and implement a research agenda designed to investigate state and local education efforts to implement the transition requirements in the Individuals with Disabilities Education Act (IDEA). The overall project will consist of five separate substudies. Substudy 1 will employ a survey of 58 state and territorial directors of special education and 500 local directors of special education to acquire information on the range and variation in state and local policies related to the definitional components of transition services. Substudy 2 will use a longitudinal follow-up of 200 randomly selected students in their last year of schooling to document the nature and extent of their participation in transition planning and explore the relationship between their participation and the resulting post-school outcomes approximately one year after leaving school. Substudy 3 will use expert review and case studies to identify context and salient characteristics (e.g. policy, organizational structures, funding, staffing, professional development, evaluation, interagency collaboration, leadership, advocacy, instruction and curriculum) that define exemplary implementation of transition services and promote positive outcomes for youth with disabilities. Substudy 4 will combine the survey in Substudy 1 and the longitudinal data in Substudy 2 to examine interagency involvement at federal, state, and local levels. In addition, an issues forum will be used to identify impediments to and strategies for improving interagency involvement at state, federal, and local levels. Substudy 5 will conduct a policy analysis to identify federal program services and policies which are relevant to the design and delivery of transition services and fulfill the requirements of IDEA.

**ANTICIPATED PRODUCTS:** Products developed as a result of these investigations will include: descriptive materials such as brochures and news releases, articles in national, regional, and state level newsletters, project publications including research reports, policy briefs and case studies, journal articles and book chapters, and workshop and conference presentations.

## **A Full Evaluation Study of the Oregon Supported Education Plan and Its Impact Upon Student Outcomes**

**PRINCIPAL INVESTIGATOR:**

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503-378-3598

GRANT NUMBER: H159A40016

BEGINNING DATE: 1/01/94

ENDING DATE: 9/30/96

### **ABSTRACT**

**PURPOSE:** The project will determine the effects of recent Oregon restructuring reforms and their impact on the inclusion of all students in regular education settings.

**METHOD:** The Full Evaluation Study will continue to refine an assessment process developed during the feasibility study and then use the process to measure direct student outcomes. The process will use: (1) the Oregon Portfolio Assessment System; (2) extant student assessment data; and (3) school records. Staff will also conduct two multiple-site descriptive case studies (at elementary and secondary levels) using these sources to document the impact of supported education on the direct student outcomes of students with and without IEPs. An analysis of the relative impact of supported education "implementation factors" on student outcomes will be conducted, integrating professional staff/parent respondent data with direct student outcome data to create a set of multidimensional dependent variables for analysis. The project will also pilot-test and provide feedback to the ODE about their development of the Oregon Portfolio Assessment system for use with students with IEPs, thus continuing the important process of integrating long-range statewide plans.

**ANTICIPATED PRODUCTS:** A full evaluation report will document each of the following: findings of the study related to the impact of supported education implementation factors on outcomes for students with and without IEPs; the development of a process to monitor the effects of supported education on students with and without IEPs; and recommendations regarding the use of Oregon's Portfolio Assessment Process with students with IEPs.

## **Technical Support for the Department of Education's Effort for Translating Research to Practice for Educating Individuals with Disabilities**

GRANT NUMBER: HS92017001

BEGINNING DATE: 10/01/92

ENDING DATE: 9/30/97

### **PRINCIPAL INVESTIGATOR:**

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### **ABSTRACT**

**PURPOSE:** The project will provide technical support for the Department of Education's effort to translate research into practice in the field of educating students with disabilities.

**METHOD:** The project will plan and evaluate programs to support the development of national program agendas, and identify and confirm focus statements and strategic targets for national commitment. Information will be synthesized from a variety of sources, including literature, programs, individuals and groups, to identify potentially effective practices. In the process of developing an accessible professional knowledge base, the project will implement and evaluate strategies for creating linkages between researchers and practitioners, in addition to disseminating pertinent information and soliciting consumer input. The project will also develop and implement a performance management system to ensure continuation and generalization of practices found effective.

**ANTICIPATED PRODUCTS:** Results of program evaluations will be a series of reports corresponding to specific project target statements, a final report on implementation procedures, and a final report on national agenda-building processes.

## **PROJECT ALIGN: Supporting Data Based Decision Making to Align the Intent and Implementation of IDEA with the Goals of National Educational Reform**

GRANT NUMBER: H023A50114

BEGINNING DATE: 10/01/95

ENDING DATE: 9/30/96

### **PRINCIPAL INVESTIGATOR:**

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804-828-9900

### **ABSTRACT**

**PURPOSE:** This project will improve and inform decision making that seeks to better align the intent and implementation of the Individuals with Disabilities Education Act (IDEA) with the goals of national education reform for children with disabilities. The project will also provide direction for systemic reform by increasing understanding of significant problems in the identification, integration, and school completion rates of children with disabilities.

**METHOD:** Staff will conduct a series of national database analyses investigating graduation, integration, and identification rates and the influences of demographic, economic, and other educational factors at the state level. Interviews will be conducted with staff in states selected for their success in aligning IDEA implementation with national goals in order to relate state performance to specific policies, resources, and other educational and demographic factors. Individual state databases will be used to conduct policy analyses through examination of locally reported identification, integration, and school completion indicators as well as interviews with local special education directors. A policy study will also be conducted to examine local variation within one state based on district data and interviews.

**ANTICIPATED PRODUCTS:** Research findings will be disseminated through direct mailings to national professional organizations, parent organizations, and federal agencies. Materials will be prepared for submission to scholarly, peer-reviewed journals, and findings will be prepared for submission to a number of national conferences.

### **Cooperative Agreement to Establish a Center for Policy Research on the Impact of General and Special Education Reform**

**PRINCIPAL INVESTIGATOR:**  
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National Association of State  
Boards of Education  
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Alexandria, VA 22314  
703-684-4000

GRANT NUMBER: H023H40002  
BEGINNING DATE: 10/01/94

ENDING DATE: 9/30/97

#### **ABSTRACT**

**PURPOSE:** This project will establish a Center for Policy Research on the impact of general and special education reform to investigate and analyze critical issues in current general and special education policies, their interactions, and their impact on students with disabilities, with a focus on discerning policy options for stakeholders at the federal, state and local levels.

**METHOD:** Over a 3-year period, the Center will conduct extensive cross-site analysis of diverse state and local sites and across dimensions of policy development, implementation and impact. The Center will use primarily qualitative research methodologies, including systematic policy review, case study design and action research. The Center will report on: (1) interaction of special and general education reform efforts within sixteen states; (2) four in-depth case studies of how state-level special and general education reform policies interact with and impact on local school districts and on students with disabilities; and (3) four additional in-depth case studies of school districts engaging in reform of both general and special education, such as those creating "inclusive" schools, including their interactions with state-level educational policies.

**ANTICIPATED PRODUCTS:** The Center will provide a structured program of training and mentoring to at least four graduate students each year in the fields of public policy and/or disability policy. They will be offered formal coursework and will participate as field researchers under the direction of senior researchers. The Center's research findings will be widely disseminated through channels and vehicles that are readily accessed by a variety of stakeholders in language that will be jargon-free, appealing to a wide audience.

## **Integrated Compliance and Program Evaluation System**

GRANT NUMBER: H159F50005

BEGINNING DATE: 6/01/95

ENDING DATE: 5/31/96

**PRINCIPAL INVESTIGATOR:**

Swize, Myron

Colorado Department of Education

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Denver, CO 80201

303-866-6701

### **ABSTRACT**

**PURPOSE:** The project will investigate the feasibility of developing a system for collecting student outcome data that can be integrated into the current Colorado state compliance monitoring process.

**METHOD:** Following a literature review, staff will identify desired long- and short-term outcomes, which will then be organized into a matrix of possible student outcomes based on the Expanded Curriculum model. Focus groups will be held with special education administrators, service providers, and consumers to identify the most useful student outcomes to measure. A list of appropriate instruments to measure these outcomes will follow. Project staff will then identify currently available student outcome data and identify and pilot-test new data collection instruments and procedures for needed additional student outcome data. These will include difficult student tasks, formats for IEP data collection, student participation checklists, and functional skills evaluation checklists, all of which will be targeted specifically for students with serious emotional disturbances, learning disabilities, or mental retardation. These instruments will then be compiled and integrated into existing systems of data collection prior to planning of the collective computer program. This program will finally be pilot-tested and its overall efficacy will be evaluated.

**ANTICIPATED PRODUCTS:** Anticipated products of this research include: (1) a conceptual framework and instruments for measuring social, student, and functional life competency outcomes; (2) a battery of data collection instruments on outcomes common to all students with invisible disabilities and those unique for students identified with serious emotional disturbances, learning disabilities, and moderate mental retardation; (3) a description of the procedures used for collecting the student outcome data; and (4) a plan for the computerized aggregation, analysis storage, and retrieval of the student outcome data.

## School Choice Options and Positive Outcomes for Students with Disabilities

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023C50050

BEGINNING DATE: 10/01/95

ENDING DATE: 9/30/98

### ABSTRACT

**PURPOSE:** The project will examine four school choice options that may be enabling children with disabilities to reach successful outcomes.

**METHOD:** Options to be explored include two established options (second chance programs and postsecondary options) as well as two emerging options (charter schools and home schooling). Qualitative methodologies will be used to examine the experiences of students with disabilities in all options, and quantitative methodologies will be used in measuring outcomes for students in second chance and postsecondary options in comparison to those who do not participate. The study will also examine how charter schools and families participating in home schooling educate students identified as having a disability, as well as the potential impact of these practices on students and special education. After separate studies of all four options, a fifth study will integrate all findings in order to enable policymakers and educators to make informed decisions about the possibilities of school choice options and the attainment of outcomes for students with disabilities.

**ANTICIPATED PRODUCTS:** Products will include the customary research reports and journal articles. In addition, staff will develop products that present the findings in an user-friendly format. These products will include policy briefs, short reports, and fact sheets. Similar products will be developed to reach parents and other interested parties.

## The Center to Support the Achievement of World Class Outcomes

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H159C50004

BEGINNING DATE: 10/01/95

ENDING DATE: 9/30/00

### ABSTRACT

**PURPOSE:** This project will establish a Center to support the achievement of world class outcomes for Students with Disabilities. The Center will assist states in implementing activities for students with disabilities and document states' efforts in these areas.

**METHOD:** The Center will conduct three interrelated strands of activity: (1) Documentation and Analysis; (2) Information Exchange and Dissemination; and (3) Technical Assistance (TA). Key activities in the Documentation and Analysis strand will include documenting the participation of students with disabilities in state and national assessments, the secondary analysis of outcome data for students with disabilities, the documentation of state and national standards-setting activities, and the tracking of the participation of students with disabilities in state Goals 2000 plans. Strand 2 activities will include production and dissemination of products, facilitating information exchange among researchers and developers, infusing the disability perspective into a variety of materials used by general and special educators, networking and linking with parents, advocacy groups and other organizations, and telecommunications networking. The scope of technical assistance activities will encompass provision of direct TA to states, work with regional resource centers, and work with other technical assistance providers.

**ANTICIPATED PRODUCTS:** The Center will contribute to current knowledge and practice, lead to improved services for infants, toddlers, children and youth with disabilities, and provide state and national audiences with information on the impact and effectiveness of programs and services provided under the Individuals with Disabilities Education Act. Planned products for dissemination will include information reports, update reports, recommendation reports, directories of projects and resources, lists of relevant publications, press releases, and publications in other periodicals.

***SECTION 6:***

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***RESTRUCTURING  
AND  
SERVICE DELIVERY  
ISSUES***

**The CHILD Health Resource Partnership: Collaborative  
Health Interventions for Learners with Disabilities  
(CHILD)**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023D40013

BEGINNING DATE: 9/01/94

ENDING DATE: 8/31/97

**ABSTRACT**

**PURPOSE:** This project will develop an integrated, transagency and transdisciplinary model to plan, deliver, and research the efficacy of pediatric health care support services to families and young children with chronic health care needs and developmental disabilities.

**METHOD:** This three-year clinical research project targets children between 4.5 and 6 years who are at high risk for cumulative educational and functional disorders because of dual developmental disabilities and chronic health conditions. This project focuses on the late preschool to early primary school period as critical to the success of children who must move from early intervention programs that emphasize more family-centered and interagency services to less collaborative, more professionally-centered school-age services. Targeted CHILD participants will have a variety of mild to severe neurodevelopmental and neurobehavioral disorders, associated active medical conditions, and mental health disorders. During the first of two research phases staff will observe, follow, and compare two groups of young children with dual medical and developmental needs within the public schools. The control group will consist of a matched sample of children (N=25) who will receive a program plan that they have typically received regarding an array of uncoordinated services. The experimental group will also enroll a matched sample of children (N=25) who will receive the CHILD interventions. After a period of 1 year, Phase 2 will commence, in which the control group will begin to receive the CHILD interventions. Within and between group effect size comparisons will be analyzed as well as the progress and outcome indicators from using each child and family as its own control.

**ANTICIPATED PRODUCTS:** This project will result in the development of a system of transagency care for children and families with developmental disabilities and medical and mental health needs, a family-centered model of decision making about child needs that relies on parental participation and co-leadership, and establishment of collaborative transagency strategies for teamwork that foster agency and policy changes.

**Project Education Plus: A Proposal to Include Children  
with Disabilities as a Part of the Systemic Efforts to  
Restructure Schools**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023R20010

BEGINNING DATE: 1/01/93

ENDING DATE: 12/31/96

**ABSTRACT**

**PURPOSE:** The project will restructure secondary programs at Holt High School in order to provide improved student advocacy for students with disabilities and those designated as "high risk".

**METHOD:** Interactive relationships will be developed with established school programs, child and adult service agencies, and the Holt community. Parent and student support groups will be established, and training in postsecondary rights and service delivery systems will be provided for students and parents. A core transdisciplinary staff will be established with the ability to identify needs and assist with making contacts with identified agencies. Specific services provided to students will include mentorship, vocational assessment, career counseling, psychosocial counseling, training in assertiveness and self-advocacy, and other services as identified imperative to transition into adult life.

**ANTICIPATED PRODUCTS:** An estimated 250 students will be served directly through the project, and an additional 300 will receive indirect services. The ultimate outcome for the students will be active participation in achieving personal, educational, and vocational skills development, utilizing school and community support, to result in appropriate employment, independence, and involvement with the community. A comprehensive evaluation plan, including formative and summative evaluation methods, will provide and disseminate data on the effectiveness, and efficiency of project efforts.

## **Systemic Restructuring to Include Children with Disabilities: A School-based Multi-District Demonstration Program**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023R20030

BEGINNING DATE: 10/01/92

ENDING DATE: 9/30/96

### **ABSTRACT**

**PURPOSE:** This project will determine what common systemic changes need to be made in schools that are restructuring to increase the inclusion of students with disabilities in general education and improve outcomes for all students.

**METHOD:** An initial model of necessary systemic changes will be developed that will achieve the above goals regardless of the sociodemographic characteristics of a school, its stage of restructuring, or the innovative practices adopted by the school. This model will be developed through determination of common systemic changes specified in strategic plans developed at the end of the first year of the project by all five participating schools. The model will be demonstrated through implementation of changes selected by participating schools as being critical to implement selected innovative practices. Through case studies the implementation process will be evaluated, and case study results will guide the process of revision and refinement throughout the project.

**ANTICIPATED PRODUCTS:** A newsletter will be developed that describes project findings and status of the demonstration. Presentations will be made at national, regional, and state conferences. Project staff will meet with the principal investigators of the other six funded demonstration grants to share findings and shape further dissemination plans.

## **Project SCORE: Systemic Change Organizing Reform Efforts**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023R20016

BEGINNING DATE: 9/01/92

ENDING DATE: 8/31/96

### **ABSTRACT**

**PURPOSE:** This project will employ a systematic perspective in pursuit of an ambitious agenda of working at the state, district, and school levels to evaluate and revise policies and practices and encourage full participation and collaboration among members of the Metro-Nashville public school system and the community at large.

**METHOD:** Quantitative and qualitative methods will be employed within a quasi-experimental design using two project schools and one comparison school. After spending the first half of the first year in planning, School A will conduct small pilots of systematic changes and effective practices, with School B being studied for comparison and control purposes. Implementation at School A will gradually increase throughout the second year until at least 70% of the school population participates in project activities. Meanwhile School C will commence planning and piloting much as School A did in the previous year. Individual goals within this framework will range from detracking and curriculum enrichment to university and hospital linkages and reform of decision-making and self-determination processes throughout the system.

**ANTICIPATED PRODUCTS:** Following documentation and validation of project practices, dissemination to the scholarly audience will focus on ERIC network reports, journal articles, and presentations at national, state and regional conferences. Parents and practitioners will be reached through dissemination of a training manual and other practitioner-oriented documents. Professional leadership training activities and other technical support will be provided to support replication and implementation of identified practices.

### **Synthesis and Dissemination of a Knowledge Base Regarding Outcomes from the Placement of Students with Disabilities in General Education Classrooms**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023E40005

BEGINNING DATE: 10/01/94

ENDING DATE: 9/30/96

#### **ABSTRACT**

**PURPOSE:** The purpose of this project is to provide practitioners with easier access to relevant information and to provide answers on how to appropriately educate students with disabilities in the least restrictive environment (LRE). The project will synthesize, communicate, and foster the use of the knowledge base concerning the placement of students with disabilities in the general education classroom, and the outcomes of different general classroom support models for students with different disabilities.

**METHOD:** Staff will use a grounded theory approach, integrating multiple data sources and generating themes, patterns, and constructs inductively. The synthesis will focus on the key variables of students' characteristics, program characteristics, setting and context, and intended and actual outcomes. A series of coding matrices will be developed and combined to describe the data set and to study the factors affecting student outcomes. Staff will initiate the knowledge base synthesis by creating

an easily accessible database through which practitioners and researchers can find useful information about the outcomes of the placement of students with specific disabilities in specific teacher/learning environments. Staff members will then review and index the usable knowledge of outcomes according to disability, types of outcomes, program characteristics, and developmental and grade level. Next, staff will prepare at least two different information packets synthesizing portions of the database. Selection of topics will be based on the number of the documents in the database and the perceived needs of those in the field. This database will be disseminated and supported through the inclusion of stakeholders throughout the process, a forum to be held in Washington, DC in cooperation with OSEP, and a dissemination strategy including the use of electronic networks. Finally, staff will provide an analysis that will compare strengths and weaknesses of different inclusion models for different types of students.

**ANTICIPATED PRODUCTS:** Products will include a bibliography; collected knowledge of outcomes indexed by disability, types of outcomes, program characteristics, and school-level; a user-friendly database with a manual that will enable users to access the database and manipulate it for their own needs; and two information packets synthesizing selected portions of the database.

### **School-Linked Services to Support Better Outcomes for Children with Disabilities and Their Families**

GRANT NUMBER: H023D40015  
BEGINNING DATE: 8/01/94

ENDING DATE: 7/31/96

**PRINCIPAL INVESTIGATOR:**

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SRI International  
333 Ravenswood Avenue  
Menlo Park, CA 94025-3493  
415-859-3571

#### **ABSTRACT**

**PURPOSE:** The project will conduct research examining school-linked services for children with disabilities and their families based on a conceptual framework that views system issues, service issues, and child and family outcomes as important areas for study.

**METHOD:** Project staff will undertake two components of research: a multisite analysis of systems, services and outcomes, and an in-depth look at the delivery of services in a school-linked model in one community. The multisite component will examine the services and outcomes for students in special education across 65 Healthy Start school-linked sites in California. Under the multisite component, staff will analyze data collected for a concurrent Healthy Start evaluation to compare services and outcomes for students in special education with those for other service recipients. To provide a richer look at special education in a school-linked services model, staff will study school-linked services for students with disabilities at a single Healthy Start site. The design for this component includes both qualitative

and quantitative techniques. Data collection techniques will include staff interviews, direct observations, document analysis, reviews of client and student records, family interviews, and family case studies. Service and outcome data for students with disabilities and their families will be compared with those for others in the same school and with students in special and regular education in a comparison school that serves a similar population but does not provide school-linked services.

**ANTICIPATED PRODUCTS:** This study will provide a detailed description of a school-linked services model from the policy perspective, service-provider perspective, and family perspective. Data from the qualitative components will be used to describe how school-linked services models bring about improved child and family outcomes.

### **Including Students with Disabilities as a Part of Systemic Efforts to Restructure Schools: Souhegan Cooperative School District**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023R20018

BEGINNING DATE: 9/01/92

ENDING DATE: 8/31/96

#### **ABSTRACT**

**PURPOSE:** This project will assist New Hampshire schools with the inclusion of students with disabilities in secondary school restructuring and reform efforts.

**METHOD:** Training and technical assistance will be provided to Souhegan High School to insure that the needs of students with disabilities are fully considered in all curricular, governance, and organizational reform efforts. Training and technical assistance at Souhegan and other schools in New Hampshire will also target the objective of full inclusion of all students in the mainstream of education. Findings from the Souhegan effort will be replicated at two additional high schools. In collaboration with the University of New Hampshire's teacher education program, inclusion philosophy and practices will be critically examined and integrated into teacher training programs. In collaboration with the state Department of Education, inclusion-related philosophy and competencies will be incorporated into teacher certification revision efforts. Leadership training will be provided to regular and special education school administrators relative to best practices in inclusion, reform, and restructuring.

**ANTICIPATED PRODUCTS:** A model will be developed for evaluating educational outcomes of students with disabilities enrolled in restructured schools and overall project efforts. Dissemination materials will include two

books, four refereed journal articles or book chapters, one monograph, a manual of lesson plans, a project brochure and newsletter, twenty regional and national conference presentations, and a conference on restructuring and inclusion sponsored specifically by the project. General community awareness will be increased throughout the state regarding the rationale behind full inclusion of students with disabilities in school improvement efforts.

## Evaluating School-linked Services for Children with Disabilities and Their Families

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GRANT NUMBER: H023D40017  
BEGINNING DATE: 7/01/94

ENDING DATE: 6/30/97

### ABSTRACT

**PURPOSE:** This project will describe the participation and outcomes of students with disabilities and their families who receive school-linked services in schools that are implementing the full-service school concept, and to study programmatic and policy implications associated with the delivery of school-linked services using a full-service school concept.

**METHOD:** Staff will conduct three interrelated studies to address: (1) the implementation of this concept of delivery; (2) whether services provided are culturally competent and based on family needs rather than service providers' perspectives; and (3) academic and social outcomes of participating students with disabilities. The research will be conducted in two elementary schools selected by the district because of their substantial need for general health, mental health, and social services. Study 1 will conduct case studies with the schools as the unit of analysis to provide an in-depth profile of the full-service concept, describe the participation of children and families, and identify systemic and programmatic features that act as barriers to, or facilitators of participation. Study 2 will compare the extent of participation and the outcomes of students with disabilities who attend full-service schools with: (1) students without disabilities in the same schools; and (2) students with disabilities who receive continual special education and related services in representative schools in the district. During this study, staff will also assess and analyze students' outcomes using the National Center for Educational Outcomes model. Finally, Study 3 will involve an analysis of 12 individual case studies of students with disabilities and their families that focuses on the quality of services and whether this quality varies with type of disability and race and ethnicity.

**ANTICIPATED PRODUCTS:** This project will result in an in-depth profile of the full-service school concept, an in-depth description of full-service school concept implementation, an analysis of the academic and social outcomes for students with disabilities, and data regarding programmatic and policy implications of the full-service school concept.

## **Systemic School Reform for Students with Disabilities in Prince George's County**

**PRINCIPAL INVESTIGATOR:**  
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Children  
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301-405-6495

GRANT NUMBER: H023R30016

BEGINNING DATE: 10/01/93

ENDING DATE: 9/30/97

### **ABSTRACT**

**PURPOSE:** This project will assist three separate elementary schools in Prince George's County, Maryland, to move toward a comprehensive school-wide restructuring process that will address the major aspects of school restructuring including the special education service delivery system.

**METHOD:** Within each school, project staff, in cooperation with school staff, will: (1) select and refine a framework for restructuring special education service delivery; (2) develop a comprehensive strategic plan that specifies goals in each of the five restructuring areas, identifies key events that must occur, responsible parties, and specifies timelines; (3) implement and refine the systemic educational restructuring plan to accommodate ongoing reform initiatives; (4) conduct case studies to document the process of restructuring; (5) develop school sites into professional development centers providing collaborative training of special and regular educators; and (6) conduct project evaluation.

**ANTICIPATED PRODUCTS:** The outcome of the project will be three individual approaches to restructuring the total educational programs within participating schools. Experiences of participants as well as intended and unintended outcomes or products, including effects on students, will be carefully documented through case studies and will be broadly disseminated.

## **Including Children with Disabilities as a Part of Systemic Efforts to Restructure Schools**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023R30030

BEGINNING DATE: 6/01/93

ENDING DATE: 5/31/97

### **ABSTRACT**

**PURPOSE:** This project will develop, implement and evaluate district-wide policies and procedures to change the overall educational system in a manner that includes students with disabilities as a major component of this reform.

**METHOD:** The Model Project will be implemented in a school district in Rotterdam, New York, which currently serves 2,900 students, including 215 special education students. The project will employ a district steering committee, a model project think tank, six district planning teams, three building reform teams, and four participant/observers as basic structures of operation. During the initial planning phase, district planning teams will engage in refining major goals, determining specific outcomes associated with each goal, and developing measurement techniques to assess each specific outcome. Building-level planning will follow, using school-based teams to set standards for determining goal attainment at each school, and to formulate reform intervention plans and professional development activities designed to accomplish these reforms. Building reform teams will design strategies and structure implementation activities in their own schools, and along with the steering committee they will monitor the efficacy of implementation.

**ANTICIPATED PRODUCTS:** Project staff will present findings and results of this project at state and local conferences. They will also provide inservice training and develop articles for publication in relevant research journals.

## **Restructuring Education for Work: Examining the Outcomes for Youth with Disabilities**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023R20034

BEGINNING DATE: 1/01/93

ENDING DATE: 12/31/97

### **ABSTRACT**

**PURPOSE:** The primary goals of this project are twofold: (1) to refine and implement a merged restructuring effort centering on the inclusion of youth with disabilities in Tech Prep programs, and (2) to rigorously evaluate the processes, effects and impact of this initiative.

**METHOD:** A 15-member Leadership Cadre will guide the development and implementation of the project. The Cadre will be facilitated and supported by an evaluation consultant team from the Center on Education and Work and the Center on Organization and Restructuring of Schools, both located at the University of Wisconsin. The basic project design will incorporate concepts of reflective practice, teamwork, continuous quality improvement, organizational learning, and action research teams. These teams will conduct focus groups, surveys, interviews, document analyses, and observations as appropriate. Based on a comprehensive data set, specific reform strategies will be developed, implemented, and evaluated in Years 2 and 3. During the latter part of Year 3 and throughout Year 4 the validated processes will be replicated in nearby school districts.

**ANTICIPATED PRODUCTS:** The primary products of this program will be a guidebook describing the planning, implementation, and continuous assessment processes used throughout the study. Throughout the project a series of special reports and journal articles documenting the resolution of critical curriculum and instructional issues will be released.

### **Lane County Direction Service — Ombudspersons**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023M20010

BEGINNING DATE: 10/01/92

ENDING DATE: 3/01/96

### **ABSTRACT**

**PURPOSE:** This project will improve the delivery of community services for children/young adults with disabilities and help assure their involvement in appropriate educational programs.

**METHOD:** Project goals will be accomplished through the recruitment and training of ombudspersons to assist families, and the development of a multi-agency advisory committee charged with the identification and resolution of systemic and organizational problems. A model ombudsman program is planned within a school district serving over 17,000 students, including at least 1,500 students with disabilities. Information on available community resources for families of children with disabilities will be collected and updated. A consumer satisfaction survey will be designed and administered to parents, and a qualitative study will examine formal and informal patterns of interaction between the school district and other service providers.

**ANTICIPATED PRODUCTS:** Results should involve: (1) creation of a trained cadre of professional ombudspeople; (2) initiation of communication among key agency leaders for the specific purpose of improving collaborative relations; (3) improved access to high quality information on community resources for parents and consumers; (4) extensive documentation of system improvement needs in the school district; and (5) development and field testing of an innovative ombudsperson training package.

## **The Thoughtful Structures and Effective Practices Project: Building an Inclusive Exemplary High School Community**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023R30015

BEGINNING DATE: 6/01/93

ENDING DATE: 5/31/97

### **ABSTRACT**

**PURPOSE:** This project will incorporate effective practices for students with disabilities into a new high school that is committed to inclusion.

**METHOD:** Beginning in Year 1 and continuing throughout the project, the project will play a major role in developing the high school's mission, student goals, student outcomes, and quality indicators, to better reflect the diversity of student needs. The project Advisory Committee and school teams will receive training and assistance needed to participate in the school process of developing systems of accountability for its students, actualizing its inclusion goal, and reallocating staff and resources for integrated programming. Project funds will support staff development in best practices for secondary students with disabilities chosen by the school teams. Multiple methods will be used to document the process of developing an inclusive high school including focus group interviews, stakeholder surveys, observation and documentation of meetings, and collection and analyses of school documents.

**ANTICIPATED PRODUCTS:** Findings and updates on the ongoing project will be disseminated through newsletters to parents of students with disabilities and their teachers.

## **Kansas University Affiliated Program at Lawrence's School-Linked Services Research Project**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023D40020

BEGINNING DATE: 8/01/94

ENDING DATE: 7/31/97

### **ABSTRACT**

**PURPOSE:** This project will study school-linked services that are designed to support better outcomes for children with disabilities and their families through the combined efforts of the Kansas State Board of Education (KSBE) and two local school districts providing school-linked services.

**METHOD:** The sample for this investigation will include all children (N=270) and their families who receive school-linked services through one of the two target projects. This research project consists of interactive qualitative and quantitative components designed to augment each other. For the

qualitative component, staff will conduct naturalistic inquiries regarding policy and implementation issues related to school-linked services. These naturalistic inquiries will reveal the perspectives of participants at all levels of the implementation process, including consumers, teachers, administrators, related service providers, and other stakeholders. During the first project year, the inquiry team will identify service integration needs and barriers at each site and develop potential solutions relative to matters such as logistics of services and staff training needs. During the second project year, policy, planning, and implementation recommendations will be enacted and the inquiry will serve as a formative evaluation of their impact. Using both consumer and participant perspectives, inquiry teams will examine both accessibility and outcomes of these services. The third project year will involve development and refinement of case studies detailing the impact of planning and implementation processes carried out during the first two years. Quantitative descriptive research techniques will be used primarily to examine the impact of school-linked services integration in terms of accessibility of services and outcomes of services. Investigations will be prioritized by relevant stakeholders through Advisory Council participation and naturalistic inquiry information. Areas of study will include length of time between problem identification and implementation of services, and demographic information.

**ANTICIPATED PRODUCTS:** This project will result in identification of effective processes for the initial development and implementation of school-linked services, identification of barriers to school-linked service implementation, and a description of the impact of school-linked services on children with disabilities and their families.

### **Including Children with Disabilities in School-Based Change**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023R30014

BEGINNING DATE: 7/01/93

ENDING DATE: 6/30/96

#### **ABSTRACT**

**PURPOSE:** The project will implement and evaluate a school-based change process to help schools take a comprehensive view of special education services and the needs of the children they serve.

**METHOD:** The model to be employed includes the following components: (1) school-wide self examination; (2) parental involvement; (3) a school-based planning team; (4) ongoing and varied forms of technical assistance; (5) time-limited funds to the school for innovation; and (6) planned exit of the researchers. Within the model, school staff and parents articulate guiding principles for the design of effective services for children with disabilities, and then participate in a four-day workshop to examine school practices in relation to these guiding principles and the school's stated goals. Two schools that are engaged in school-based restructuring will serve as test sites. Qualitative case

study methodology, quantitative measures, and data produced by the built-in evaluation process will be used to provide evidence of the change model's effectiveness in producing meaningful outcomes for special education students.

**ANTICIPATED PRODUCTS:** Research findings and results from this project will be presented at annual meetings of professional organizations and published in relevant journals. Specific project products anticipated will include a practitioner guide on considerations in making schools more effective for children with disabilities, and a description of special education services within site-managed schools.

### **The Involvement of Special Education in the Planning and Implementation of the Modernization Project and the Effect of this Involvement on Programs, Personnel, and Students with Disabilities and their Families**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H159A40013

BEGINNING DATE: 10/01/94

ENDING DATE: 9/30/96

#### **ABSTRACT**

**PURPOSE:** The project will examine the impact of school restructuring efforts in South Dakota upon students with disabilities. The study will also seek to determine the level of involvement of special education personnel and students with disabilities and their families in school modernization efforts. In addition, the project will assess the impact of school modernization efforts on the performance of students with disabilities.

**METHOD:** Questions on the impact of restructuring efforts will be answered through collection of data from state agencies and the 20 school districts currently participating in the modernization project. Three school districts (one each in the first, second and third years of the project) will provide in-depth qualitative data for analysis of local and classroom-level changes that impact special education programs and students. Quantitative data will be collected from participating school districts, calling for information from administrators, support staff and teachers who use the Portland Instrument and the About Your District Questionnaire. Students' performance indicator data will be gathered from schools via the Student Information System and direct examination of a stratified random selection of students' IEPs.

**ANTICIPATED PRODUCTS:** At the local district level, findings of the study will be presented to all participating school districts, and will be disseminated on request to other South Dakota school districts through the state agency and Modernization Project. At the state level, findings will be disseminated through presentations at state-wide conferences and through print media disseminated through state agencies and organizations. At the national level, dissemination activities will include reports to the Department of Education, presentations, and publication of monographs through national organizations.

### **Project RISES: Restructuring for the Inclusion of Special Education Students**

**PRINCIPAL INVESTIGATOR:**  
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904-392-0701

GRANT NUMBER: H023R30010

BEGINNING DATE: 8/01/93

ENDING DATE: 9/30/96

#### **ABSTRACT**

**PURPOSE:** This project will demonstrate that systemic school reform is possible, that its effects can be documented, and that methods used to initiate systemic reform can be disseminated to other schools.

**METHOD:** Over a two year period, stakeholders and project staff will develop and test a more tangible and transportable version of the basic model of school restructuring in question. Project staff will assist stakeholders as they develop materials and design training programs for a second-generation target school to join the project in a third year. Materials will show how a traditional school can move through shared decision-making on to curricular, instructional and organizational restructuring. Specific programs to meet the academic, social, and developmental needs of at-risk children will be offered.

**ANTICIPATED PRODUCTS:** Dissemination of project findings will be carried out through conference presentations, articles for publication, distribution via the ERIC database, and a manual on meeting the needs of hard-to-reach students in restructured schools.

**Project Succeed in Middle Schools: Securing  
Understanding in Content Through Consultation and  
Explicit Environmental Demands**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023C30064

BEGINNING DATE: 7/01/93

ENDING DATE: 6/30/98

**ABSTRACT**

**PURPOSE:** This project will develop, field-test, and evaluate a special education service delivery model for middle schools, with content teachers as the primary source of instruction.

**METHOD:** In Year One, the project will focus on providing content teachers a structure for organizing their content-teaching. During Year Two, the study will investigate effects of systematic databased feedback on teachers' use of this structural framework. In Year Three, attention will shift to examine how teachers manipulate the two dimensions of the framework in their curriculum and within their interactive instruction to achieve changes in student perception and learning. In the fourth project year, the special educator will be added as case consultant within this package with a student progress monitoring system. The teacher will also be placed in the role of researcher to identify individually effective strategies within a component analysis, using individual student monitoring of learning outcomes and explicit consultation support systems. Finally, in Year Five, the manipulation of Organized Knowledge Forms and Interactive Learning Tasks will be synthesized in a consultation system and evaluated.

**ANTICIPATED PRODUCTS:** Dissemination activities will include the following: presentation at national conferences during all 5 years of the project; presentations at preconference workshops; publication of a number of research reports, monographs, and training modules; and teaching both methodology and findings from research in courses on-campus.

**Project Departure: Designing Educational Programs  
Aligned with Reforms in Teaching and Uniform  
Restructuring in Education**

**PRINCIPAL INVESTIGATOR:**  
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GRANT NUMBER: H023R30026  
BEGINNING DATE: 7/01/93

ENDING DATE: 6/30/97

**ABSTRACT**

**PURPOSE:** This project will attempt to implement and explain the relationships among interdependent systemic processes and resource use strategies within the context of school reform/restructuring to enhance system adaptability and inclusiveness as means for achieving better educational outcomes for children with disabilities.

**METHOD:** Three important resource use strategies with extensive empirical support and widespread application will be explored; including: team-building from within the context of organization development framework; consultation as practiced from a broad behavioral approach; and curriculum-based assessment. Particular objectives to be sought among participating children will include presence and participation in school programs, independence and personal responsibility, skilled social behaviors, and improved literacy.

**ANTICIPATED PRODUCTS:** This project will provide systemic design features for assuring that primary school restructuring initiatives meet the needs of children with disabilities. The use of rigorous case study replications will both guide these efforts and provide valid design principles for schools initiating primary education reform and restructuring initiatives.

**PRINCIPAL INVESTIGATOR:**

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**The Quality Management and Practices Project (QMAP)**

GRANT NUMBER: H023R20019

BEGINNING DATE: 10/01/92

ENDING DATE: 9/30/96

**ABSTRACT**

**PURPOSE:** The project will develop and implement a process for adapting and internalizing effective assessment and instructional practices for students with disabilities that will inform the ongoing broader school-based restructuring efforts in the four-school Powerful Schools Coalition (PSC).

**METHOD:** An organizational context will be developed to stimulate ongoing implementation of school innovation for students with disabilities. The PSC will develop a plan for systemic change to incorporate effective practices for students with disabilities in PSC restructuring efforts. Effective practices for students with disabilities will be designed, introduced, evaluated, refined, and incorporated in field-test classrooms within participating schools. Validated practices will then be selected for implementation throughout the PSC. Case studies will be conducted on the policy, organization, administrative, operational and cultural features that enable schools to implement systemic changes.

**ANTICIPATED PRODUCTS:** The project will identify the mediating and bridging conditions that link effective teaching and learning practices with structural alterations that sustain positive student and teacher outcomes. The case studies will be a major product of the project, as they will describe components of the system and the culture of the schools that the schools choose to focus on as they incorporate these practices into the process of continuous improvement.

**Shared Responsibility**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023R30029

BEGINNING DATE: 9/01/93

ENDING DATE: 8/31/97

**ABSTRACT**

**PURPOSE:** This project plans to initiate and sustain systemic school change that supports the inclusion of students with disability labels in general education classrooms and in their communities.

**METHOD:** Through the process, members of the Alice Smith School community will collaboratively gather information about the systemic and organizational features of their school and community, describe goals and visions for both the school and for student outcomes, identify critical features that impact the full adoption of new ideas and best practices, and implement strategic action plans to restructure the system so that full inclusion

and educational excellence are achieved. Intensive, ongoing evaluation will be used to assess and refine the restructuring model to develop a systematic yet flexible model that will be replicated in a second school in the third and fourth years of the project.

**ANTICIPATED PRODUCTS:** This project is expected to significantly contribute to knowledge about systemic features of schools that impact adoption of inclusive education best practices, and of planned educational restructuring. Dissemination of project results and findings will be achieved through a combination of conference presentations, journal articles, and replication efforts.

### **Restructuring Education for all Learners**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023R20005

BEGINNING DATE: 1/01/93

ENDING DATE: 9/30/96

#### **ABSTRACT**

**PURPOSE:** The purpose of this project is to incorporate effective practices for individuals with disabilities into broader school-based educational reform and restructuring initiatives occurring in two elementary schools in Dade County.

**METHOD:** The program will begin with a community-building and planning phase, followed by an intensive university/school partnership phase focusing on faculty development, strengthening resources for the school, and implementing innovative service delivery for persons with disabilities. University support for the restructuring effort will gradually give way to site-based implementation. Tutoring services will be provided with the assistance of the University of Miami Student Literacy Corps. School site, teacher, and student case studies will be conducted for both process and outcome evaluation and data analysis.

**ANTICIPATED PRODUCTS:** Findings from this study will be reported through six major channels: Strategically Planned Dissemination Networks, journal articles, conference presentations, computer networks, curriculum dissemination, and community-based discussion/meeting groups. National restructuring networks will participate in ensuring availability of findings to all school districts currently involved in school restructuring. The project is believed to have the potential to produce collaborative change in the restructuring of education for all learners at local, state and national levels.

***SECTION 7:***

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***SECONDARY  
EDUCATION  
AND  
POSTSECONDARY  
OUTCOMES***

## Beyond Bridging the Gap: Creating Learning Communities of Research and Practice

### PRINCIPAL INVESTIGATOR:

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409-845-1831

GRANT NUMBER: H023G50045

BEGINNING DATE: 9/01/95

ENDING DATE: 8/31/99

### ABSTRACT

**PURPOSE:** The project will develop and validate a participatory research and development model that creates learning communities of research and practice. The ultimate goal of these communities of research and practice is to impact teacher thinking and instructional behavior in inclusive classes, the school systems and cultures in which teachers work, university teacher training and research programs, and the academic outcomes of students with and without disabilities in inclusive classes.

**METHOD:** The project will develop a working model of participatory research and development (PR&D). In the first year, the model will be implemented with ten secondary special and general education teachers (expanding to 35 teachers in the first three years) to address authentic instructional problems in the inclusive classrooms of participating teachers. Descriptive and intervention studies will determine the effects of teacher involvement in participatory research and development on their problem-solving/innovation development process, including their planning, instructional behaviors, and attitudes. Intervention studies over the first three years of the project will determine the effects of teacher participation in the PR&D process and implementation of classroom teaching and learning strategies in experimental classrooms on the academic performance of students with mild disabilities as well as those without disabilities (N=80 students in the first and third years, N=40 in the second). In addition, in each year of the project, the academic performance of students with and without mild disabilities within experimental classes will be compared to the academic performance of students with and without disabilities in classrooms where teachers do not participate in PR&D, but do implement the innovations of PR&D teachers. Descriptive studies will address the effects of teacher, administrator, and staff involvement in participatory research and development on the system, culture, and professional climate of the schools included in the project. Finally, descriptive studies will determine the effects of participation in participatory research and development on the attitudes, future research plans, and teacher preparation programs involving participating university educators.

**PRINCIPAL INVESTIGATOR:**

Bulgren, Janis  
Schumaker, Jean Bragg  
University of Kansas  
Center for Research  
3061 Dole Center  
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913-864-4780

**ANTICIPATED PRODUCTS:** Project findings will be disseminated through presentations to peers within participating institutions and regional and national conferences. Research findings will be published in practitioner and research journals.

**Performance Enhancement Routine for Use in  
Inclusive Secondary Content Classrooms**

GRANT NUMBER: H023C50143

BEGINNING DATE: 8/01/95

ENDING DATE: 7/31/00

**ABSTRACT**

**PURPOSE:** The project will develop and validate four new routines, called Performance Enhancement Routines, which will be aimed at overcoming the barriers associated with methods used to ensure and evaluate mastery of secondary school content.

**METHOD:** Components of the Performance Enhancement Routines to be developed and validated include the following: an Assessment Planning Routine to be used by teachers in analyzing content they teach and creating assessment tools appropriate to both content and student characteristics; a Study Guide Routine to help teachers create study guides matched to assessment tools; a Review Routine to be used as a closure activity through which students can review important information in cooperative study groups; and a Feedback Routine to provide feedback to whole classes of students on both content and process aspects of learning. An evaluation of effects of the teacher training program on the implementation of this model will be conducted, as will an evaluation of effects of the instructional model on student performance on both content measures and motivational factors. The social validity of the instructional model will also be measured by specially designed surveys. Descriptive studies yielding both quantitative data from teacher surveys and qualitative data from information received from teacher focus groups will also be collected.

**ANTICIPATED PRODUCTS:** The routines to be developed through this project will be usable in combination with current Content Planning Routines and Content Delivery Routines to help students with disabilities succeed in content-area classes at the secondary level. Numerous reports and professional papers will be prepared for presentation and publication through journals, conferences, and agency-sponsored training sessions. These papers will include the original position paper, results of annual studies, and teacher training procedures.

## **A Feasibility Study for a Data-based Tracking System for Secondary Students with Disabilities**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H159F50001

BEGINNING DATE: 8/01/95

ENDING DATE: 7/31/97

### **ABSTRACT**

**PURPOSE:** This project will evaluate the feasibility of implementing a state-wide student tracking system for Alabama's secondary students and young adults with disabilities.

**METHOD:** A follow-along project design will be employed to collect data on both in-school and post-school indicators. The sample will consist of students from Jefferson County (urban) and Lee County (rural) high schools. All students over 17 years of age in participating schools will be administered a questionnaire (approximately 242 students.) For the post-school phase, half of all students who exited these two school systems in the 1994-1995 school year will be administered the post-school questionnaire via telephone, (approximately 202 post-school participants.) Ultimately, the student tracking system would gather information on the same students at both 17 years of age in-school and 9 months post-school. This information will then be used to identify links between post-school indicators and specific programs, services, and prior program improvement activities. A task force will be developed, to consist of individuals from an array of state and local agencies representing administrators, educators, and consumers. This group will translate project outcomes into a set of recommendations for policy formation, adoption, and implementation in Alabama.

**ANTICIPATED PRODUCTS:** The final project report will include a description of the piloted student tracking system, the developed in-school instrument and revised post-school instrument, the results of the pilot test in terms of analysis for in-school and post-school indicators, the final project evaluation report, and the task force's recommendations for policy formation.

## **Indicators of Integrated Academic/Occupational Curricula in Secondary Classrooms Serving Students With and Without Disabilities**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023B50033

BEGINNING DATE: 9/01/95

ENDING DATE: 8/31/96

### **ABSTRACT**

**PURPOSE:** The purpose of this project is to develop valid measures of classroom practice that are sensitive to the level of integration of academic and vocational curricula in a variety of high school courses, including those experienced by students with disabilities.

**METHOD:** Using systematic observation methods in a purposive sample of forty academic, vocational, and blended classes offered at a comprehensive high school participating in the Southern Regional Education Board's "High Schools that Work" initiative, project staff will assess four domains of curriculum and instruction: (1) content blend; (2) vocational content; (3) instructional strategy; and (4) student activity. Data will consist of pre-coded administrative descriptions of courses and student types (including numbers of students with disabilities), pre-coded teacher descriptions of courses, daily teacher logs of classroom activity, and observer logs of classroom activity. Interobserver agreement, correlational analyses, and teachers' and observers' structured comments will be used to test the validity of the measures. Repeated measures profile analyses will be used to ascertain if there is a profile or set of profiles that are most likely to occur in high school classes that have been pre-specified as "integrated academic/occupational courses", such that integrated classes may be differentiated from classes that do not integrate academic and occupational curriculum. Additional profile analysis will be used to determine if student disability is associated with certain curricular and instructional features and whether those features are similar to those found in classes that integrate academic and occupational learning.

**ANTICIPATED PRODUCTS:** The project will develop valid classroom indicators of integrated curricula based on current conceptual models; an analysis of the utility of the conceptual model for describing regular and special education classroom activities; measures of reliability of teacher reports of integrated curricula; and benchmarks of local practice in the participating school.

**General Education Development (GED)  
Success: Effective Instructional Interventions  
for Students with Disabilities**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023P30004

BEGINNING DATE: 9/01/93

ENDING DATE: 8/31/97

**ABSTRACT**

**PURPOSE:** This project will identify and document interventions that provide effective individualized instructional accommodations and supports for students with learning disabilities and behavior disorders in secondary GED preparation programs.

**METHOD:** A multi-agency Advisory Task Force will identify the needs and barriers to GED programs that students experience, effective preparation programs and instructors, and intervention strategies that will address student needs. Students with disabilities who have dropped out of Seattle schools will be recruited and assigned to one of three regular education GED programs: a computer-assisted curriculum for pre-GED and GED preparation; a test-based GED curriculum based on student strengths and test characteristics; or a program of instructional accommodation and support based on identification of barriers and successful program features. Budget strategies will be identified to capture the FTEs of all target students so that interventions can be supported without grant funds after the project ends. Each of these GED interventions will be evaluated to determine its effectiveness in preparing students to successfully complete the GED subtests. Students who successfully complete these interventions will be compared with students who do not complete them, and a control group of nonenrollees on occupational, social, and personal outcomes.

**ANTICIPATED PRODUCTS:** Information on effective GED practices identified in this project will be disseminated to secondary and postsecondary program sites, professional and advocacy organizations, and state and federal offices.

## **Students' Entrepreneurial Education Research Project**

GRANT NUMBER: H023C50080

BEGINNING DATE: 5/01/95

ENDING DATE: 4/30/98

### **PRINCIPAL INVESTIGATOR:**

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303-491-0699

### **ABSTRACT**

**PURPOSE:** The project will investigate the relationship between entrepreneurial education and the development of self-mastery skills for secondary students with emotional disorders during school and upon exit or graduation from high school.

**METHOD:** Using a three-level entrepreneurial curriculum, staff will work with 55-75 students ages 6 through 21 who are participating in three different alternative programs as a result of failure in a mainstreamed secondary education environment. Staff will coordinate project activities and facilitate a multi-disciplinary, multi-agency advisory and service team to include students, teachers, counselors, entrepreneur mentors, employers, parents, law enforcement representatives, and representatives of social service agencies. A case study approach using a participatory action research model will provide the qualitative component of the project's evaluation, while standardized measurement tools combined with subjective assessments by entrepreneurial coordinators will provide quantitative evaluation. The business community will be drawn in to help determine specific employability skills they want to see in potential new employees, and mentors will provide support as each class plans, develops, and implements an entrepreneurial enterprise.

**ANTICIPATED PRODUCTS:** Project findings will be presented at local, state and national conferences directed towards teachers, administrators, related services personnel, adult service providers, parents and students with emotional disorders. The Colorado Department of Education will disseminate the finished curriculum state-wide, and staff will submit process and research articles to relevant professional journals.

## **The Development and Validation of a GED Proficiency Attainment Model for Students with Learning Disabilities and Severe Emotional Disabilities**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023P30008

BEGINNING DATE: 8/01/93

ENDING DATE: 12/31/97

### **ABSTRACT**

**PURPOSE:** This program will identify barriers to GED program participation and completion for students with learning disabilities (LD) and severe emotional disturbances (SED) who drop out of high school. The project will also design, implement, and evaluate an intervention model to accommodate these students' needs related to completion.

**METHOD:** In the first phase of the project, those involved in the GED process will participate in interviews, focus group meetings, and/or observations. These data sources will provide information describing the current needs of students and instructors in GED programs. In collaboration with those involved, an intervention package will be designed for implementation and evaluation in the second research phase. One product will be an intervention model generalizable to other GED programs. The intervention model will address academic and self-management skills as major areas influencing GED participation and completion.

**ANTICIPATED PRODUCTS:** The instructional model will consist of three packages: (1) a Recruitment Package; (2) a GED Preparation Package (consisting of the Strategies Application Component, the Strategic Tutoring Component, the Content Enhancement Component, and the Self-Management Component); and (3) a Test Performance Package. In each area, learning and self-management strategies and related needs of students with LD and SED will be addressed in conjunction with the teaching skills and programmatic influences on participation and completion.

**PRINCIPAL INVESTIGATOR:**

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**Research in Self-Determination of Students  
with Cognitive Disabilities**

GRANT NUMBER: H023C40126

BEGINNING DATE: 10/01/94

ENDING DATE: 9/30/99

**ABSTRACT**

**PURPOSE:** This project will conduct an empirical examination of the causal relationship between self-determination and positive adult outcomes through a longitudinal follow-along study of school graduates with cognitive disabilities, including mental retardation and learning disabilities.

**METHOD:** This project spans five areas of research that staff members will conduct over a period of 5 years. First, through a longitudinal follow-along study, staff members will explore the causal relationship between self-determination and adult outcomes. Using precollected data related to self-determination status and demographic information, project staff will monitor participants' progress at 1 and 3 years after graduation, including employment status, postsecondary education status, marital status, and perceived quality of life. Participants recruited for this component will include students (N=150) with mild to moderate levels of mental retardation and severe learning disabilities. Self-determination assessments will include five domains: (1) autonomy; (2) self-regulation; (3) self-actualization; (4) perceptions of psychological empowerment; and (5) perceptions of self. In the second, third, and fourth components, staff will describe the development of self-determination through various means, including a longitudinal study of perceptions of control and attributions of academic achievement. Students ranging in age from 8 to 19 years will participate, including those with mental retardation, learning disabilities, and students who are not disabled. During each project year, staff will assess each student on various measures studying locus of control, perceptions of helplessness, and other research foci. The final area of research involves the development and field testing of a model of teaching that distributes the responsibility for learning among teachers, parents, and students, giving primary control to the student. Participating students will be the primary agents for choices and decisions at each phase of the model's development.

**ANTICIPATED PRODUCTS:** Project research activities will result in data detailing the causal link between self-determination and adult outcomes and describing the developmental course of constituent elements of self-determination. Project demonstration activities will result in

the validation of a model of teaching that can be used to promote self-determination. Project materials will be distributed to national organizations, journals, and conferences.

***SECTION 8:***

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***SERIOUS EMOTIONAL  
DISTURBANCE  
AND  
BEHAVIORAL  
DISORDERS***

## Improving the Lives of Children: An SED Primary Prevention Project

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H237F40012

BEGINNING DATE: 7/01/94

ENDING DATE: 6/30/98

### ABSTRACT

**PURPOSE:** The project will implement and assess interventions enabling schools to provide positively oriented instruction, curricula, and support services needed to prevent students receiving special education for emotional and behavioral problems from developing serious emotional disturbance (SED).

**METHOD:** The project will proceed over a 4-year period in three phases. During Phase 1—intervention refinement—project staff will identify concerns and form working intervention groups, and identify and develop instrumentation and specific tracking procedures for target students. To develop tracking procedures, staff will define students at risk for SED and describe a set of identifying predictors. Staff will also collect baseline data for comparison groups. Phase 2—intervention implementation—will focus on full implementation of various multienvironment interventions and on compiled data related to them. Intervention efforts will include screening and identification of target groups including those currently receiving special education services (N=100) and students identified as at risk (N=100). These students will come from backgrounds of poverty, live in violent neighborhoods, are likely to drop out of school, or are likely to develop high rates of school recorded behavior problems. Two hours of observation will be allotted for each participating student, through four 30-minute periods. In Phase 3—final follow-up and dissemination—project staff will complete evaluation, report data relevant to the change process, pursue ways to continue some interventions that require financial resources beyond what schools can provide, and develop easy-to-read manuals on guidelines and strategies for implementing various interventions in other elementary schools to prevent SED among students with emotional and social problems. Additional training will be implemented for school personnel, community agency personnel, family members, and others to broaden project impact.

**ANTICIPATED PRODUCTS:** This project will result in an increase in the number of least restrictive environments, and in specific documents usable by policy makers. This project will also improve prevention of SED among youth.

**Project EXCELLENCE: Exceptional Children Enrolled  
in the Least-Restrictive Learning Environments Made  
Notably Cost-Effective**

**PRINCIPAL INVESTIGATOR:**

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707-253-6810

GRANT NUMBER: H237B20025

BEGINNING DATE: 10/01/92

ENDING DATE: 9/30/96

**ABSTRACT**

**PURPOSE:** This project addresses the problem of mainstreaming for children and youth with emotional or behavioral disorders by: (1) obtaining waivers for the finance structure and establishing alternative educational programs; and (2) developing, implementing, and monitoring individual student transition plans to least restrictive community environments during the implementation phase.

**METHOD:** A model planning process will be created, including the development of alternative funding patterns to encourage least restrictive environment placement, development of a transition planning process, and creation of a transition planning document. Four separate record-keeping documents will be maintained to grant administration, formative process assessment, summative objective evaluation, and individual student data. Staff will design appropriate interventions, primarily ecological/behavioral, at the hospital, at participating schools, and in receiving communities. Appropriate Individualized Education Plans (IEPs) will be generated for each student, and parents and families will be involved in both the planning and implementation of the project.

**ANTICIPATED PRODUCTS:** Written products documenting project activities and results will include a formal evaluation report, a more user-friendly replication guide, and articles by project staff to be submitted for publication in professional journals. Findings will also be presented at least one state-wide or national conference.

## **Investigation of the Institution-to-Community Transition Experiences of Adolescents with Emotional and Behavioral Disorders**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023C30049

BEGINNING DATE: 10/01/93

ENDING DATE: 9/30/98

### **ABSTRACT**

**PURPOSE:** The project will conduct a follow-along investigation of the institution-to-community transition of adolescents with emotional and behavioral disorders (EBD), who have been incarcerated for their extreme antisocial behaviors.

**METHOD:** Data on roughly 300 to 400 adolescents with EBD will be gathered on their release from institutional facilities in the state of Oregon. At referral, demographic, SES, level of service, and social skill rating forms will be completed on each person. Between 3 and 9 interviews will be administered to each individual by telephone at 6-month intervals. Interview questions will pertain to subjects' vocational, educational, social, independent living, and general community adjustment. Similar interviews will be administered to subjects' parent/guardian and probation/parole officers. Employment data will also be checked yearly with a state-wide database. Data will then be examined using logistic regression techniques and LISREL procedures to examine relationships among multiple predictor and outcome constructs.

**ANTICIPATED PRODUCTS:** The project will establish baseline data on the adjustment of individuals exiting these institutions. The participation of key state level administrators is expected to substantially augment dissemination plans. By disseminating information on the findings and procedures employed in this project, the project hopes to instigate similar projects in other regions to improve the adjustment and quality of life among this population.

## Life On The Outs - Qualitative Investigation of Resilience

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023C50150

BEGINNING DATE: 1/01/95

ENDING DATE: 9/30/00

### ABSTRACT

**PURPOSE:** The project will conduct an intensive qualitative investigation of the institution-to-community transition of adolescents with emotional and behavioral disorders who have been incarcerated in the two most secure juvenile correctional facilities in Oregon.

**METHOD:** The research will seek to define the variables and events that differentiate those persons who leave the facilities and are successful in their transition efforts versus those who are not successful. This process will contribute to the development and refinement of a grounded theory on resilience and its meaning in the transition experiences of this population. The project will dovetail with and parallel a quantitative study already in process in which staff are gathering extensive data on the demographic characteristics and institutional and transitional experiences of 400-500 male and female adolescents from these facilities. In Phase 1, staff will investigate childhood and adolescent experiences which contribute to resiliency by conducting a life history study of a sample of successful (employed, in school, no re-arrests) and unsuccessful participants from the quantitative project who have been out for 1 to 2 years already. Throughout the five project years staff will continue with longitudinal investigations of their lives in the community, describing and contrasting the characteristics, experiences, and supports of those who do or do not succeed in transitioning into community life. Phase 2 will be a focused exploration of specific factors contributing to resilience, based on interviews with selected informants. In Phase 3, staff will conduct systematic member checks to test the validity of theories of resilience with respondents, interviewees, and knowledgeable others. In Phase 4, staff will prepare the study products for dissemination.

**ANTICIPATED PRODUCTS:** Planned products include: a holistic model of the construct of resilience, based on the experiences and perspectives of participants themselves; and a collection of case studies illustrating the model and outlining the life histories of participants. Extensive efforts will be made to disseminate results and products to other professionals, sites, parents, and consumer groups both regionally and nationally.

**Project SERVE: Support for the Emotional, Residential,  
Vocational, and Educational Needs of Adolescents with  
EBD**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H237F50023

BEGINNING DATE: 10/01/95

ENDING DATE: 9/30/99

**ABSTRACT**

**PURPOSE:** The project will provide vocational services and service management to adolescents with emotional and behavioral problems, and will examine the effects of these interventions on both in-project and post-project experiences and outcomes among participants.

**METHOD:** Participating adolescents will be referred to the project and assigned a Service Coordination Specialist, who will work in conjunction with the adolescents and his/her family to plan and implement these services. After exiting the school setting, services will be arranged to continue through a support network from different community agencies (including vocational rehabilitation, Job Training Partnerships, and Social Security offices). A comprehensive data collection systems will be used to describe empirically the student and his or her presenting behaviors and the types and intensity of services that are provided to each participant. To examine post-project impact of the services, participants will be tracked through individual interviews and review of extant state-level data sets on criminal and employment activities to profile their transition experiences.

**ANTICIPATED PRODUCTS:** Dissemination activities and projects will include presentations at professional conferences, articles for submission to professional journals, and a project newsletter for quarterly distribution to education and human services agencies as well as parents, teachers and other stakeholders. Upon the project's completion a monograph describing the data collection procedures, results, and service delivery recommendations will be developed.

## **Designing Educational Support Teams through Interagency Networks for Youth with Serious Emotional Disturbance (DESTINY-SED)**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H237D30012

BEGINNING DATE: 9/01/93

ENDING DATE: 8/31/96

### **ABSTRACT**

**PURPOSE:** This project will provide training and support for families and professionals in the fields of education, social work, and mental health to improve services for children and youth with serious emotional disturbances.

**METHOD:** In each of six communities, a research team from the Institute on Emotional Disabilities will work with the middle schools and the local Child and Adolescent Service Systems Program (CASSP) teams to collaboratively identify staff development needs. Staff development objectives will be phrased in terms of knowledge, skills, and strategies that project participants will be expected to use in their practice with professionals, students, and families. Particular objectives will focus on the areas of collaboration among project participants and on ways to apply knowledge, skills, and strategies. Student progress will be closely monitored through data on school attendance and involvement, social competence, and achievement, as well by project staff and teacher rating scales, in-school record reviews, and responses from community agencies and parents.

**ANTICIPATED PRODUCTS:** Staff development is expected to motivate and empower participants to accomplish new goals in the workplace, and renew their commitment to achieve desirable outcomes for youth with serious emotional disturbances. By focusing on teachers and students in the middle school years, the project intends to impact on students' social and academic involvement in school and better prepare students for high school completion, vocational placements, and entry into productive adult living.

## **School Outcomes and Community Benefits for Minority Youth With Serious Emotional Disturbances: Synthesizing Research and Literature to Devise Practical Strategies for Families and Professionals**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023E40015

BEGINNING DATE: 7/01/94

ENDING DATE: 6/30/96

### **ABSTRACT**

**PURPOSE:** The project will systematically review and synthesize key research findings and literature from related fields and communicate to schools and families what works, rather than to document past failures of the system, focusing on improvement of practice in the schools in relationship to school success and postschool benefits.

**METHOD:** The project will systematically synthesize literature and research respective to needs, characteristics, treatments and alternatives as they promote or inhibit successful benefits and outcomes among youth with serious emotional disturbances or emotional problems. These syntheses will focus on: (1) individuals with emotional disabilities from minority backgrounds; (2) optimal educational outcomes and social benefits; and (3) valid strategies that professionals may use to improve benefits and outcomes. Staff members will identify strategies that professionals can use to improve the benefits and community outcomes for youth from minority backgrounds with behavioral disorders, and will identify strategies that families of youth with behavioral disorders can use to improve school participation and community outcomes for these children and young adults. Staff will achieve these objectives by pursuing a finite series of relevant hypotheses identified by a Constituency Resource Committee. The literature base included to test each hypothesis will be evaluated using a Systematic Integrative Review, applying multiple approaches to synthesize and integrate quantitative, qualitative, and expository literature. The review will permit comparison and compression of information drawn from published research-based, theory-based, practice-based, and case studies, and from literature available through "fugitive sources." Each potential literature source will be examined in terms of problem formulation, the quality and reliability of data or evidence collected, it's evaluation of the validity of evidence yielded, the replicability of interpretations of findings, the accuracy of interpretation, and the quality of presentation of findings. The synthesized data will form the basis for conclusions and recommendations about needs, characteristics, benefits, outcomes, and justification for recommending the use of potential strategies by professionals and families.

**ANTICIPATED PRODUCTS:** The review will yield a database comprised of a set of synthesized data elements relevant to each hypothesis which others

may use to replicate both the procedures of the research and the viability of conclusions reached from the synthesis.

## **Designing and Implementing Coordinated Systems of Care for Students with SED and Their Families**

### **PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H237B20014

BEGINNING DATE: 10/01/92

ENDING DATE: 8/31/96

### **ABSTRACT**

**PURPOSE:** This project will bring together individuals and organizations to plan, develop, and provide case management and professional services to children and youth with serious emotional disturbances (SED).

**METHOD:** In Phase I, the project will design and assess a comprehensive system of education and care. Activities will include: (1) development of an interagency collaboration model comprised of representatives from parents and the primary educational, social and mental health agencies in the community; (2) agreement on which students will be served, the principles of care, and written joint agreements; (3) the implementation of a comprehensive needs assessment of children, family, and service providers and (4) the development of a plan of action to design a comprehensive system. In Phase II, the system will be implemented and evaluated. The system will be based on the principles of individualized care which emphasize unconditional care, intensive case management, wrap-around services, family involvement, and cultural competence. The evaluation model will gather information in the areas of child status, family involvement, interagency collaboration, community-based services and demographic information.

**ANTICIPATED PRODUCTS:** A series of working papers will be developed which will include research reports, position papers, and other descriptions of products or activities carried out by staff members. While these papers will be published eventually, they will initially be disseminated to professionals working with students with serious emotional disturbance. Staff will present reports on project activities and findings at appropriate professional meetings. Reports of the implementation and results of each evaluation component will be written and published in manual style at the conclusion of the project. These manuals will be disseminated to persons on the mailing list who request them.

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## Training Regional Interagency Staffing Teams

GRANT NUMBER: H237D30030

BEGINNING DATE: 10/01/93

ENDING DATE: 9/30/96

### ABSTRACT

**PURPOSE:** The purpose of this research project is to develop, implement, and evaluate a training program to prepare direct service providers and educators from various social service agencies to collaborate in serving students with serious emotional disturbances and their families.

**METHOD:** Interagency teams consisting of an educator, a mental health counselor, a social worker, a probation officer, a rehabilitation counselor, and a substance abuse counselor, will be trained to plan, implement, and monitor individualized treatment programs. Additionally, parents will be trained as part of the interagency teams to serve as advocates for the students and their families. Team members will be trained to: (1) collaborate with service providers from other disciplines; (2) contribute to the development and implementation of intensive case management plans; (3) involve families via empowering parents; (4) be knowledgeable about information specific to local service agencies; and (5) be knowledgeable about a conceptual model of interagency collaboration.

**ANTICIPATED PRODUCTS:** Approximately 18 interagency teams will be trained over the course of the project's 3 years.

## Preventing the Development of Serious Emotional Disturbance among Children and Youth with Emotional and Behavioral Problems

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GRANT NUMBER: H237F50036

BEGINNING DATE: 4/01/95

ENDING DATE: 3/31/99

### ABSTRACT

**PURPOSE:** The project will test a school-based model for preventing serious emotional disturbance (SED) in young children, ages kindergarten through second grade, using team building and instructional support strategies implemented by a parent/teacher led collaborative team.

**METHOD:** During the first two years of the project, 1,000 kindergarten children in four school districts (one urban and three rural) will be screened for externalizing or internalizing behaviors which would place them at risk for developing more severe emotional/behavioral problems. Children assigned to Intervention A (N=50) will be served by a Prevention Team for two years beginning in the summer following kindergarten and

extending through second grade. Children assigned to Intervention B (N=50) will receive classroom instruction in social skills, also extending through second grade.

**ANTICIPATED PRODUCTS:** Submissions will be made to special education publications and project findings will be presented at regional and national conferences. In an effort to reach parents, findings will be rewritten to suit the needs of the popular press and submitted to parenting publications. Cassette tapes will also be produced from these materials, and a professional videotape of findings will be produced for presentation to parents, teachers, and other service providers in schools and other educational settings nationwide. Staff will make periodic information postings to electronic information networks.

### **Linkages to Learning: An Integrated Multi-Agency, School-based Program for the Delivery of Health, Mental Health & Social Services to Students and their Families**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H237F50014

BEGINNING DATE: 9/01/95

ENDING DATE: 8/31/99

#### **ABSTRACT**

**PURPOSE:** The project will implement and evaluate the effectiveness of "Linkages to Learning," a collaborative, multi-agency, school-based program designed to facilitate, coordinate, and deliver a comprehensive array of health and human services to students and their families.

**METHOD:** This project will take place in a racially and ethnically diverse elementary school setting (using 400 students) in a high-need area of Montgomery County, Maryland. Major activities will include: (1) carrying out a variety of outreach and information activities to educate students, parents, and teachers about the full range of health and human services available to them at and through the schools; and (2) using a coordinated case management approach to facilitate and coordinate the referral, assessment, case management, and delivery of health and human services to students and their families within the school setting. Direct services will include: (1) individual, group, and family counseling to address students' and parents' social and emotional problems; (2) educational support for students, including academic tutoring and mentoring; (3) social skills training and self-esteem enhancement programs for students; (4) parental assistance for financial, housing, legal, child care, and psychological problems; (5) health education and coordination of health services and referrals; (6) parent skills training and education workshops; and (7) consultations, workshops, and support for teachers working with students with social and emotional problems.

**PRINCIPAL INVESTIGATOR:**

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Fuchs, Douglas  
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**ANTICIPATED PRODUCTS:** Results from this project will be circulated beyond the traditional outlets of the scientific community to ensure that useful information reaches school personnel and other direct service providers interested in implementing similar programs. Findings will also be published in an array of peer-refereed scientific journals and book chapters representing the fields of education, public health, counseling, and psychology. In addition, findings will be presented at a variety of national meetings.

**Promoting Attention, Literacy, and Socialization (PALS)  
among Students with Emotional/Behavioral Disorders**

GRANT NUMBER: H023C40001

BEGINNING DATE: 9/01/94

ENDING DATE: 8/31/97

**ABSTRACT**

**PURPOSE:** This project will use Adaptive Peer Tutoring to enhance the task engagement, reading achievement, prosocial behavior and quality of generalized peer interactions, social status, and degree of inclusion in mainstream settings for students with emotional/behavioral disorders (EBD).

**METHOD:** During the first year of this 3-year project, PALS staff will implement, formatively evaluate, and modify existing Adaptive Peer Tutoring methods to maximize their feasibility and efficacy for students with EBD. In Year 2, staff will develop additional training procedures designed to extend participating students' capacity to explain difficult materials to peers and to develop prosocial interaction styles. At this time, staff will also examine the added value of this component to existing Adaptive Peer Tutoring methods. In Year 3, project staff will develop Adaptive Peer Tutoring further and explore its efficacy for helping students with EBD make successful adjustments to general education reading classes. Staff members will contrast typical reintegration methods to those in which Adaptive Peer Tutoring is implemented in both special and regular education settings to facilitate the mainstreaming effort. During each project year, participating teachers (N=20) of students with EBD will implement treatments with all students in their classrooms and will identify study participants (N=120). Classroom observations during Adaptive Peer Tutoring will be conducted to assess the fidelity of treatment. Direct observation methodology will be employed during reading instruction to index task engagement and prosocial interactions. Videotapes of generalization sessions will be coded to evaluate quality of peer interactions. Staff will also use pre/post individual multidimensional assessments, peer sociometric ratings, and questionnaires to monitor levels of student interaction and achievement.

**ANTICIPATED PRODUCTS:** This project will result in modified Adaptive Peer Tutoring methods that specifically maximize benefits and feasibility for students with EBD, extended Adaptive Peer Tutoring procedures designed to help students with EBD make successful transitions to general education, and a teacher training manual and video explaining the implementation of these enhanced Adaptive Peer Tutoring methods with students with EBD in both special and mainstream reading instruction classes.

### **Proactive Home-School Programming for the Prevention of Serious Emotional Disturbance in Children with Behavior Problems**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H237F50019

BEGINNING DATE: 8/01/95

ENDING DATE: 7/31/99

#### **ABSTRACT**

**PURPOSE:** This project will outline a program of proactive home-school prevention which directly targets "protective" and "risk" factors to increase social, behavioral, and academic competencies.

**METHOD:** The school-based component of the program will include: (1) social skills groups including instruction in prosocial behaviors, training in problem solving, incidental teaching, and reinforcement procedures for generalization of skill usage; and (2) peer tutoring in reading and comprehension skills. The home-based component will include: (1) parent-child activities and monitoring schedules for increasing positive parent-child interaction and supervision; and (2) parent-led play/recreation groups for reinforcement of prosocial skills. The third level prevention component will provide systematic functional assessment and analysis of environments to determine conditions maintaining resistant behaviors with consequent intervention for behavioral improvement, as well as liaison work with community-based agencies to facilitate family services. The investigation will include three elementary school sites in an intensive quality-controlled program for 36 to 45 children, with a control group.

**ANTICIPATED PRODUCTS:** Expected outcomes include increased, positive adult and peer interaction, improved compliance and behaviors, increased engagement and learning, and improved social competence. The following products will be developed in order to further dissemination efforts: papers presenting findings to state and national conferences; independent study university coursework; written reports and program descriptions to be distributed at state, local, and federal levels; and articles on findings for submission to appropriate professional journals.

**World of Difference: A Culturally-Competent  
Demonstration Model to Improve Services for Students  
with Serious Emotional Disturbance (SED) and to  
Develop Prevention Services for Students with Emotional  
and Behavioral Problems**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H237G50018

BEGINNING DATE: 8/01/95

ENDING DATE: 8/31/98

**ABSTRACT**

**PURPOSE:** The purpose of this project is to develop and demonstrate a collaborative model of culturally competent intervention and prevention services designed to address the current gaps in service delivery to students at risk and students with serious emotional disturbance (SED).

**METHOD:** The project will establish four model classroom sites of students at risk of having SED and students with SED where the most successful collaborations among teachers, paraprofessionals, mental health providers, students, and family members would be replicated. Two classes will consist of approximately twelve 3rd - 5th grade Hispanic students classified as learning disabled and at risk for serious emotional disturbances. The other two classes will consist of approximately ten predominantly African-American 3rd-5th grade students already classified as SED. Tutors from San Francisco State University's Special Education Department Minority Outreach Program will provide tutoring, encouragement, support and mentoring to students. Teachers, paraprofessionals, and tutor/mentors will receive intensive training and resource materials regarding the use of culturally competent instructional strategies and curricula, as well as training in use of student-centered instructional strategies designed to capitalize on students' diversity and individual strengths. Family members will be provided with information and training regarding mental health issues, learning disabilities and serious emotional disturbances, instructional practices, and ways in which families can provide emotional and academic support to their children. Onsite service and after-school consultant time will also be increased.

**ANTICIPATED PRODUCTS:** Project results will be disseminated to family members at community meetings, while dissemination to mental health providers will take place in the form of workshops to be coordinated with the professional development personnel of each department. Further dissemination will be filtered through the school district-wide professional development system and channeled through collaborating institutions to reach beyond the immediate target population.

## Qualitative Investigation of Effective Service Coordination for Children and Youth with Emotional and Behavioral Disorders

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023B50053

BEGINNING DATE: 9/01/95

ENDING DATE: 8/31/96

### ABSTRACT

**PURPOSE:** The project will examine parent perspectives on what constitutes effective service coordination. Investigators will explore what happens for individual children and their families as a result of effective service coordination that would not have occurred without such support.

**METHOD:** Phase 1 of the project will include the facilitation of a focus group of 10 to 12 parents who are coordinators of local family support groups located throughout the state. Results of the focus group will be used to develop the next phase of data collection. Phase 2 will consist of in-depth semi-structured interviews with 8 to 12 parents who have children with emotional or behavioral disorders. Each parent will nominate the professional they perceive as being the most helpful in providing service coordination, after which each of these professionals will be interviewed by research staff. The coding of interview transcripts, comparisons of parent and professional perceptions, and identification of categorical systems each parent and child is involved in will be used to indicate which school and agency documents to review. Data analysis will proceed concurrently with data collection, and will be used to influence future data collection. Phase 3 will consist of member checks to test the validity of emerging theories of effective service coordination. Phase 4 will consist of the preparation and dissemination of project findings. Emerging theories of effective service coordination will be documented in this stage.

**ANTICIPATED PRODUCTS:** Findings will be disseminated in the form of presentations at conferences and submission of articles to professional journals. Dissemination will take place across the disciplines of education, social services, juvenile justice, and child and adolescent mental health.

## **Project SUCCESS: Preventing the Development of SED Among Children with Emotional and Behavioral Problems**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H237F40022

BEGINNING DATE: 7/01/94

ENDING DATE: 6/30/98

### **ABSTRACT**

**PURPOSE:** The purpose of this project is to conduct research into the prevention of the development of Serious Emotional Disturbance (SED) in elementary school students with behavioral and emotional problems through intervention based on multidisciplinary literature.

**METHOD:** In the first of 4 project years, staff will finalize the case study "best practices" theory and scenario, develop the case study protocol and pilot the protocol. The pilot test will include interviews with kindergarten teachers and the review of specific documents for relevance. Staff will then plan and conduct inservice training for participating teachers and other school personnel. During this year, staff will also screen students in each participating school, collect and analyze data, evaluate and manage the project, and work to collaborate with other SED projects. During the following 3 project years, staff will conduct assessments of family needs and strengths of families of at-risk children, and will conduct functional assessments through interviews. Staff will ask teachers for their perceptions of the environmental conditions under which at-risk children in their classes display desirable or undesirable behaviors. Interviewed teachers will begin testing hypotheses developed on the bases of functional assessment interviews. Staff will then develop Family Service Plans (FSPs), and implement the educational child-centered components and the family-focused components. Once FSPs have been implemented, staff will collect and analyze case study data using the case study protocol developed in Year 1, and analyze school records/accumulative folders for at-risk children in grades 1 and 2. Staff will also survey comparison schools about identification of SED in 1st and 2nd grade children, and will collect data on personal and social attributes on the Student Self-Concept Scale (SSCS), Social Skills Rating System (SSRS), Classroom Behavior Inventory (CBI), and peer ratings and nominations (PRN). Finally, staff will disseminate results, and work further to collaborate with other Office of Special Education (OSEP) projects.

**ANTICIPATED PRODUCTS:** Project SUCCESS will result in a validated model for: (1) identifying students with such serious emotional and behavioral problems that they are at risk for SED; (2) conducting functional assessments of at-risk children; (3) developing classroom interventions; (4) coordinating multiple services based on family strengths/needs; and (5) ensuring the delivery of culturally competent services to students and their families.

## **Developing Interagency Collaboration Skills for Transition of SED Students to Less Restrictive Environments**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H237D20006

BEGINNING DATE: 1/04/93

ENDING DATE: 1/03/96

### **ABSTRACT**

**PURPOSE:** The purpose of this project is to design, implement, and evaluate the effects of a training program to develop knowledge, skills and strategies for collaboration between education and social service personnel in the transition of 16 students with serious emotional disturbance (SED) students to less restrictive educational settings.

**METHOD:** A competency-based training program will be developed and implemented with 20 regular education, special education, related services, and social services personnel. During each training session, material and concepts will be illustrated with videotaped vignettes, practice exercises will be presented for role playing, and participants will view video playbacks of examples of their positive performance. The program will then evaluate the effectiveness of these staff development methods in promoting acquisition of collaboration skills and the generalization of those skills during interagency team meetings to coordinate services for the transition of students with SED. In addition, the program will assess outcomes of collaboration on improved services and on professionals' motivation and sense of empowerment.

**ANTICIPATED PRODUCTS:** In addition to directly providing services to students with SED, the program will contribute to a greater understanding of the knowledge, skills, and strategies underlying effective collaboration. Project findings will be disseminated via reports to consumer groups, publication of articles and a multimedia training package, and a conference sponsored by the Devereux Foundation.

## **Collaborative Responsibility Empowering School Teams (CREST)**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H237D30069

BEGINNING DATE: 6/10/93

ENDING DATE: 6/30/96

### **ABSTRACT**

**PURPOSE:** The project will test the value of the CREST model as an effective school-based approach to training school and community staff to meet the needs of students with serious emotional disturbance (SED) and behavior disorders.

**METHOD:** The CREST Project is a comprehensive 3-year program to support the total school staff of 21 schools in developing and using knowledge and skills to respond to all students in a constant and predictable manner. The purpose of the project is to enhance and promote students' growth and well-being and allow students with serious emotional and behavior problems to remain in their community schools. Major training components support school staff in using community and school resources in the following fields of focus: (1) developing and implementing school-wide discipline policies and procedures; (2) teaching and maintaining positive classroom behavior and social skills; (3) designing, implementing and evaluating interventions for students with SED; (4) developing ongoing support systems for the school model to ensure refinement and maintenance as school ecology changes.

**ANTICIPATED PRODUCTS:** The project will use descriptive methods to document the development of each school's CREST program as they refine and maintain the model over time. These descriptions will then provide the basis for further research into the factors that help schools sustain the ability to meet the needs of students with a wide range of behavioral and emotional differences.

### **Project Community Approach to Improving Child Success (Project CAICS)**

**PRINCIPAL INVESTIGATOR:**  
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GRANT NUMBER: H237G50045  
BEGINNING DATE: 8/01/95

ENDING DATE: 6/30/98

#### **ABSTRACT**

**PURPOSE:** The project will create a comprehensive program to address the problem of unequal distribution of children with behavior problems or serious emotional disturbance (SED) to special education classes through a combination of models based on systems theory.

**METHOD:** Project CAICS will work with three groups of students: (1) those students at any grade or level who are classified as seriously emotionally disturbed based upon a thorough Child Study Team assessment; (2) those students identified by individual schools in grades K-8 as part of their ongoing search for improved effectiveness with all children; and (3) those students whose background suggests they are at risk of developing SED as they progress through school. The project will intervene with these students by assisting regular education teachers to adopt specific techniques and strategies, assisting building administrators in addressing school environmental problems that help to trigger negative behaviors, and training staff in basic techniques to reduce cross-cultural misunderstandings. The project will also work with pre-high school programs to institute curricular and instructional approaches

to teaching all students the skills necessary to succeed in school. The community will support this approach by coordinating and expanding community activities which foster the development of peaceful and cooperative conflict resolution skills. The community and the school will jointly develop the details of project actions through a set of advisory panels. Each participating teacher will receive staff development and training over an eight-month period to reinforce learning of both recommended techniques and their underlying philosophy. This component will directly seek to reform the institutional culture of participating schools relative to the population of students whose behavior has been a major concern for years.

**ANTICIPATED PRODUCTS:** At the project's conclusion, staff expect to find fewer students classified as SED due to emotional and behavior reasons which are not deeply rooted in factors beyond the control of the family. This will translate to less restrictive learning environments for more students, fewer discipline problems in the schools, and a lower operating cost for special education programs.

### **Comparing Experiential Inservice and On-site Consultation to Increase Inclusionary Practices for Students with SED**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H237D30045

BEGINNING DATE: 9/01/93

ENDING DATE: 8/31/96

#### **ABSTRACT**

**PURPOSE:** The purpose of this project is to compare two unique approaches to increasing the skills and applications of interventions for effective inclusion of students with serious emotional disturbance (SED) in regular education classrooms.

**METHOD:** In this 3-year study, personnel from 24 school districts will be trained through a combination of experiential inservice training and on-site consultative support provided by staff from an approved private school for children with SED. Participating school districts will be required to identify teams of three district personnel including a regular education teacher, special education teacher, and related services personnel. Districts will be randomly assigned to one of three conditions (Experiential Inservice/Immediate Consultation; Experiential Inservice/Delayed Consultation; and Wait-List Control Group.) Outcomes measures repeated at specific points of the study will include quantitative and qualitative measures of content and process.

**ANTICIPATED PRODUCTS:** Results of this project are expected to provide empirical examinations of training methods that may be possible for increased collaboration between other approved private schools and public school districts. Additionally, the project should provide careful analysis of the potential impact of such training methods on the knowledge, skills, and attitudes of school personnel working within regular education settings.

## **Children and Youth at Risk of Developing Serious Emotional Disturbance (Project Impact)**

**PRINCIPAL INVESTIGATOR:**  
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GRANT NUMBER: H237G50029  
BEGINNING DATE: 10/01/95

ENDING DATE: 9/30/98

### **ABSTRACT**

**PURPOSE:** This project will provide a community-based program focused on preventing and treating children with serious emotional disturbance (SED) in a culturally competent manner, using families as a key component.

**METHOD:** Project Impact will target approximately 50 predominantly African-American students, some of whom are in special education classes, between the ages of 12 and 15, who are exhibiting dysfunctional behaviors and are considered to have SED or are at risk for SED. During the planning phase, needs and strengths will be determined through the use of community forums involving students, families, service providers, community educators, leaders, and businesses, and by surveying families and students regarding what they view as their own most important needs. Project staff will identify community resources and individuals that are willing and able to provide services to children with SED and their families. Teachers and project staff will be provided with training and staff development focusing on cultural sensitivity, and culturally competent assessment instruments will be developed to help evaluate children showing signs of SED and their families. In order to increase access to and utilization of mental health services, location of services, service providers, services provided, service hours, and outreach to the community by providers will be closely examined. Project staff will ensure that during initial meetings with children and families, service providers stress the role and importance of the family in the design and implementation of the services the child will receive. Project Impact will train and utilize family advocates from the community to help families prepare for these initial meetings. Direct service methods and interventions that are planned include: recognition of and intervention in social problems; group therapy; family-focused therapy; in-home services; crisis intervention and problem solving services; didactic and educational approaches; community-level interactions; and appreciation and recognition of cultural issues and problems.

**ANTICIPATED PRODUCTS:** By collaboratively creating and implementing culturally competent services designed to prevent and treat SED in African-American children, this project will prevent future costs by enabling families to care for their children and access appropriate services, helping prevent and reduce out-of-home placement costs. Through the Easter Seals network and the Wayne County Regional Educational Service Agency, staff will be able to actively disseminate project information using inservice training, newsletters, meetings, and other media.

### **Aversive Stimuli within Academic Interactions: Implications for Students with Severe Behavior Disorders and Their Teachers**

**PRINCIPAL INVESTIGATOR:**  
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GRANT NUMBER: H023C30071  
BEGINNING DATE: 10/01/93

ENDING DATE: 9/30/96

#### **ABSTRACT**

**PURPOSE:** This project will identify potentially aversive stimuli that occur within the academic instructional process.

**METHOD:** Major program goals to be explored through a series of specific experiments include: (1) assessing the appropriateness of the level of academic materials used in classrooms for students with severe behavior disorders; (2) identifying through direct observation and experimental verification escape- and avoidance-motivated behavior associated with academic materials; (3) identifying through direct observation and experimental verification escape- and avoidance-motivated behavior associated with teacher/student instructional interactions; and (4) identifying through direct observation teacher escape- and avoidance-motivated behavior.

**ANTICIPATED PRODUCTS:** Project findings will be disseminated through research reports, teacher guidelines, and conference presentations. Anticipated findings will document current uses of negative reinforcement within the instructional process and examine the potential of negative reinforcement in therapeutic applications.

**Nondiscriminatory, Culturally-Competent, Collaborative  
Demonstration Model to Provide Services for Children  
and Youth with Serious Emotional Disturbance and  
Prevention Services for Preventing Serious Emotional  
Disturbance: Research on School-Wide Conflict  
Resolution with Peer Mediation**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H237F50028

BEGINNING DATE: 8/01/95

ENDING DATE: 7/31/99

**ABSTRACT**

**PURPOSE:** The project will assist students in developing the interpersonal skills necessary to manage their own conflicts through a school-based conflict resolution/peer mediation program with community and family linkages.

**METHOD:** In the first year of the program, staff will work collaboratively with middle school professionals, parents, and community representatives to: (1) develop a curriculum; (2) train school professionals and students in the curriculum and its implementation; (3) access, develop, and validate data collection instruments; and (4) establish data collection programs. The conflict resolution/peer mediation (CR/PM) program will also be piloted in this year. During the second year, staff will fully implement the CR/PM program in two treatment schools and use two matched middle schools as delayed treatment or control, while also seeking opportunities for impact through parent and community groups. In the third year, staff will fully implement the CR/PM program in the two delayed treatment schools and monitor the program in the original treatment schools as they assume full responsibility for its implementation, while continuing involvement in home and community-based settings. During the fourth year of the project, staff will collect data in all four schools as the delayed treatment schools disengage from project personnel and continue to collect generalization data on all high school students who graduated from the four middle schools.

**ANTICIPATED PRODUCTS:** This project will provide a model for future research in the area by providing a theoretical base as a model, a validated curriculum and training protocol for teachers and student mediators, implementation protocols, validated data collection methodology, and efficacy and generalization data.

## Kakao'o 'ia Na Lei

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H237G50052

BEGINNING DATE: 7/01/95

ENDING DATE: 6/30/98

### ABSTRACT

**PURPOSE:** The project will develop and demonstrate a model to recruit and train natural paraprofessional caregivers from the community to support teachers and parents in creating school and family environments that foster the psychosocial and intellectual development of Native Hawaiian students with or at risk for serious emotional disturbances (SED).

**METHOD:** Phase I of the process will involve building and maintaining a team of stakeholders with a common vision for a seamless system of culturally competent and nondiscriminatory services. Team members will be recruited based on the criteria that they have strong connections to the Native Hawaiian community and have expressed a desire to help it address its' problems. Phase II will employ a five-step framework to guide team members through review and discrepancy analysis of desired and existing services: (1) team members will explore and determine outcomes expected of students following completion of their educational programs; (2) team members will review educational and related services proven successful in contributing to these outcomes for minority group students; (3) team members will review current practices with a focus on their cultural competency and efficacy for Native Hawaiian students; (4) team members will decide what current practices need to be improved, and how; and (5) team members will analyze how identified skills and behaviors can best be imparted to both professionals and natural caregivers. In Phase III, project staff will launch the implementation of innovations and recommended improvements in training and services. It is anticipated that the resulting natural caregiver training program will last for 11 months with a strong emphasis on field activities and practice.

**ANTICIPATED PRODUCTS:** The project will develop curricula for natural caregivers and professionals; evaluation reports; a replication package; and journal articles and conference presentations. Expected results for Native Hawaiian students with or at risk for SED include a decrease in proportions of students identified with SED, improved school attendance and performance, lower dropout rates, greater family involvement in service planning and delivery, increased satisfaction with services, decreases in inappropriate behaviors, improved self-concept and self-esteem, and higher rates of achieving IEP goals.

## Multistage Assessment of Aggressive Behavior

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023N30025

BEGINNING DATE: 9/01/93

ENDING DATE: 8/31/96

### ABSTRACT

**PURPOSE:** The project will implement and evaluate a multistage, multivariate assessment protocol for identifying variables motivating aggressive behavior problems exhibited by students with serious emotional disturbances (SED).

**METHOD:** Key factors hypothesized as contributing to aggressive behavior will include: a social skills deficit; positively or negatively reinforcing consequences; deficits in the cognitive processing of social stimuli; and environmental deficits. The first project phase will implement the multistage, multivariate study involving 150 children with SED, incorporating screening measures and a comprehensive assessment of variables associated with aggressive behavior. In Phase 2 the program will develop appropriate interventions based on the assessment information. These interventions should yield information on the validity of assessment procedures and shed light on the interaction between key hypotheses of the functional model. Four intervention studies using single-case methodology will be employed.

**ANTICIPATED PRODUCTS:** Project methodology and results will be described in papers for publication to research-oriented journals. Inservice workshops and consultation activities will be provided to promote dissemination to practitioners, as will a comprehensive report of project findings.

***SECTION 9:***

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***SEVERE  
DISABILITIES***

## Auditory Characteristics of Children with Autism

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023C50076

BEGINNING DATE: 7/01/95

ENDING DATE: 6/30/98

### ABSTRACT

**PURPOSE:** The project will determine whether hearing sensitivity of children with autism differs from that of children who are normally developing. The investigators will assess whether children with autism experience greater hypo- or hypersensitivity to auditory stimuli than children who are normally developing. The project will also establish whether traditional behavioral audiometric techniques are practical and reliable in the audiologic assessment of this population.

**METHOD:** Three basic experiments are planned. Experiment I examines the hearing sensitivity of children with autism as compared to a control group of children who are normally developing matched by race, gender and developmental age with the experimental group. A test battery of appropriate behavioral and electrophysiological audiologic measures will be employed. Experiment II is designed to determine whether children with autism demonstrate excessive hypo- or hypersensitivity as compared to a matched control group. Observers will view videotapes of children listening to various auditory stimuli and rate the subjects on a scale of attentiveness. Experiment III will examine the practicability and replicability of traditional behavioral audiometric tests used with children with autism. For Experiments I and II, researchers will utilize 20 subjects who have been diagnosed with childhood autism, as well as 20 children who are normally developing. In Experiment III, these 40 subjects will be reassessed to determine test/re-test reliability of the behavioral audiometric procedures. Analysis of variance and basic t-tests will be used to evaluate differences between the groups in auditory measures.

**ANTICIPATED PRODUCTS:** Findings from these experiments will be disseminated through presentations at state and national conferences attended by speech-language pathologists, audiologists, educators, and special educators. Results will also be published in refereed journals and the project staff will provide consultant services for regional and local special education personnel.

## Improving Language Learning Disabilities using Naturalistic Teaching Procedures

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GRANT NUMBER: H023C30070

BEGINNING DATE: 10/01/93

ENDING DATE: 9/30/96

### ABSTRACT

**PURPOSE:** This study will experimentally test the efficacy of integrating language and speech intelligibility training using naturalistic procedures for students with severe disabilities in full inclusion settings.

**METHOD:** In the first project year, staff will carefully evaluate efficacy of targeting improved sound production during naturalistic language teaching and directly compare results to baseline levels of training implemented using traditional pull-out, analogue procedures with settings held constant across training procedures. In years 2 and 3 the naturalistic conversation training will be provided as an integral part of the regular language curriculum and comparisons on social validation assessments of children's language and social gains will be obtained in integrated school, community, and home settings in order to determine whether naturalistic and analogue drill-based procedures differ with regard to generalization of targeted structures to various social contexts and with regard to any differences in impact on social skills and disruptive behavior.

**ANTICIPATED PRODUCTS:** These studies will be directly replicated in the Nashville Metropolitan School District in Tennessee and the Santa Barbara County Schools in California. Teaching improved speech intelligibility using naturalistic conversation training is expected to prove highly effective in training generalized speech production skills; in turn, this will lead to rapid and generalized improvements in language and social skills as well as reductions in disruptive behavior among students with severe disabilities. The naturalistic procedures explored are also expected to prove significantly more cost-effective than existing pull-out models.

**Expanding Behavioral Momentum: Linking  
High-Probability Requests and Peer Interactions to  
Promote Skill Acquisition and Generalization in Young  
Children with Severe Disabilities**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023C30089

BEGINNING DATE: 9/01/93

ENDING DATE: 8/31/98

**ABSTRACT**

**PURPOSE:** The project will expand previous work in behavioral momentum by embedding the high-probability request sequence into peer social interactions, then using these sequences to promote social, motor, communication, and self-help skills.

**METHOD:** Participants in the research will be young children with severe disabilities. Across the various studies the children will be identified as: (1) socially withdrawn or isolate; (2) experiencing substantial motor impairments that limit their abilities to reach, grasp, manipulate objects, maintain head control or move through space; and (3) lacking in expressive communication systems, and/or lacking functional and important self help skills. Observational research methods combined with a series of multiple baseline designs will be used to examine and evaluate the effects of the momentum interventions. Outcomes measured across the series of studies will include each participant's performance of high and low probability requests including: (1) social interactions; (2) motor actions; (3) communication responses; and (4) self-help skills.

**ANTICIPATED PRODUCTS:** Results of individual studies will be used to develop an empirically-based, socially validated curriculum that can be used by professionals and parents to teach children with severe disabilities across settings and developmental domains. Dissemination activities planned include manuscripts describing research results for publication in professional journals, conference presentations, employment of the Educational Resource Information Center (ERIC), and a training manual to facilitate replication.

## Self-Managed Exercise and Stereotypy Project

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023N30001

BEGINNING DATE: 10/01/93

ENDING DATE: 9/30/96

### ABSTRACT

**PURPOSE:** This project will study both the relationship between exercise and aberrant behavior and the methods by which persons with severe disabilities can self-manage exercise routines.

**METHOD:** Across three years, approximately 20 students, ranging in age from 10 to 21 years and receiving services as severely mentally retarded or autistic, will attend exercise sessions, four to five times weekly as part of their school program. Modes of exercise will include electronic treadmills, exercycles, and walking. Measures will be maintained on amount and types of exercise, level of independence on various components of exercise routines, heart rate during exercise, resting heart rate, frequency and duration of aberrant activity, and proportion of time in behavior states. Participants will also receive formal cardiovascular assessments and a field-based treadmill test twice yearly. Analyses of daily behavioral measures and pre/post fitness measures will be compared.

**ANTICIPATED PRODUCTS:** This project has the potential to contribute to broad areas of interest, including: theoretical and applied study of aberrant behavior; implementation of self-managed fitness routines for persons with severe disabilities; the development of reliable cardiovascular fitness assessments, and the long-term effects of exercise and increased fitness on behavior and behavior states. Project findings, strategies and methodology will be disseminated via papers for publication, presentations at national conferences, and workshops and other inservice training opportunities.

## Systematic Instruction of Persons with Profound Disabilities (Project SIPP)

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023C40115

BEGINNING DATE: 9/01/94

ENDING DATE: 8/31/97

### ABSTRACT

**PURPOSE:** This collaborative effort between the University of Georgia and Gwinett County Public Schools will study the effectiveness of instructional strategies for students with profound cognitive disabilities. The project will study more-to-least prompts and graduated guidance, and to develop a manual for service providers on effective instructional strategies for students with profound cognitive disabilities.

**METHOD:** Subjects will be students with profound cognitive disabilities who presently attend integrated school programs. Four to six students will be included in each investigation. Data will be collected by the students' teachers under the supervision of project staff. A multiple baseline or multiple probe design will be used in the investigations. Data will be collected on acquisition, fluency, generalization in both instructional and home environments, and maintenance of the objectives. Data collected will be type and number of prompts given, frequency of correct independent responses, trials to criterion, errors to criterion, instructional time to criterion, response latency, response duration, and criterion for mastery. Staff will select participating students, sites, and teachers, conduct analyses within activities for selection of basic developmental skills to be taught, train teachers and implement experimental procedures, interview parents to ascertain if the child has increased his or her level of partial participation in family routines, and disseminate results. Staff will then develop a manual that describes: (1) the results of investigations; (2) the effectiveness of the strategies; (3) considerations in choosing prompts and reinforcing contingencies; (4) variables for deciding when to change prompts; and (5) considerations for the generalization of skills. The manual will also describe the results of generalization probes into the students' homes.

**ANTICIPATED PRODUCTS:** This project will result in a module summarizing investigation results for special education teachers that will provide a format for faculty to teach teacher trainees relevant information about effective instruction for students with profound cognitive disabilities. Staff will also develop a manual that will help special education teachers teach these students.

### **The Influence of Real-Time Frequency Transposition on the Development and Refinement of Skills of Articulation in Severely and Profoundly Hearing Impaired Children**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023A50064

BEGINNING DATE: 6/01/95

ENDING DATE: 5/31/96

#### **ABSTRACT**

**PURPOSE:** The project will compare the influence of real-time frequency transposition with that of conventional hearing aids in the development and/or refinement of articulation skills among children with severe to profound hearing loss.

**METHOD:** This study will compare the development and refinement of articulation skills among two groups of children who possess nearly equivalent degrees of severe to profound hearing loss. A control group will utilize appropriate conventional amplification to compensate for their hearing loss, while the experimental group utilizes real-time frequency transposition. In

addition, both groups will undergo conventional individual articulation therapy. Pre-, interim-, and post- assessments of articulatory competence will be measured by experienced speech-language pathologists, followed by statistical treatment to assess the relative strengths of association between changes in articulation versus the type of amplification and four other variables.

**ANTICIPATED PRODUCTS:** Research findings will be prepared for publication in refereed journals serving the speech-language pathology and audiology communities. Presentations will be prepared for state and national meetings of speech-language and audiology professional organizations as well.

### **Effects of Social Interactive Strategies on Early Social-Communicative Skills of Children with Autism**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023B50032

BEGINNING DATE: 9/01/95

ENDING DATE: 8/31/96

#### **ABSTRACT**

**PURPOSE:** The project will investigate a training package designed to facilitate the spontaneous use of early social-communicative skills among children with autism in natural classroom environments.

**METHOD:** This project will utilize a multiple-baseline design across participants with generalization probes to evaluate the effects of the interactive training package. Four children with autism who are identified as displaying absent or poor development of eye contact, joint attention, and imitation will be selected from children with disabilities enrolled in early intervention or public school programs. All dependent and independent variables will be recorded using an event recording procedure of the Multiple Option Observation System for Experimental Studies. Direct observation data will be analyzed in terms of change in mean, level, trend direction and stability, latency of behavior change, and percentage of data overlap between experimental conditions through visual inspection of data which will be plotted in a time-lagged fashion across participants.

**ANTICIPATED PRODUCTS:** Dissemination activities will include inservice training, workshops, and technical assistance to allow the practical application of instructional procedures among practitioners and families. In addition, project procedures and findings will be disseminated widely through publications in relevant journals and presentations at professional conferences. The identification of a training package that promotes early social-communicative skills will be a major contribution to the literature on autism.

## **A Longitudinal Study of Generalization and Maintenance in Integration Settings for Students with Autism**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023C30055

BEGINNING DATE: 7/01/93

ENDING DATE: 6/30/98

### **ABSTRACT**

**PURPOSE:** This project will continue previous investigations of procedures for mainstreaming and integration of children with autism.

**METHOD:** Project objectives include: (1) longitudinal ecobehavioral analysis of existing integration programs for students with autism including identification of successful components and/or weaknesses; (2) building upon these findings to carefully plan generalization studies to increase integration time and success; (3) replication studies for effective generalization strategies with follow-up; (4) pilot studies in middle schools including environmental assessments, integration, and generalization studies. These goals have been designed to extend current integration technology, to expand the knowledge base to include generalization procedures, to investigate self-monitoring and continue documentation of peer-involved activities in integrated environments, to provide middle school demonstrations, to monitor program effects in the areas of academic, social and behavioral competence for students with autism and their peers, and to disseminate findings to improve the quality of life for all students.

**ANTICIPATED PRODUCTS:** These studies and databases will provide a much needed evaluation of current and progressively improving integration technology. Continuation of current research objectives is required to define a model, determine variables congruent with successful implementation, provide additional strategies to the knowledge base, address the issue of generalization of procedures, determine long-term effects and outcomes, and explore dissemination and training methods which ensure future adoption.

## **Project Reading ABC: An Alternative Reading Assessment Battery for Children with Severe Speech and Physical Impairments**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023F50011

BEGINNING DATE: 1/01/96

ENDING DATE: 12/31/98

### **ABSTRACT**

**PURPOSE:** The project will assemble an interdisciplinary team of experts in assessment, literacy, and severe speech and physical impairments (SSPI) to systematically develop alternative reading assessments, including an alternative reading assessment battery for school-aged children with SSPI.

**METHOD:** Subjects will be school-aged children with SSPI as well as nondisabled peers matched for gender, race, native language, and developmental reading abilities. Children with SSPI will be sampled from assessment centers and concentrated instructional programs in Chicago, Illinois (N=15), Denver, Colorado (N=30), Plattsburgh, New York (N=10), Chapel Hill, NC (N=30), and Durham, NC (N=40). Assessment battery development will be initiated with the reading comprehension subtest. In Phase I, the research team will validate the existence and importance of a construct (i.e., knowledge, strategy, attitude) to be assessed by a particular subtest, review existing assessments of that construct for typically developing readers, and consult with reading and disability assessment authorities. In Phase II, the team will seek to develop prototypes of alternative ways to assess the construct for children with SSPI that have acceptable reliability. In Phase III, the team will seek to answer questions about the construct and predictive validity of the alternative assessments by comparing performance of nondisabled children on alternative and more traditional measures of the construct. In Phase IV, when the alternative reading assessment battery has demonstrated acceptable reliability and validity, the team will strengthen the case for validity of the alternative assessments across children of differing abilities, both within and between multiple measures.

**ANTICIPATED PRODUCTS:** While the assessment battery itself will be the primary product of this project, plans for disseminating project findings include: research reports to be published through the Center for Literacy and Disability Studies; peer-reviewed journal publications in literacy and disability journals; newsletter and bulletin board system articles; conference presentations; oral presentations in workshops, guest lectures, and courses conducted by staff of the CLDS; and publication, marketing, and distribution of the test battery itself by Communication SkillBuilders within the Psychological Corporation.

## **Rethinking Social Interventions for Young Children with Autism**

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GRANT NUMBER: H023C40113

BEGINNING DATE: 9/01/94

ENDING DATE: 8/30/97

### **ABSTRACT**

**PURPOSE:** The project will extend knowledge of environmental and other influences on the social behavior of students with autism by incorporating information on naturally occurring behaviors.

**METHOD:** A series of conditional probability analyses will be conducted to examine environmental relationships that correspond to the display of crucial social behaviors in students with autism. Findings on normal developmental trends in peer interactions will suggest additional educational goals, and comparisons of typical and atypical development will have implications for the design of instructional procedures that will better generalize and maintain. A set of observational conditions will be specified in a protocol which will permit more efficient assessment of children's peer-related social behavior. The assessment format will be validated via comparison to an extensive naturalistic database. The resulting product should prove useful to early intervention specialists and preschool educators, as well as to researchers. Functional analyses will be conducted to determine whether the social interests delineated in the individual descriptive analyses can be used to control improved social responding. The experimental conditions will be educational intervention that make use of children's social interests as reinforcers, and that incorporate information on environmental influences of successful social behavior.

**ANTICIPATED PRODUCTS:** Research findings will be packaged in user-friendly formats, and advance arrangements will be made for on-request conversion to large print, Braille, or audio cassette. The primary dissemination path will highlight hands-on training of developing autism specialists.

## **Concomitant Use of Matrix Training Strategy and Mand-Model Procedure in Acquisition and Generalization of Early Semantic Relational Forms with Children Who Use AAC**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023B50014

BEGINNING DATE: 7/01/95

ENDING DATE: 6/30/96

### **ABSTRACT**

**PURPOSE:** This project will investigate the acquisition and generalized production of two-term semantic relationships by children with severe cognitive disabilities and little or no functional speech.

**METHOD:** Five children with severe cognitive disabilities and little or no functional speech who use graphic symbols on augmentative communication boards will participate in this investigation. A multiple baseline design across sets of action-object combinations with generalized probes of untrained combinations will be used to teach generalized production of word combining skills using a matrix-training strategy concomitantly with mand-model procedures. Baseline measurements and intervention procedures will occur during play activities either in a classroom or in a separate area of the classroom. Instructors will provide eliciting situations for target response by asking open-ended questions requiring more than "yes" or "no" answers or environmental arrangements. Subjects will be expected to respond by pointing to the action symbol and object symbol on their symbol boards. Generalization will be measured by classroom teachers keeping anecdotal records of two-term word productions including what symbols were used and how they were used in settings other than training setup. Researchers will investigate the effect of a concomitant use of matrix-training strategy and mand-model procedure and its effectiveness in acquisition and generalization of the rule-based strategies for two-word combinations by children with little or no functional speech.

**ANTICIPATED PRODUCTS:** Findings from this research will help clinicians and teachers to teach comprehension and production of generalized word combining skills to children with severe cognitive disabilities and poor speech. Specific planned dissemination activities include both presentations in professional forums and the preparation of a manuscript for publication in a professional refereed journal.

**PRINCIPAL INVESTIGATOR:**

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## The Inclusive Education Project

GRANT NUMBER: H023C20212

BEGINNING DATE: 8/01/92

ENDING DATE: 7/31/96

### ABSTRACT

**PURPOSE:** This project will conduct a longitudinal investigation of processes and outcomes in regular education classrooms where students with moderate and severe disabilities are enrolled full time.

**METHOD:** The project will begin with an open-ended qualitative study focused on 12 students with moderate or severe handicaps during the first year; the study intends to clarify and refine hypotheses regarding key study questions and objectives. Year 2 will focus on the development of quantitative measures of classroom processes and student outcomes which are sensitive to variance in the parameters described through the initial qualitative study, and the number of participants will expand to 24. Years 3 and 4 will entail ongoing follow-along of students participating in the project, as well as intervention research aimed at increasing implementation of practices in regular classroom environments which have been identified as contributing to positive outcomes.

**ANTICIPATED PRODUCTS:** This project will provide data to demonstrate outcomes for students with disabilities and students without disabilities participating in full inclusion programs. Program and teacher characteristics associated with specific outcomes will be identified. Interventions aimed at modifying aspects of classroom environments hypothesized to affect outcomes will be developed, and a variety of quantitative measurement strategies with high social validity will also be developed.

## Identifying Reinforcers for Students with Developmental Disabilities Who Are Difficult to Motivate: Promoting Skill Acquisition Maintenance, and Generalization

GRANT NUMBER: H023C40063

BEGINNING DATE: 9/01/94

ENDING DATE: 8/31/98

### ABSTRACT

**PURPOSE:** The project will conduct a series of studies on the reliability, predictive validity, generalization, cost-effectiveness, and social validity of three procedures for identifying reinforcers for functional skill learning by students with developmental disabilities.

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**METHOD:** Two groups of 24 students from three educational agencies whom school personnel find either moderately difficult or very difficult to motivate have been identified. After training, two teachers will independently administer three reinforcement identification methods (RIM) for each student at two testing periods separated by 2 months. Alternate forms and test-retest reliability for each RIM will then be computed. The quality of the information of the RIMs will then be assessed by teaching the functional skills using the reinforcers identified by each method. Probes 3 and 6 months later in new training settings will be used to assess the predictive validity and generalizability of the RIMs. Measurement of staff time and a consumer satisfaction rating will allow comparisons to be made regarding cost-effectiveness and social validity.

**ANTICIPATED PRODUCTS:** Dissemination activities will include development and provision of a training manual, videotape, workshops, newsletter, journal publications and presentations at national meetings.

### **A Comparative Study of Social Development of Children with Autism: An Ecological Approach**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023B50008

BEGINNING DATE: 1/01/96

ENDING DATE: 12/31/96

#### **ABSTRACT**

**PURPOSE:** This project will examine in detail the development of social behaviors of individuals with autism, comparing these behaviors to those of control subjects matched for gender, age, and Intelligence Quotient (IQ).

**METHOD:** Eight children with autism, ages 5 through 11, will be selected by IQ and gender criteria. Ecological methods of narrative recording in the natural environment will be applied to study the behavior of individuals in home and school settings. Subjects will be observed for half a day in their natural environments, including 2 to 3 hours during structured activities and 2 to 3 hours during free and open activities. Behavior of children will then be compared during structured and free times in home and school settings. After data has been transcribed and analyzed, it will be analyzed according to ecological methods.

**ANTICIPATED PRODUCTS:** The study of social development in autism will aid researchers attempting to understand the fundamental nature of the disability, also allowing for participation by subjects often excluded from previous research. A greater understanding of social development will help professionals and families design more appropriate and meaningful interventions and treatments. Project staff plan on presenting findings at a national conference and writing up results for possible journal publication.

## **The Effects of American Sign Language (ASL) Fluency Upon the Development of Linguistic, Social, and Cognitive Competence in Deaf Children**

### **PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023T30007

BEGINNING DATE: 10/01/93

ENDING DATE: 9/30/96

### **ABSTRACT**

**PURPOSE:** Through three separate studies, this project will compare the effectiveness of using American Sign Language (ASL) versus Simultaneous Communication (SC) as the language of instruction in educational settings for profoundly deaf children in early, middle, and late childhood.

**METHOD:** The first study will compare ASL-exposed groups to groups of deaf children in programs using SC, in order to compare the effectiveness of ASL and SC as the language of the classroom upon a child's linguistic, social, and cognitive competence. The second study will focus on older students, using a combined case study/experimental approach to examine the effectiveness of using a Cooperative Language Program that teaches secondary school-aged deaf students with limited English proficiency to use first language (ASL) metalinguistic skills to develop second language (English) skills. The third study will address the issue of how young deaf children from non-ASL using, hearing, families will learn ASL. The effectiveness of a preschool classroom-based ASL Early Intervention program to a home-based ASL Early Intervention program. This last study will be experimental, but will also involve some case study analyses.

**ANTICIPATED PRODUCTS:** The project will submit articles and other information about this research to appropriate professional outlets for publication including journals, professional and consumer newsletters, and book chapters. Outcomes will be presented to at least one local/regional audience and one national audience per year. Each collaborating program and collaborating teacher will be presented with a summary of research findings. Parents of participants will be provided with a brief summary of research findings as well.

## **The Use of Natural Supports to Increase Integration in Supported Employment Settings for Youth in Transition**

### **PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023A50104

BEGINNING DATE: 10/01/95

ENDING DATE: 9/30/96

### **ABSTRACT**

**PURPOSE:** The project will investigate a number of important knowledge gaps by researching and disseminating specific natural support strategies for increasing social integration between employees with and without severe disabilities and supported employment settings.

**METHOD:** Staff will develop and evaluate specific natural support intervention procedures for increasing the social integration of employees with severe disabilities using established single-subject, clique analysis, and social validation methodologies. Specifically, the two studies will evaluate: (1) if active and passive social mediating devices increase social integration at the work site; and (2) if teaching nondisabled coworkers instructional strategies increases the integration of workers with severe disabilities. Study 1 will involve five employees with severe disabilities who have limited interactions with nondisabled coworkers. These employees will receive social interaction training during lunch and break periods when coworkers are not present, and will be observed exercising these skills in other settings. Study 2 will teach coworkers how to interact with supported employees by having coworkers provide instruction on job tasks as a form of natural support. Five employees with severe disabilities will be paired with five nondisabled coworkers who have similar job tasks and who are interested in learning how to instruct workers with disabilities. Intervention procedures will involve teaching coworkers how to use instructional tactics of verbal instructions, modeling, practicing steps with corrective feedback, praise, and quality-control checking. Length of intervention will depend upon acquisition rates.

**ANTICIPATED PRODUCTS:** A variety of professional conferences, professional journals, and newsletters have been targeted for dissemination of articles and presentations outlining results of this research.

***SECTION 10:***

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***TEACHER TRAINING,  
RETENTION,  
AND  
SUPPLY AND DEMAND***

ERIC  
Full Text Provided by ERIC

## **Trends in Teacher Entry, Retention, Turnover, Attrition, and Shortage in Special Education**

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GRANT NUMBER: H023C40102

BEGINNING DATE: 7/01/94

ENDING DATE: 12/31/97

### **ABSTRACT**

**PURPOSE:** This project will comprehensively analyze trends in the entry, retention, turnover, teaching field transfer, and attrition of special education teachers (SETs) on the national level.

**METHOD:** Project research is based on three iterations of two sets of sample surveys conducted by the National Center for Education Statistics (NCES), USDE, which will include the Schools and Staffing Surveys (SASS), and the Teacher Follow-up Surveys (TFS). The SASS are composed of several basic questionnaires administered by mail with extensive telephone follow-up. A stratified systematic probability proportionate-to-size selection procedure was used to draw the SASS sample. The TFS provides the only database at the national level for the study of attrition from the teaching profession with a representative sample of teachers. A major feature of the database is the inclusion of follow-up interviews of teachers who: (1) were retained in their teaching positions; (2) transferred to different teaching positions; and (3) left the teaching profession entirely. This project provides the application of a multidimensional model for tracking teacher career transitions using three iterations of two national sample surveys. All statistical analyses will be based on the national estimates of teachers computed by applying appropriate weights to the numbers of teachers in their respective samples. The project will continue for a 42-month period, and the pace of the project has been designed in relation to the amount of personnel resources budgeted and the availability of the SASS and TFS data bases for research.

**ANTICIPATED PRODUCTS:** As a result of this project, a large amount of new information will be provided about the national status of, and trends in SET entry, retention, turnover, teaching field transfer, attrition, and shortage. The project will also result in considerable insight into the dynamics of the SET teacher force and the teacher shortage problem.

## The Role of Paraprofessionals in Quality Inclusive Educational Programs

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GRANT NUMBER: H023B50016

BEGINNING DATE: 9/01/95

ENDING DATE: 8/31/96

### ABSTRACT

**PURPOSE:** The project will study the role of the paraprofessional in quality inclusive education programs, building an empirical base for this role and examining critical job competencies and components of job descriptions.

**METHOD:** This study will examine the roles and responsibilities of eight paraprofessionals working in grades 2-5. Participants will be drawn from four elementary schools from four school districts in New York State that have participated in a larger scale evaluation of their inclusive programs. Data collection will include interviews and direct observations of paraprofessionals, as well as interviews with the principals of participating schools, the director of special education for each district, parents of students with special needs who are being supported by paraprofessionals, and the general and special education teachers who work with these paraprofessionals. In addition, relevant district documents will be examined. Study questions will address: (1) how the teaching team views the role and responsibilities of the paraprofessional; (2) paraprofessional involvement in individual program planning; (3) types of job training paraprofessionals receive to prepare them to carry out their duties; (4) in what ways teaching assistants might be assigned to work one-on-one with students with disabilities versus a support role within the class that includes work with students with and without disabilities.

**ANTICIPATED PRODUCTS:** Research results could serve as a reference for paraprofessional staff development and contribute to the national discussion of appropriate roles and responsibilities for paraprofessionals in inclusive education. Project staff hope to disseminate findings through a presentation at one national conference.

## **Teacher Preparation for Diverse Classrooms: Performance-Based Assessment of Beginning Teachers**

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GRANT NUMBER: H023B50041  
BEGINNING DATE: 9/01/95

ENDING DATE: 10/31/96

### **ABSTRACT**

**PURPOSE:** This project will use a performance-based assessment model to examine the effects of preservice preparation factors on the degree to which beginning teachers use culturally responsive teaching (CRT).

**METHOD:** The primary tool of assessment will be Praxis III, a performance-based assessment for beginning teachers developed at the Educational Testing Service. Research staff will examine how the following three preservice factors impact the practice of CRT by beginning teachers: (1) preparation in general vs. special education teacher education programs; (2) levels of preservice teacher preparation in cultural issues; and (3) preservice university preparation. Using Praxis III, investigators will gather records of evidence for 70 beginning teachers from general and special teacher education programs at four universities in Florida. Evidence will be gathered from teacher and classroom profiles, pre- and post-observation interviews, and observations. These records will be analyzed with both qualitative (MANOVA) and quantitative methods.

**ANTICIPATED PRODUCTS:** Project findings are expected to enhance the knowledge base of teacher educators regarding preservice factors that may affect the practice of CRT by beginning teachers. Final products of the study will be disseminated through professional journals and conference presentations to enhance the research base and provide methodological information to researchers in cultural diversity, teacher education, and teacher assessment.

## **The Paraprofessional Role in Inclusion**

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GRANT NUMBER: H023A50092  
BEGINNING DATE: 9/01/95

ENDING DATE: 8/31/96

### **ABSTRACT**

**PURPOSE:** The project will conduct a study of the extent to which paraprofessionals are currently involved in inclusion of children with disabilities and the nature of their roles. The project will also construct a framework that guides the range of ways in which paraprofessionals could be constructively involved in the inclusion of students within the school and in the larger community.

**METHOD:** Research will employ both quantitative and qualitative methods, including a mail survey of 150 paraprofessionals working in inclusive classrooms at various grade levels and locations to determine the nature and extent of their involvement in the educational process and semistructured interviews with a smaller sample of 30 paraprofessionals to follow up on survey findings in depth. Follow-up interviews will focus on a purposeful sample of survey respondents reflecting a range of ethnicity, roles in inclusion, awareness of issues, types of disability, and geographic location. Three separate focus groups will also be conducted to gain the unique perspectives of parents, classroom teachers, and special education teachers.

**ANTICIPATED PRODUCTS:** Expected outcomes include a better understanding of the roles paraprofessionals currently play and practical ways for school to improve inclusion practices through the use of paraprofessionals. Findings will be distributed through written products and conference presentations to families, educators, researchers, and paraprofessionals.

## **Development and Validation of a Partnership-Consultation-Collaboration-Professional Development Model to Bridge the Gap Between Research and Practice**

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GRANT NUMBER: H023G50012

BEGINNING DATE: 8/01/95

ENDING DATE: 7/31/99

### **ABSTRACT**

**PURPOSE:** The project will articulate, implement, evaluate, and disseminate an existing model designed to improve the practices of special and regular education teachers and of parents in inner-city communities.

**METHOD:** Participants in the project will include 975 students (195 with disabilities), their parents, 36 teachers and administrative staff of three school buildings in three school districts, and 10 researchers. Two of these schools will be from economically disadvantaged (over 35% in poverty) urban communities. Key components of the model to establish and maintain sustained research-practice relationships between researchers and practitioners will address partnership, collaboration, consultation, and professional development. Using a multiple baseline design across schools and a multi-method (qualitative and quantitative) measurement model, functional relationships between use of the model and changes in implementation of practices, instructional processes, and products/outcomes on students with and without disabilities will be examined. Additional participants will include the staff and students of a third, out-of-state replication school that will serve as an independent replication site for the model prior to national dissemination.

**ANTICIPATED PRODUCTS:** In addition to direct benefits to participants, the project will result in new knowledge in the form of empirical and qualitative findings concerning the model, its components, processes, products, and outcomes. This knowledge will be published in the professional literature and used in preservice teacher training. This knowledge will also be represented in a "blueprint" of training, materials, media, and technology for replication in local schools.

## **Collaborative Co-Planning Between General and Special Educators**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023B50063

BEGINNING DATE: 9/01/95

ENDING DATE: 1/31/96

### **ABSTRACT**

**PURPOSE:** The project will evaluate the effectiveness of a structured collaborative co-planning model for general and special educators.

**METHOD:** The model to be employed has been designed to: (1) increase the number of instructional interventions generated and implemented by general and special education teachers for students with learning disabilities included in the general education classroom; (2) increase the on-task classroom behavior of students with learning disabilities; (3) increase the number of positive interactions between general and special educators and their students with learning disabilities; (4) increase the number of positive interactions among students with learning disabilities and their peers; (5) increase the general and special education teachers' perceptions of positive academic achievement for students with disabilities; and (6) increase self-perceptions of positive academic achievement among students with learning disabilities. Forty-eight general and special education teachers from four local education agencies will participate in the project through team or co-teaching arrangements in sixth grade classrooms. Each teacher "team" will have a minimum of two students with learning disabilities. Qualitative and quantitative sources (e.g., interviews, classroom observations, teacher reflections in journals and logs, and Likert-type ratings instruments) will be utilized to examine the results of the project and the effectiveness of the program.

**ANTICIPATED PRODUCTS:** Findings will have implications for LEA personnel in the planning and implementation of inclusive school or collaboration programs in which general and special educators team or co-teach. Additionally, results will impact preservice and inservice teacher trainers as they attempt to replicate the model in developing new collaborative or inclusive school programs or refining extant programs. Project results will be disseminated at the college level to preservice teachers to provide them with valuable collaborative skills. Project findings will also be disseminated through journal articles, conferences presentations, and inservice workshops.

***SECTION 11:***

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***TECHNOLOGY  
AND  
SOFTWARE***

**PRINCIPAL INVESTIGATOR:**

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**Project LITERACY-HI: Literacy Improvement via Text Enhancements and Reading Assistance for Children and Youth with Hearing Impairments**

GRANT NUMBER: H180G30027

BEGINNING DATE: 6/01/93

ENDING DATE: 5/30/96

**ABSTRACT**

**PURPOSE:** This project will conduct research into the benefits of electronically-enhanced text for mainstreamed students who are hard-of-hearing.

**METHOD:** Participating students (N=77) will be provided with Macintosh PowerBooks containing electronically-enhanced versions of their classroom textbooks. Short-term effects of electronically-enhanced reading materials on the comprehension of content-area materials and academic achievement in regular classes will be assessed, as will the long-term effects on the literacy skills, academic achievement, and psychosocial development of students who are hard-of-hearing. Additional research will explore the extent to which environmental factors effect and are effected by the use of enhanced reading materials among such students.

**ANTICIPATED PRODUCTS:** It is anticipated that this technology will greatly enhance students' abilities to read and comprehend text from content area materials by supporting their literacy needs unobtrusively, thereby maximizing their chances for success in least restrictive environments. Technical reports will be written on each phase of the project. Articles will be written for publication in technology-oriented, content-area, language arts, and special education publications. Presentations will also be made at national conferences.

**Project CONNECT: Content-Area-Literacy Networked Notetaking for Exceptional Children and Teachers**

GRANT NUMBER: H180G40066

BEGINNING DATE: 6/01/94

ENDING DATE: 5/31/97

**PRINCIPAL INVESTIGATOR:**

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**ABSTRACT**

**PURPOSE:** The project will research the benefits of synchronous notetaking strategies using portable laptop computers and a wireless network.

**METHOD:** Participating students will be selected from three populations for whom notetaking in regular content area classes is often difficult: students with learning disabilities, students with severe hearing impairments, and students with severe upper extremity dysfunction. All participating students will be provided with Macintosh PowerBooks for regular class notetaking and will be assisted by trained notetakers using the same equipment. These laptop computers will be linked wirelessly and together they will create notes from class presentations and discussions using synchronous writing software. Data will be gathered to (1) uncover the specific notetaking strategies most important for different types of students, (2) determine effective ways for students to manipulate and use the notes for studying outside of class, and (3) explore ways to increase students' independence and personal responsibility for the notetaking process.

**ANTICIPATED PRODUCTS:** A technical report will be written at the end of each project year describing and summarizing the results of research efforts to date. Researchers have arranged for the provision of the software used at a discounted price to schools along with project training materials and a descriptive videotape. Findings will also be submitted to professional publications and presented at conferences on state, regional, and national levels.

### **Training Hispanic Teachers to Develop English Literacy Lessons Using Hispanic Culture and Multimedia Technology**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H180G50035

BEGINNING DATE: 7/01/95

ENDING DATE: 6/30/98

#### **ABSTRACT**

**PURPOSE:** The project plans to increase the English literacy skills of Hispanic students who are deaf through the use of Hispanic cultural themes presented via multimedia.

**METHOD:** This project will (1) train teachers who teach students who are deaf from Hispanic backgrounds to use multimedia technology; (2) train teachers to develop literacy software centering around the theme of Hispanic culture at elementary, junior high, and high school levels; (3) implement and evaluate these literacy lessons in classrooms with Hispanic students who are deaf; and (4) disseminate a series of prototypical Hispanic-oriented multimedia CD-ROMs containing literacy lessons which are designed for users who are deaf. In addition to multimedia adaptations of popular Hispanic childrens' books, the CD-ROM lessons will include biographical sketches of successful Hispanic adults who are deaf. Vocabulary enrichment will be supported

through the inclusion of visual demonstrations of key terms as expressed in and Spanish sign language.

**ANTICIPATED PRODUCTS:** During the three-year project, staff expect to develop five CD-ROM literacy instruction packages. Each CD will contain 10-15 literacy lessons featuring Hispanic culture. Topics will include: children's stories, legends, festivals, proverbs, crafts, jokes, folktales, art, poetry, history, recipes, and games. Narration and text on the CDs will include English written text as well as spoken English and Spanish, signed English and American Sign Language, and Spanish written text. Annual progress reports and other articles on the project will be prepared for submission to Lamar University publications as well as local, state, and national media.

### **Examination of the Effectiveness of a Functional Approach to the Delivery of Assistive Technology Services in Schools**

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GRANT NUMBER: H180U50025  
BEGINNING DATE: 8/01/95

ENDING DATE: 7/31/96

#### **ABSTRACT**

**PURPOSE:** This project will examine the impact of the use of a recently-conceptualized unifying model of human function to guide the development and delivery of assistive technology services in public schools.

**METHOD:** The functional model to be used focuses on identification of demands that are placed on an individual from the environment and the functional responses that are required to respond to those demands. Functional responses are made within the context of personal perceptions, the available personal resources, and the external supports (including assistive technologies) that can be provided. Research will be conducted to identify commercially-available assistive technology assessment instruments and development of specifications for assistive technology assessment protocols. Research will also conduct an initial comparison of assistive technology information systems, and procedures will be developed for researching other identified information systems. Procedures will be developed for conducting research on interaction analyses occurring during assistive technology IEP meetings, as well as procedures for guiding the evaluation of assistive technology effectiveness. Project staff will develop instrumentation for conducting critical incident studies to determine the competencies needed by those who are involved in delivering assistive technology services. Initial training materials, procedures for evaluating their effectiveness, and guidelines for providing training for those who will be implementing the policies and procedures will be developed. Baseline information about existing assistive

technology policies and procedures will be collected as well. A variety of qualitative and quantitative research methodologies will be employed to answer key research questions, including survey research, case studies, single subject research, critical incident studies, interviews, direct observation, and evaluation research. Following comparison of this baseline data with research findings based on assessment of outcomes among students receiving these technology services, the final summer of the project will be devoted to analysis of project effectiveness and preparation of the final report.

**ANTICIPATED PRODUCTS:** Project findings will be presented at state and national conferences, and an article reporting on research comparing software packages will be prepared for publication in a professional journal. A document of Guidelines for Providing Assistive Technology Services in Schools will be generated, to include a description of what was learned as a result of various project investigations. A manual will also be developed for each of the screening and assessment procedures used in the project. Screening and assessment devices will also be discussed in a series of reports for consumers.

## **A Computerized Assessment Environment to Promote Literacy in Assessment for Individuals with Disabilities**

GRANT NUMBER: H180G50015

BEGINNING DATE: 3/01/95

ENDING DATE: 2/28/98

### **PRINCIPAL INVESTIGATOR:**

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### **ABSTRACT**

**PURPOSE:** The project will conduct the second phase of research to (1) assess the overall efficiency and desirability of a computerized testing environment for individuals with disabilities, and (2) to systematically investigate the effects of specific modifications on test performance of students with disabilities, with the goal of improving the performance on tests and increased inclusion of students in district assessment performances.

**METHOD:** In Phase I of this research, 53 special education teachers and related service personnel were surveyed to determine the most common problems that special education students have in taking tests and the most common modifications used. Data from this phase will be incorporated into Phase II analysis, and software developed as a result of this research will be used in Phase II experiments. After Phase I research is used to identify tests and test items currently in use that can be used in a computerized testing environment for assessing students with disabilities, staff will investigate the effectiveness and suitability of the computerized testing environment for administering tests and delivering test modifications for students with disabilities. The effects of specific computer-delivered modifications on test performance of students with specific disabilities will be systematically

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investigated. Finally, data will be evaluated in preparation for dissemination of results, including suggestions for continuing experimental comparison of performance on computerized modified tests with traditional test administration procedures, both modified and unmodified. The computerized assessment environment will be field-tested in four diverse special education departments representing different geographic, demographic, and administrative characteristics.

**ANTICIPATED PRODUCTS:** Results of research will be disseminated in two reports and also through publication and presentation of research results. The first report will contain a description of the project design, a description of prototype software design, and a project evaluation section. The second report will be written for school district management personnel, and will outline the costs and benefits of using the model for student assessment and test development.

### **National Center to Improve the Tools of Educators (NCITE)**

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GRANT NUMBER: H180M10006

BEGINNING DATE: 10/01/91

ENDING DATE: 9/30/96

#### **ABSTRACT**

**PURPOSE:** This project will establish a center to advance the quality of technology, media, and materials (TMM) for providing special education and related services to children with disabilities.

**METHOD:** The Center will evaluate technology, media, and materials across age groups (early childhood to transition), disabilities (mild to severe), and outcomes (enhancing academic learning to improving social relationships.) Partnerships will be formed with major stakeholders including parents, teachers, administrators, researchers, developers, producers, distributors, and representatives of private industry. Major activities will include: developing a strategic framework for aligning design of TMM with needs of children, educational activities, and procedures; conducting analyses and syntheses of quality TMM; providing networks, exchanges, meetings, and focus groups to review and exchange information; and developing and disseminating materials which provide guidance to TMM developers, producers, and distributors/publishers.

**ANTICIPATED PRODUCTS:** Products for dissemination will include research syntheses, newsletters, and guidelines for producers, developers, and publishers of TMM.

## **Experimental Validation of the Effects of Assistive Writing Technologies on the Literacy of Students with Disabilities**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H180G40065

BEGINNING DATE: 7/01/94

ENDING DATE: 6/30/97

### **ABSTRACT**

**PURPOSE:** This project will conduct a program of single subject research which, when mapped into a comprehensive conceptual model, will establish the effects of assistive writing technologies such as voice recognition, word prediction programs, and alternative keyboard systems on the writing skills and literacy of children and youth who have disabilities.

**METHOD:** Following collection of baseline data on the writing skills of students by teachers, a technology specialist and project staff will establish the experimental conditions of the research study. Training in the operation and maintenance of assistive writing technology will be provided to school staff, as will training in the procedures for collecting weekly assessment data. After collection and analysis of project data, weekly teacher follow-up will be conducted by phone. Writing technology will be reconfigured as needed, and inservice and training support will be provided for ongoing integration of writing technology.

**ANTICIPATED PRODUCTS:** In addition to submission of articles on project findings to relevant professional journals, project staff will produce a series of technical reports detailing project findings. Findings will also be presented at professional meetings, and copies of training curriculum materials will be made available to interested parties.

## **An Interactive MultiMedia Approach to Teacher Training Designed to Reduce the Gap Between Research and Practice**

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GRANT NUMBER: H023B50025

BEGINNING DATE: 7/15/95

ENDING DATE: 7/14/96

### **ABSTRACT**

**PURPOSE:** The project will develop and validate an interactive hypermedia training program to train teachers in one complex teaching practice: the Concept Mastery Routine (CMR).

**METHOD:** Once information gathered from a literature review and consultations with expert trainers and teachers has been compiled, project staff will develop a refined version of the Interactive Hypermedia Program (IHP) that will maximize teachers' choice in learning, and hopefully increase teachers' understanding and ability to implement the CMR in their classrooms. Text and graphic displays will be collected, as will audio segments from teachers commenting on their use of the CMR with students. Additional audio will provide a running commentary and narration to accompany text and graphic displays. Video segments will illustrate correct usage of CMR with students, and will be designed to clarify, elaborate, and extend the information provided in text and graphic displays. An intervention study (yet to be designed) will focus on comparing the effectiveness of the IHP to a traditional teacher training program in terms of impact on teacher knowledge and behavior. Sets of 30 experimental and control teachers will complete questionnaires and pre- and post-tests of CMR understanding.

**ANTICIPATED PRODUCTS:** It is anticipated that development of the Interactive Hypermedia Program for training teachers in a complex instructional practice will provide a viable solution to bridge research to practice. Descriptions of the project, position papers, and research reports will be written by project staff for publication in regular and special education journals. The possibility of presenting findings at national and state education conferences will also be pursued.

## Assistive Technology in the Cognitive Realm: Tools for Daily Living

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H180T40053

BEGINNING DATE: 1/01/95

ENDING DATE: 12/31/97

### ABSTRACT

**PURPOSE:** The project will utilize existing technologies to assist a group of adolescents and young adults with cognitive impairments to use technology to "work around" their cognitive limitations in terms of remembering and implementing metacognitive routines.

**METHOD:** This project will develop and implement a series of software modules to help users access relevant information and knowledge to improve the quality of their life in the community; develop skills for exercising increased personal autonomy in decision making; manage day-to-day living situations and challenges; and promote the development of increasingly sophisticated problem-solving strategies. Students aged 17-21 will be nominated by teachers for participation in the project. Interviews with subjects will examine their interests and needs so software packages can be tailored to meet these needs. Field testing will focus on the refinement of the graphic user interface, the user/prompt interaction sequences, and the kind of training needed to support users in their initial phases of learning and ongoing interaction with the system. Project evaluation will rely on the use of multiple methods including qualitative and quantitative techniques for data collection and analysis.

**ANTICIPATED PRODUCTS:** The project's creation of innovative tools using varied and integrated media and materials should enable individuals with disabilities to achieve the outcomes expected of all students, such as independence, productivity, and a quality of life that promotes equity in opportunity. The process will also enable the learner across environments by fostering the creation of state-of-the-art instructional environments both within and outside school settings.

## **Developing Technology, Media and Materials to Enhance Student Self-Determination Within Transition Planning**

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GRANT NUMBER: H180A40071

BEGINNING DATE: 7/01/94

ENDING DATE: 6/30/97

### **ABSTRACT**

**PURPOSE:** The project will enhance the utilization of a transition planning strategy that incorporates a self-determination process as a foundation through the development of computer software, broadcast quality video tapes, and a wide array of materials.

**METHOD:** The three basic steps of this project will include the development of appropriate technology, materials, and media to support a transition planning strategy that enhances student self-determination within the IEP process, training a large sample of stakeholders on how to use the strategy, and training potential users and trainers of the strategy on how to use the transition planning strategy and its supporting materials. The achievement of student self-determination within the IEP process requires that students must: (1) forecast their long-range goals and anticipate how to reach them; (2) be able to learn their own strengths and weaknesses; and (3) have a workable strategy for using this information themselves. This approach should be supported by effective materials including technology and effective media supports. In order to meet these conditions, project staff will focus on a strong foundation of work in: (1) teaching adolescents with disabilities how to build a sense of self-empowerment; (2) developing assessment instruments in areas that pertain to transition; and (3) designing programs and developing materials that improve transition services in local communities. Student self-evaluation will include such areas of potential student achievement as academic skills, vocational skills, independent living skills, and personal/social skills. While teaching self-evaluation practices to students with disabilities through modifications of the Transition Skills Inventory, staff will develop procedures for negotiating differences of opinion, and will review other relevant standardized tests.

**ANTICIPATED PRODUCTS:** This project will result in a series of training materials, software for a computerized management information system to support the overall strategy, and a set of objectives and tasks for addressing high priority program standards over the course of a year.

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## Telecommunications for All

GRANT NUMBER: H180J30025  
BEGINNING DATE: 8/01/93

ENDING DATE: 7/31/96

### ABSTRACT

**PURPOSE:** This project will develop systems for the assistive technology application of telecommunications for deaf children.

**METHOD:** Off-the-shelf and emerging communications technology will be tailored for improved access by children in school environments, and staff will develop systems, materials, and activities that enable and encourage telephone use based on the developmental level of the child. The project will begin with a needs assessment conducted at the schools, a survey of materials and curricula from other schools, and a review of all candidate products. A preliminary design of at least one system for providing an array of technologies at one site will be developed, followed by review by a panel of experts. The system will be assembled and software written to integrate the components, provide a user-friendly interface, and to provide tutorials and other information. The prototype system will initially be tested at schools closest to the research system, and then placed farther away as system reliability is established. The system will be evaluated for cost, reliability, technical support required, ease of use, training requirements, and impact on children's abilities to use visual telecommunications.

**ANTICIPATED PRODUCTS:** The systems and materials generated will result in greater program accessibility and appropriateness for deaf children, use of telecommunications at earlier ages, and an accelerated program of instruction on visual telecommunications compared to the present case.

## The Early Childhood Comprehensive Technology System (ECCTS)

GRANT NUMBER: H180U50039  
BEGINNING DATE: 9/01/95

ENDING DATE: 8/31/98

### ABSTRACT

**PURPOSE:** The project will advance the availability, quality, use, and effectiveness of technology in addressing the practical problem of improving technology access in early childhood programs at the local level.

**PRINCIPAL INVESTIGATOR:**  
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309-298-1634

**METHOD:** The study, which will use a qualitative approach, is designed to examine effects of a comprehensive system on three interwoven elements providing technology services to young children with disabilities including the learners and their families, professional and family development staff, and promoting policy. Together the ECCTS components will provide initial and ongoing child assessment, planning and implementing developmentally appropriate technology activities, transition services, staff development, family participation, administration, community involvement, and policy development. During the study, ECCTS will focus on integrated classrooms, children, staff, families, community schools, and state agencies with interests in assistive technology experiences for young children. Thirty-five 3- and 4-year-olds with moderate to severe disabilities that prevent them from interacting effectively with objects, people, and events in their environment will be the primary subjects. They are spread across 12 classrooms, each of which has a special education teacher and an early childhood teacher in conjunction with support staff. Tested procedures and materials will be adapted for model projects focusing on elements of the ECCTS system. Data to be gathered across the major components will include informally gathered pre- and post-test measures, observation, interviews, examination of records and materials, analysis of videotapes, content analysis, focus groups, and other methods. Component I data will specifically include records and videotapes of classroom activities as well as individual child behaviors, dyads, and small groups functioning during curricular activities.

**ANTICIPATED PRODUCTS:** Study results will provide the field with information on the most effective strategies in terms of developing comprehensive technology systems that mesh with delivery systems. Awareness information on the project will be disseminated through news releases, television and radio, journal publications, electronic bulletin boards, and presentations during local, regional, and national presentations.

## **The Early Childhood Emergent Literacy Technology Project**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H180G40078

BEGINNING DATE: 8/01/94

ENDING DATE: 7/31/97

### **ABSTRACT**

**PURPOSE:** The purpose of this project is to describe and explain the effects of an Interactive Technology Literacy Curriculum (ITLC) on emergent literacy knowledge and abilities of 3-, 4-, and 5-year-old children who demonstrate mild to moderate disabilities.

**METHOD:** The study is designed in three phases, one phase per project year. Phase 1 will provide a description of the effects of implementing the ITLC in classrooms with three varying levels of technology available. Phase 2 will expand the Phase 1 sites with a non-technological classroom and will test findings of Phase 1 site research. Phase 3 will continue to collect longitudinal data on both Phase 1 and Phase 2 sites. Data collection will include pre- and post-tests, observation, interviews, examination of records and materials, analysis of videotaped individual child behaviors, dyads, and small groups, content analysis, and other methods.

**ANTICIPATED PRODUCTS:** This project will result in the evaluation of interactive commercial software, hypermedia software produced in the classroom and utility software such as graphics and story-making packages.

## **A Virtual Reality Training Program for Motorized Wheelchair Operation**

**PRINCIPAL INVESTIGATOR:**

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1899 Willamette  
Eugene, OR 97401  
503-342-8445

GRANT NUMBER: H180E30001

BEGINNING DATE: 3/01/93

ENDING DATE: 2/29/96

### **ABSTRACT**

**PURPOSE:** The project will demonstrate and evaluate four virtual reality training programs designed to teach nonambulatory children to operate a motorized wheelchair safely in the natural environment.

**METHOD:** Four virtual reality training programs with which to increase driving skill and the extent to which children use their wheelchairs in the school and community environment will be planned, created, and tested. These training programs will then be implemented in three demonstration sites, two of which will be in the public school system, with an emphasis on recruiting and training children between the ages of 6 and 12. Using both single subject and group design methodologies, staff will evaluate the extent to which virtual reality training increases driving skill and wheelchair usage among trained children.

**ANTICIPATED PRODUCTS:** A technical report will be written at the end of each year describing the project and results of evaluation efforts to date. In addition, a manual for implementing the strategies found to be effective in the project will be written, including guidelines for implementing the program in public schools. Journal articles will also be prepared for publication in technology-oriented and practitioner-oriented publications concerned with special population.

## Science Education for Secondary Students with Severe Orthopedic Impairments Using Virtual Reality

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H180T40100

BEGINNING DATE: 10/01/94

ENDING DATE: 9/30/96

### ABSTRACT

**PURPOSE:** This project will develop and program three-dimensional virtual reality (VR) scenarios to be implemented in science classrooms containing one or more students who would otherwise be prevented from experiencing hands-on science education due to orthopedic impairments.

**METHOD:** Staff will work closely with science teachers at selected secondary schools to identify specific units within the existing curriculum from which students with severe orthopedic impairments are excluded due to their physical limitations. Following development of appropriate VR scenarios, half of the regular class (including orthopedically impaired students) will conduct experiments or perform activities using the VR system, while the other half of the class performs these tasks in the usual way. Analyses will compare mean scores between the groups (to measure instructional validity) and between orthopedically impaired students and their peers (to insure adequate progress within the curriculum). Project staff will thus identify principles underlying the use of VR to provide modified science activities and materials and to ensure meaningful student participation, meanwhile validating that the VR materials ensure adequate student progress in inclusive settings.

**ANTICIPATED PRODUCTS:** A technical report will be written at the end of each year summarizing the results of evaluation efforts to that date. A manual for implementing the strategies found to be effective in this project will be written, with special emphasis on guidelines for implementing the program in public schools. Project staff will write articles for submission to professional publications for both scholarly and practitioner-oriented audiences. Project findings will also be presented at key relevant conferences at state, regional and national levels.

## **Integrating Speech Recognition Into the Classroom Interpreting Services of Mainstream Deaf and Hard-of-Hearing Students**

**PRINCIPAL INVESTIGATOR:**

Jensema, Carl J.  
The Conference Center, Inc.  
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Suite 200  
Silver Spring, MD 20902  
301-593-2690

GRANT NUMBER: H180A40006

BEGINNING DATE: 9/01/94

ENDING DATE: 9/30/97

### **ABSTRACT**

**PURPOSE:** This project will develop techniques for integrating speech recognition within the sign language interpreting process, develop a training program and materials for teaching interpreters to use these techniques, and set up a nationwide "training-the-trainer" program to disseminate these techniques.

**METHOD:** Staff will first meet with Montgomery County Public School (MCPS) administrators to plan activities, select MCPS interpreters (N=4) and high school students with deafness (N=4) to participate, and select topic areas and classes. Staff will then obtain the DragonDictate speech recognition system as well as more advanced models (N=4), consisting of computers, sound capture boards, headsets, and a software package. Staff will also obtain copies of each of the high school textbooks used by MCPS in classes related to the selected topic. The index and glossary words from these textbooks will be checked against the words in the speech recognition system; any words not in the system will be added. Once all equipment has been installed, participating MCPS interpreters will train on the systems, and will help analyze classroom interpreting to determine strengths and weaknesses. Once basic techniques have been defined, a mock classroom learning situation will be conducted to allow participating interpreters and students to practice interpreting. Techniques and procedures developed by participants will then be evaluated for a total of 20 hours under actual classroom conditions including non-participating students (N=30) and a teacher. Once techniques have been approved, staff will develop materials and a training program for teaching interpreters to use speech recognition in class. Staff will then develop a "training the trainer" program to teach people how to use the training program in other classrooms and in different subjects.

**ANTICIPATED PRODUCTS:** At least two journal articles will be submitted by the project staff. Staff will develop training materials for teaching classroom interpreters to use speech recognition. As a result of this project, interpreters (N=60) will be trained to use speech recognition, with special instruction on teaching others to use it.

## **Presentation Rate and Readability of Closed Caption Television**

**PRINCIPAL INVESTIGATOR:**

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The Conference Center, Inc.  
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301-593-2690

GRANT NUMBER: H180G40037

BEGINNING DATE: 2/28/94

ENDING DATE: 1/30/96

### **ABSTRACT**

**PURPOSE:** This project will: (1) develop words-per-minute and readability scoring techniques for measuring captioning; and (2) determine the caption presentation rate and readability level that hearing impaired adults and children prefer and are able to comprehend.

**METHOD:** A presentation rate and readability measurement system will be established, measuring presentation rate in words-per-minute and readability in grade levels. Baseline data for this measurement system will be obtained from a random sampling of 200 hours of closed caption television. Subjects of various ages (N=600) and with varying degrees of hearing loss will be tested to determine their closed caption television preferences and ability to read captions. An advisory panel including experts from the fields of captioning, reading and hearing impairment will provide guidance and technical input to the project staff.

**ANTICIPATED PRODUCTS:** A final report will be constructed to provide caption companies with information to help them improve the quality of captioning by fitting caption presentation rate and readability to the preferences and abilities of the audiences. At least three journal articles will be written and submitted for publication in relevant professional journals.

## **Technical Support for the Department of Education's Technology, Educational Media, and Materials Program (TMMP)**

**PRINCIPAL INVESTIGATOR:**

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Suite 810  
Washington, DC 20036  
202-785-9360

GRANT NUMBER: HS93032001

BEGINNING DATE: 10/10/93

ENDING DATE: 9/30/96

### **ABSTRACT**

**PURPOSE:** This project will support the transfer of knowledge developed under the Technology, Educational Media, and Materials Program (TMMP) through marketing, communication, and evaluation activities.

**METHOD:** Marketing activities will promote TMMP's national agenda by securing a broad base of commitment, support, and participation in the ongoing agenda building process among researchers, developers, and practitioners. Communication activities will work to synthesize the existing knowledge base of technology, media, and materials and transfer that information for use by appropriate groups within both the special and regular education communities. Evaluation activities will continually assess both the ongoing relevance of the four TMMP Program Commitments as well as concrete progress in achieving the Commitments' goals to educate children and youth with disabilities. The Chesapeake Institute's general approach will be based on Daniel Yankovitch's three states of moving people to public judgement and action; all marketing, communications, and evaluation plans will thus feature components focusing on consciousness raising, working through, and achieving resolution.

**ANTICIPATED PRODUCTS:** Products corresponding to the communication component of the project will include: video materials and public service announcements; written materials including information kits, newsletters, teachers' guides, and compendia of expert opinion; media and informational events, such as televised town meetings and a 20th anniversary celebration of the Education for All Handicapped Act; and networking of TMM experts via interactive information lines and existing computer networks.

### **Project VISION: Visually Impaired Students and Internet Opportunities Now**

**PRINCIPAL INVESTIGATOR:**  
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Sycamore, IL 60178  
815-895-3078

GRANT NUMBER: H180T40008

BEGINNING DATE: 1/01/95

ENDING DATE: 12/31/96

#### **ABSTRACT**

**PURPOSE:** This project will develop the methods and strategies by which students who have visual impairments can use assistive technology to gain access to the vast resources found on the Internet.

**METHOD:** Procedures involved in gaining access to the Internet using assistive technology by visually impaired persons will be task analyzed. A first draft of an instructional manual will be developed using this information. Eight students and their eight itinerant/resource teachers will be chosen from Illinois and Wisconsin high schools, and the appropriate assistive technology will be purchased. Teachers will be trained to use this technology in accessing the Internet, after which they will instruct their students in the methods and procedure developed by project staff. Students will further field test these procedures. During the second half of the academic year, a 30-minute

videotape will be produced to document the project. After the close of the academic year, revisions will be made in the manual, and a plan for effective dissemination of project findings will be disseminated.

**ANTICIPATED PRODUCTS:** The project manual (in all its formats) and copies of the videotape will be deposited in instructional materials centers for visually impaired students nationwide. The manual will also be submitted for publication and uploaded to the Internet. The videotape will be broadcast on Kaleidoscope (a disabilities television channel), and staff will appear on that network to describe the project and its findings.

### **Synthesis and Communication of Successful Intervention Strategies to Promote Generalization and Maintenance in Augmentative and Alternative Communication**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023E50014

BEGINNING DATE: 7/01/95

ENDING DATE: 6/30/97

#### **ABSTRACT**

**PURPOSE:** This project will integrate and synthesize, using meta-analytic synthesis methods, the extant research literature on the effectiveness of strategies for promoting successful intervention, generalization and maintenance outcomes among users of augmentative and alternative communication (AAC) users.

**METHOD:** This project will extend previous efforts by: (1) moving from subjective analyses in AAC to a systematic synthesis for integrating a body of intervention research; (2) focusing on AAC interventions that were not adequately represented in previous synthesis efforts from related fields; and (3) incorporating input from potential consumers regarding hypotheses and information products. Through the use of focus group methodology, the project will produce an integration and synthesis that is responsive to the concerns about intervention outcomes of those educators, related service professionals, and parents directly involved in serving children and youth with severe communication impairments.

**ANTICIPATED PRODUCTS:** Project findings will be presented in two major research forums, and will be summarized in a research-to-practice session for AAC practitioners. A practitioner-oriented version of project technical reports will be submitted to ERIC together with the search and selection protocols and coding manuals and recording sheets. Two research papers and two practitioner-oriented papers will be submitted for publication in refereed journals as well.

## **Formulate and Conduct Research Around Improving Education and Technology Related Services at the Local Level**

**PRINCIPAL INVESTIGATOR:**

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Hart, Debra  
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Boston, MA 02115  
617-735-6506

GRANT NUMBER: H180U50026

BEGINNING DATE: 10/01/95

ENDING DATE: 9/30/98

### **ABSTRACT**

**PURPOSE:** The project will examine the impact of comprehensive district-wide capacity-building initiatives on the utilization of assistive technology across learner environments.

**METHOD:** Technical assistance in the development of adoption of policies (including a funding plan) supporting the utilization of technology in the classroom will be provided. Training will be given to school personnel and family members relating to available assistive technology funding options. Training and technical assistance will also be provided to teachers, focusing on the utilization of instructional software in the classroom. District Assistive Technology Utilization Teams will receive assistance in heightening community awareness of the potential of assistive technology, and students and family members will receive training regarding low cost assistive technology for use in the home, workplace, and community. Project collaborators will join with three local education agencies (LEAs) and one regional educational collaborative (REC) to participate in the first two years of the project. In each participating LEA or REC, a series of behavioral observations of five target students will be conducted, during which time data will be collected on the students' level of active participation in integrated settings. Project activities in the third year will be primarily devoted to measuring outcomes and conducting dissemination activities.

**ANTICIPATED PRODUCTS:** Progress reports will be developed and disseminated to the project's Program Advisory Committee, the state Department of Education, and other interested parties. Databased and descriptive articles will be written and submitted to appropriate journals, and project staff will be prepared to present results at various national, regional, and state conferences.

## **Project Alive! Acquiring Literacy Through Interactive Video Education**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H180H20034

BEGINNING DATE: 1/01/93

ENDING DATE: 12/31/96

### **ABSTRACT**

**PURPOSE:** The project will demonstrate and evaluate uses of interactive video as a means of increasing literacy development and interest among deaf and hard-of-hearing students.

**METHOD:** The project will use Thurston's START model, which indicates that Support, Time, Access, Resources and Training are all necessary for the successful implementation of innovation in the classroom. An additional teacher empowerment model will emphasize extensive teacher control of the implementation process and extensive teacher involvement in decision making. Four programs - two residential schools and two public school programs - will participate in the 3-year project. Each program will select a team of teachers and administrators for participation, and participants will be involved in all phases of the project, including preparation, training, curriculum development, support, implementation, institutionalization, dissemination, and evaluation. Year One will focus on uses of captioned movies available on existing videodiscs. Year Two will expand uses of interactive video to materials developed by teachers and students in project sites. Year Three will focus on shifting from the external to internal support for interactive video, on conducting a summative evaluation, and disseminating results at regional and national levels.

**ANTICIPATED PRODUCTS:** Outcomes will include: (1) a data based, empirical description of the process by which interactive video was implemented in programs for deaf and hard-of-hearing students; (2) descriptions of contextual variables and student characteristics that may influence the success of implementing interactive video in the classroom; (3) a model of successful implementation based on these descriptions; (4) curricular materials for interactive video instruction; and (5) a video record of the implementation process, potentially for future use in training others for replication.

## **Integrating Captioning with College Preparatory Courses for Students with Special Educational Needs**

**PRINCIPAL INVESTIGATOR:**

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National Captioning Institute  
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Vienna, VA 22182  
703-917-7623

GRANT NUMBER: H180G50022

BEGINNING DATE: 10/01/95

ENDING DATE: 9/30/98

### **ABSTRACT**

**PURPOSE:** This project will investigate the effect of captioned instructional television for students in special education and students with limited English proficiency enrolled in college preparatory classes.

**METHOD:** Using a multiple phase research strategy, the study will address the following questions: (1) Does captioning provide cognitive benefits for college age students with learning disabilities or students with limited English proficiency? (2) Does captioning provide affective benefits for college-age students with learning disabilities or students with limited English proficiency? (3) Is there a differential benefit (either cognitive or affective) for captioning for students with learning disabilities as compared to students with limited English proficiency? and (4) What are the optimal conditions for implementing captioning in a community college setting? A minimum of two intact classes (one focusing on students with learning disabilities, one focusing on students with limited English proficiency) will be selected each year for full qualitative and quantitative data collection at Miami-Dade Community College.

**ANTICIPATED PRODUCTS:** In addition to the knowledge and understanding gained from the data collection and analysis effort, the project will result in several products including captioned videos with accompanying guidelines for integrating them into college preparatory courses and classroom vignettes of students and instructors as they adapt to captioning technology.

## **Development of a Personal Caption Display Prototype to Benefit Students Who Are Deaf**

GRANT NUMBER: H180J30040

BEGINNING DATE: 6/01/93

ENDING DATE: 5/31/96

### **ABSTRACT**

**PURPOSE:** This project will develop a prototype personal caption display system that could be worn by students who are deaf.

**PRINCIPAL INVESTIGATOR:**

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National Captioning Institute  
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703-917-7623

**METHOD:** This system would use a set of special eyeglasses to provide a caption display. The glasses would be battery operated and would receive captions via a wireless link; captions themselves would be viewed in the lens, and the optical design would be such that the caption would appear to be projected onto a distant screen or other object. This imaging would save users from having to refocus their vision to read captions. While the primary application of this technology will be to provide captions for lecture portions of a lesson, further applications for captioning television, movies and other media are also foreseen. In addition, by using several transmission frequencies, this technology could be used to simultaneously provide captions in multiple languages.

**ANTICIPATED PRODUCTS:** Development and testing of this system could be a major breakthrough in captioning technology, providing a personal-level solution to many common captioning problems. With the development of such a wearable personal caption system, other major sources of aural communication would become more equally accessible to deaf persons.

## **PROJECT WRITE: Writing and Reading Instruction Through Technology, Educational Media and Materials**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H180G20016

BEGINNING DATE: 1/01/93

ENDING DATE: 12/31/96

### **ABSTRACT**

**PURPOSE:** This project will focus on: (1) investigating the availability, quality, use, and effectiveness of technology, educational media, and materials (TEMM) in current instructional settings for children with developmental disabilities; (2) conducting surveys and comparative case studies to test the generalizability of Phase I studies; and (3) conducting a series of intervention studies designed to advance the availability, quality, use, and effectiveness of TEMM based upon the findings of Phase I and II studies.

**METHOD:** Subjects will be children with developmental disabilities, ages 3-12, their families, and the professionals who address their literacy-learning needs in preschool and school settings. Three typical settings in which preschoolers are educated and three typical settings in which elementary school-aged children are educated will serve as principal research sites. A socio-communicative model of language and literacy use and a comprehensive model of the study of classroom teaching will serve as the frameworks driving the research. Qualitative and survey research methods will be the primary means of conducting Phase I and II research into the state of the art in the use of TEMM to promote literacy. Experimental designs will be employed in Phase III intervention studies.

**ANTICIPATED PRODUCTS:** Research findings will be shared through multiple means including: publication in peer-reviewed journals, publication in newsletters and journals for families of children with developmental disabilities and the professionals who serve them; and conference presentations, particularly the Carolina Literacy Symposium.

## **Enhancing the Writing Skills of Students with Learning Disabilities Through Technology: An Investigation of the Effects of Text Entry Tools, Editing Tools, and Speech Synthesis**

**PRINCIPAL INVESTIGATOR:**

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619-594-5692

GRANT NUMBER: H180G40073

BEGINNING DATE: 8/15/94

ENDING DATE: 8/14/97

### **ABSTRACT**

**PURPOSE:** This project will study the effectiveness of one set of technologies (word processing tools) in improving the literacy skills of students with learning disabilities.

**METHOD:** Three separate pretest-posttest control group studies are planned to investigate one type of word processing tool each by comparing the performance of experimental groups, a control group of students with learning disabilities not receiving treatment, and a comparison group of general education students. In Year 1, four text entry strategies will be compared, including keyboarding instruction, alternative keyboards, word prediction, and word prediction with speech synthesis. The Year 2 study will contrast spelling and grammar aids, each with and without speech synthesis. The Year 3 study will investigate speech synthesis under several different conditions. A total of 640 students will serve as subjects, half with and half without learning disabilities. Data will be collected via writing samples, speed probes, and student observations and interviews. Group differences will be tested via analysis of covariance.

**ANTICIPATED PRODUCTS:** Results will be reported at national conferences and in professional journals targeting researchers, teacher trainers, and practitioners in general and special education.

## **Telecommunications in Literacy Intervention for Inner-City At-Risk Students and Those with Hearing Disabilities**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H180E20027

BEGINNING DATE: 10/01/92

ENDING DATE: 4/30/96

### **ABSTRACT**

**PURPOSE:** This project will establish a bi-coastal "electronic village" in south central Los Angeles and Chinatown in New York City that will address the low level of literacy among at-risk students and those with learning disabilities through the motivation of communication through electronic networks.

**METHOD:** Electronic networks, word processing, desktop publishing, and various audio and video instructional media will be used by 112 at-risk students and 112 students with Learning disabilities. Staff development training, ongoing technical assistance, and instructional and resource support will be provided by project personnel. Staff development will include training in the use of electronic networks through e-mail and bulletin boards, desktop publishing, diverse instructional methods, and ongoing technical, curricular, and material support. The program will be documented by observational data such as videotapes of implementation and field notes. A data based, school-based assessment program has been created for implementation in the schools to provide administrators, teachers and research staff with continuous information to aid decision-making for improvement of instruction.

**ANTICIPATED PRODUCTS:** Contributions to the theoretical knowledge base include provision of data on: (1) differential effects of literacy intervention using electronic networks and diverse instructional methods; (2) differences between inner-city at-risk students and students with learning disabilities from multiethnic, multicultural, and multilingual backgrounds on achievement scores, quality of writings, learning and social behavior, and literacy attitude as a function of a technologically-supported intervention program; differential effects of various promising intervention strategies integrated with state-of-the-art technology, interactive and communicative approach to literacy instruction, and a writer's workshop learning environment emphasizing writing processes; (4) use of comic books and audio cassettes of motivating materials such as old-time radio shows as stimuli; and (5) various administrative and evaluative procedures regarding technology integration into instructional practices.

**Effects of Individualized Closed-Captioned Video  
Prompt Rate on Reading Skills of Disabled and  
Nondisabled Elementary Students in Inclusion and  
Noninclusion Classrooms**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H180E30034

BEGINNING DATE: 9/01/93

ENDING DATE: 8/31/96

**ABSTRACT**

**PURPOSE:** This project will examine and demonstrate how individualizing the closed-caption prompt rate, manipulated to match each student's reading level and comprehension reading rate, can be a successful technological reading approach.

**METHOD:** A cluster equivalent materials design comprised of two groups of 4th-grade students who are mildly disabled and nondisabled in two classroom environments (inclusive and noninclusive) will participate in a limited pilot study and a full-scale study for 1 academic year. These groups of students will receive alternate treatments of: (1) digital video interactive materials with individualized prompt rate; and (2) closed-captioned videotapes with no individualization of prompt rate. A demonstration of this technology in both inclusive and noninclusive classrooms will be conducted during Year 3 of the grant. Appropriate data analyses will be applied, results graphed, interpreted, reported, and disseminated.

**ANTICIPATED PRODUCTS:** Results from this project will give educators new directions in improving reading level, comprehension, and retention skills in elementary students. In addition, hypermedia technology will be demonstrated and training offered for interested educators and policy makers at school-based demonstration sites. Videotape as well as CD-ROM products will be produced for a national educational market for implementation and replication.

**Object Linking and Embedding Graphical User  
Interface Descriptive Environment (OLE Guide) - A  
Software Tool That Enables Better Access to Graphic  
Based Computer Programs for Users with Visual  
Impairments**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H180T40011

BEGINNING DATE: 10/01/94

ENDING DATE: 9/30/96

**ABSTRACT**

**PURPOSE:** This project will design, develop, and test an innovative software architecture to provide a significant improvement in access by users with visual impairments to graphically-based software.

**METHOD:** This project will use an innovative multiple task approach for converting the graphic screen to speech or Braille. A new computer standard called Object Linking and Embedding (OLE) will be used to enable one program to communicate with another. OLE will provide the means for access software to communicate directly with application programs instead of simulating or modeling the actions of the operating system. The OLE Graphical User Interface Descriptive Environment (OLE GUIDE) will attempt to provide good access to the Microsoft Chicago Operating System.

**ANTICIPATED PRODUCTS:** Through this adapted access to the Chicago system, users with visual impairments will be given access to line charts, bar graphs, and pie charts, as well as other graphic components of computer applications. The publication of a monthly "OLE GUIDE Progress Report" will outline the project's ongoing problems, solutions and findings. This report will be available via Internet and will also be used to maintain lines of communication with Microsoft, field staff at the American University, and other interested parties. Papers on the progress of the project will be presented at leading conferences dealing with the interests of people with disabilities and will be submitted for publication in relevant professional journals.

## **Learning by Design: Multimedia Projects for Students with Disabilities**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H180E30043

BEGINNING DATE: 7/01/93

ENDING DATE: 7/14/96

### **ABSTRACT**

**PURPOSE:** This project will demonstrate the potential of multimedia technology project-based activities to promote the learning, self-perceptions, and collaboration of students with disabilities.

**METHOD:** The project will be conducted in three middle schools in the Christina School District, each of which serves over 1,000 students, roughly a quarter of whom live with disabilities. By providing equipment and technical support for students to work with multimedia technology, staff will study the effects of collaborative, multimedia-based learning activities on students' knowledge, problem solving and critical thinking, collaboration with peers, self-efficacy, and achievement goals. Staff will also assess the impact of participating in these projects on the acceptance and integration of students with and without disabilities. Further, staff will examine the preparation and support necessary for teachers to implement these activities in classroom settings.

**ANTICIPATED PRODUCTS:** The project will develop curriculum materials, videotapes, and case studies based upon these findings that will be disseminated to educators and researchers throughout the nation.

## **Beyond Assistive Technology: Policy, Curriculum and Technology for Inclusion**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H180U50035

BEGINNING DATE: 9/01/95

ENDING DATE: 9/01/98

### **ABSTRACT**

**PURPOSE:** This project will study the efficacy of a technology-based literacy curriculum as an inclusive educational tool for teachers, parents, and children with disabilities.

**METHOD:** The multimedia technology literacy curriculum to be used, WiggleWorks, is inclusive and features supports for students with disabilities. Six elementary schools (three urban and three rural) will participate in the study. Two sites will receive three high level Macintosh computers per classroom and copies of WiggleWorks, as well as intensive professional development in practices which best foster technology use and inclusion in literacy education. Technology to foster parent involvement in the literacy development of their children will also be provided. Two more schools will receive the same technology and software, but no training on the use of that technology to develop literacy in inclusive classrooms. The remaining two schools will participate as observation and control sites. At these schools observations will be made regarding the ways in which existing technology is used to foster literacy and full inclusion.

**ANTICIPATED PRODUCTS:** Study results will be disseminated via print and accessible multimedia CD ROM to individuals with disabilities, parents, teachers, administrators, policy makers, and publishers. The collaborative team will also generate recommendations for changes in WiggleWorks while it undergoes revision. The study will also yield recommended guidelines for the design and production of inclusive curricula for curriculum developers and publishers.

## **Making CD-ROM Reading Software Accessible to the Deaf**

**PRINCIPAL INVESTIGATOR:**

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512-440-5419

GRANT NUMBER: H180J30008

BEGINNING DATE: 10/01/93

ENDING DATE: 9/31/96

### **ABSTRACT**

**PURPOSE:** This project will improve the reading skills of students who are deaf by adding Signed English and American Sign Language to the printed word to existing CD-ROM software.

**METHOD:** The project will adapt existing CD-ROM software so that it is beneficial for the deaf, create new CD-ROM reading materials for the deaf, and produce a model for developers and publishers that details how to adapt existing CD-ROM software for the deaf. These materials will be adapted, created, and produced for elementary, middle, and high school students who are deaf. The project will evaluate student progress in vocabulary, picture word association, syntactic constructions, sign to printed word, and ASL understanding. This evaluation will include students who use unmodified software and students who use the modified software.

**PRINCIPAL INVESTIGATOR:**

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503-838-8776

**ANTICIPATED PRODUCTS:** The evaluation findings and software development requirements will be presented at conferences on educating the deaf and technology applications. In addition, this project will contract with a commercial distributor of computer software to market the CD-ROM reading software for students who are deaf.

**MILE Curriculum**

GRANT NUMBER: H180T40138

BEGINNING DATE: 10/01/94

ENDING DATE: 9/30/96

**ABSTRACT**

**PURPOSE:** The purpose of this project is to develop a videodisc-based curriculum for teaching applied money management skills necessary for adolescents and young adults who are deaf and "lower-achieving" to transition successfully to adult life.

**METHOD:** As part of research related to the development and validation of the Transition Competence Battery for Deaf Adolescents and Young Adults (TCB), the applicants have identified money management skills needed for this population to cope with independent adult life. Using the TCB content base, staff will insure the direct relevance of the videodisc curriculum to the needed skills. In Year 1 staff will conduct a series of development activities with both deafness professionals and persons who are deaf to insure that the curriculum is conceptually accurate, instructionally powerful, and linguistically appropriate. In Year 2 the curriculum will undergo intensive pilot-testing in mainstream and residential educational settings prior to finalization.

**ANTICIPATED PRODUCTS:** Dissemination of project findings will include a project newsletter, publications, and presentations. A private publisher will be sought to increase the visibility and use of the curriculum.

## Integrated Curriculum and Life Style Knowledge

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GRANT NUMBER: H180E30016

BEGINNING DATE: 9/01/93

ENDING DATE: 8/31/96

### ABSTRACT

**PURPOSE:** This project will develop, implement, and evaluate powerful instructional interventions employing multimedia-based anchored instruction coupled with an integrated curriculum in the areas of literacy (reading and writing) and social studies.

**METHOD:** The project will be implemented in the Williamson County School System, which currently serves 12,216 students in 20 schools, including almost 1,800 students with various disabilities. Eighth-grade students with mild disabilities who are experiencing learning problems and who are receiving special education services either in mainstream settings or through building-based resource rooms will be the target population. The project will be implemented in one middle school building per project year, including one mainstream social studies program and one resource room program. Instructional interventions will be developed incorporating research findings from the areas of cognition and computer/videodisc technology for students with mild disabilities. The curriculum will incorporate "life lessons" to enhance students' planning, survival behavior skills, and employment possibilities by integrating authentic problem situations into the subject-area curriculum. This will be done using multimedia technology, including videodiscs controlled by Hypercard on Macintosh LICC computers through an anchored instruction model.

**ANTICIPATED PRODUCTS:** The project will: (1) publish information about videodiscs developed under the grant; (2) develop manuscripts describing project results for publication in special education journals; and (3) present at local, regional and national professional conferences.

## **An Analysis of Organizational Support and Professional Development Strategies Designed to Enhance Instruction and Improve Outcomes for Students with Disabilities**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H180A40030

BEGINNING DATE: 9/01/94

ENDING DATE: 8/31/97

### **ABSTRACT**

**PURPOSE:** The project will analyze a range of multilevel professional delivery systems training teachers of students with disabilities to incorporate multimedia technology into contextualized learning environments, and to develop, field-test, and disseminate multimedia training materials.

**METHOD:** During the first of 3 project years, the project will work closely with special education teachers and principals (N=30) to identify, implement, and analyze the efficacy of three organizational support and professional development activities. The first set of activities will entail utilizing materials developed by Peabody researchers between August and December to train special education (N=15) and building administrators (N=15). Second, a series of studies will be conducted between January and June to examine the efficacy of models of staff development coupled with different organizational support levels. Third, training materials based on research outcomes will be developed that describe strategies for staff development training programs. These activities will be the foundation for materials training teachers to modify instructional environments to produce improved teachers and students behavioral outcomes. During the second project year, the project will focus on: (1) formatively and summatively evaluating training packages with groups of local and national special education teachers; and (2) analyzing the efficacy of staff development and instructional intervention strategies. In the third project year, all training materials will be summatively evaluated and disseminated nationally.

**ANTICIPATED PRODUCTS:** Staff will develop two sets of multimedia training materials. The first set will be designed to enable teachers to effectively use anchored instruction with multimedia technology to instruct students with disabilities. The second will describe strategies to organize, deliver, and evaluate building-based staff development training activities.

## **A National Perspective on Special Educators' Use of Technology, Media, and Materials to Promote Literacy**

### **PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H180G50013

BEGINNING DATE: 10/01/95

ENDING DATE: 9/30/98

### **ABSTRACT**

**PURPOSE:** The project will conduct a nationwide study of the ways special educators use technology, media, and materials to promote literacy among children with disabilities.

**METHOD:** This study will seek to answer the following questions: (1) What is the state of practice in the use of technology to promote literacy for children with disabilities? (2) What are effective and innovative strategies for using technology to promote literacy? and (3) What kinds of information do special educators use to determine which technology to use to promote literacy and when to use them? A research design using Computer Assisted Telephone Interview (CATI) technology and case studies will solicit information from special education teachers, administrators, and higher education faculty about what technologies they use and how; which technologies they feel are effective in promoting literacy; and what sources of information they use to learn about such technologies. The overall CATI survey will reach 2,200 educators nationwide. Case studies of seven school districts which use technology to promote literacy in special education programs will provide real-world examples to deepen descriptive statistical data gathered through the survey.

**ANTICIPATED PRODUCTS:** Results of the survey and case studies will be translated into three informational products: a research report, a photo essay, and a computer-based presentation. Products will be distributed to the original survey participants, who will again be interviewed through CATI to find out if they read the information, what they thought of it, and how they might have used it.

## **Integrated Application of Computer and Assistive Technology**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H180J30031

BEGINNING DATE: 10/01/93

ENDING DATE: 9/30/96

### **ABSTRACT**

**PURPOSE:** The project will demonstrate the integrated application of existing computer and assistive technologies to better meet the educational needs of students who are deaf and hard-of-hearing.

**METHOD:** The project will install a campus-wide and state-wide network of 83 personal computers to be used for instructional and communication purposes. Educational software, media, and materials will be reviewed and assessed, with information disseminated through electronic networks, a project newsletter, and other means. In addition, software/media materials will be developed to serve the special needs of the students attending New Mexico School for the Deaf, including non-English-speaking students and parents, students with learning disabilities, and those with multiple disabilities. Working samples of assistive technologies will be purchased and demonstrated through the Educational Resource Center on Deafness, through conferences and workshops, at schools and organizations, and to parents and students. All phases of the project will be documented and evaluated.

**ANTICIPATED PRODUCTS:** The project will establish a statewide network to serve special populations, and in so doing, will demonstrate the innovative use of existing technology to serve the needs of a multicultural, predominantly low-income, and geographically dispersed population.

## **Access through Captioning: an Improved Captioning System for Programs that Serve Deaf and Hard-of-Hearing Students**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H180J30036

BEGINNING DATE: 9/12/93

ENDING DATE: 9/12/96

### **ABSTRACT**

**PURPOSE:** This project will develop a captioning system for school use that is affordable, easy to use, and appropriate to the varied educational needs of students who are deaf or hard-of-hearing.

**METHOD:** This project will use a captioning workstation to improve delivery of curriculum content to deaf and hard-of-hearing students; it will also explore the possibilities inherent in making other materials and events, such as audiotapes and school performances, accessible via external display devices. The project will focus on the use of captioning in language arts classes, drawing on the researchers' work in the creation of computer-based reading and writing supports for people with language difficulties. The Center for Applied Special Technology and WGBH will work collaboratively with three schools for the Deaf, and an advisory group will contribute to the project. Consumers will be actively involved throughout the project, and the project will collect feedback through site visits, project meetings, and national conferences.

**ANTICIPATED PRODUCTS:** The system resulting from this project will be powerful, intuitive, and easy to learn for both adults and children. It will be the first full-featured system available to schools, and will be an improvement over other non-professional captioning systems.

### **Demonstrating the Benefits of Tangible Symbol Systems**

GRANT NUMBER: H180E30056

BEGINNING DATE: 10/01/93

ENDING DATE: 9/30/96

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#### **ABSTRACT**

**PURPOSE:** This project will conduct a comprehensive evaluation of the benefits of using tangible symbol systems beyond what has been possible in the past.

**METHOD:** Approximately 60 children and youths aged 3-21 with severe and/or multiple disabilities who are not able to communicate using a symbolic system will be involved. (The children will be from three school systems in Oregon.) Three separate studies will be conducted to implement and evaluate the tangible symbol system to be used, including: a study to document the efficacy of tangible symbol systems as a means of symbolic communication for students who have no means of communicating other than gestures; a longitudinal study to explore the long-term potential for tangible symbol systems as a possible stepping stone to the use of more conventional communication systems (including technological devices); and a study to evaluate the effectiveness of new materials developed through this project.

**ANTICIPATED PRODUCTS:** Products will include videotaped case studies for use as training aids, revised training materials, and presentations of project results at national conferences.

## **Implementing Technology Related Policy in the Schools; Fostering Ownership and Change at the Local Level through Participatory Action Research**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H180U50022

BEGINNING DATE: 10/01/95

ENDING DATE: 9/30/98

### **ABSTRACT**

**PURPOSE:** The project will foster ownership among all stakeholders, and thus create real change at the local level in response to state guidelines on the implementation of the IDEA's technology-related mandates.

**METHOD:** In Phase I, the project will enable stakeholders in school districts to: (1) understand the intent of state guidelines for assistive technology planning; (2) assess the impact of the existing assistive technology and training systems upon the provision and integration of technology for students with disabilities; and (3) develop an agenda for change. During Phase II, project staff will assist participating school districts in implementing their assistive technology objectives and plans. In Phase III, a variety of descriptive and outcome data will be collected and analyzed to allow schools to evaluate their implementation activities and plan for the remaining project period. Reports will be drafted for each participating district, outlining those factors which inhibit or promote: (1) the ordering and purchasing of assistive technology; (2) use of assistive technology by students with disabilities, as well as by teachers and administrators; (3) formation of school-based teams; effective technology training; and (4) the integration of technology in the curriculum. Phase IV will consist of dissemination activities, and will additionally focus on the transfer of ownership back to participating districts.

**ANTICIPATED PRODUCTS:** The project training curriculum will be formatted into a manual for use by school districts as they prepare to implement a technology project in their school districts. Concrete examples of project activities and specific procedures and technical assistance developed to enhance project outcomes will also be included. Materials will be adapted on request in accessible formats such as diskettes, large print, Spanish, and Braille. The State Department of Education will work with project staff to produce training and informational teleseminars for school district staff. Staff will also pursue the possibility of presenting project findings at professional conferences.

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**Technology Information and Education Systems (TIES)  
Project**

GRANT NUMBER: H180E30024

BEGINNING DATE: 5/01/93

ENDING DATE: 4/30/96

**ABSTRACT**

**PURPOSE:** The project will evaluate the benefits of the innovative uses of specific applications of technology to improve the education and expand the learning potential of children with disabilities under age 10, especially in the acquisition of communication and other language arts skills.

**METHOD:** In Phase I, the impact of the existing technology transfer and training system upon the integration of technology in the classroom and its effects upon the instructional needs of children will be measured and evaluated. In Phase II, factors shown to promote relevant technology transfer and training, and the selection of suitable equipment, adaptive devices and materials for the students will be incorporated in and offered through an enhanced system. In Phase III, project staff will document the effects of implementing this enhanced system to determine any positive outcomes for teachers and students. The areas of measurement will include student skills and competencies, the process of technology-focused decision-making on the part of the teacher, and classroom management. In Phase IV, findings from the project will be disseminated throughout the country, resulting in more useful technology applications and enhanced opportunities for learning for children with disabilities.

**ANTICIPATED PRODUCTS:** Dissemination products and activities anticipated will include presentations at regional and national conferences, provision of technical assistance to facilitate replication, preparation of documents and other usable material for dissemination, and production and dissemination of instructional videotapes to show various adaptive devices and their uses.

**The Personal Communicator: Empowering Deaf  
Learners in Social Interactions**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H180J30013

BEGINNING DATE: 8/16/93

ENDING DATE: 8/15/96

**ABSTRACT**

**PURPOSE:** This project will enable deaf students to communicate better with their peers, teachers, and other associates, deaf or hearing, using a portable, multimedia communication device called the "personal communicator."

**METHOD:** A case study approach will be used over a 2-year period to provide an in-depth analysis of the application of the personal communicator" on Macintosh PowerBooks and next-generation computers referred to as Personal Digital Assistants with deaf children at elementary through secondary school levels. Videotapes of randomly selected classroom periods at 2-month intervals will be analyzed to assess the frequency and content of social interactions between deaf and hearing students and between deaf students and hearing teachers. In addition, researchers will assess attitudes toward integration of all hearing teachers and hearing classmates of deaf subjects, by randomly sampling written dialogue entries between dyad members to also assess written language competency.

**ANTICIPATED PRODUCTS:** The "personal communicator" is designed to impact deaf subjects' social interactions with hearing classmates and teachers in participating classrooms. Social integration skills learned through the use of the "personal communicator" are likely to generalize to situations outside the classroom. Teacher and student attitudes toward integration are likely to improve when deaf students demonstrate positive social interactions.

## **Development and Evaluation of a Computer-Aided Speech-to-Print Transcription System**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H180J30011

BEGINNING DATE: 12/01/93

ENDING DATE: 11/30/96

### **ABSTRACT**

**PURPOSE:** This project will develop and evaluate a real-time speech-to-print transcription system that can be employed as a support system for deaf students.

**METHOD:** The system will use a hearing transcriber and a computer program to convert speech into print as the words are being spoken. The system will provide a real-time text display that the student can read to understand what is being said in a classroom. In addition, the text file stored in the computer can be examined by students, tutors and instructors by reading the computer monitor or a hard-copy printout. The system will use a laptop computer and common word processing software, as well as procedures for "compressing" or reducing the text when speech becomes rapid. Following refinement of the basic system, the package will be evaluated in the classroom through: (1) evaluation of technical performance, (2) questionnaire of users, (3) in-depth interviews, (4) study of operators' use of the system, and (5) study of the system in implementation at the secondary level. Operators and other personnel will be trained in key procedures, and operator training procedures will be refined and evaluated.

**ANTICIPATED PRODUCTS:** This project will produce a field-tested and validated system to create computerized text files of classroom speech, which will not only serve the needs of deaf and hard-of-hearing students, but also create documentation for many other uses. The system also has potential to facilitate the communication of deaf persons in work settings and could be useful for other groups of students, such as students with learning disabilities.

## **The Efficacy of Transient Evoked Otoacoustic Emissions in Identifying Hearing Loss in Children with Developmental Disabilities**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023C30039

BEGINNING DATE: 9/01/93

ENDING DATE: 8/31/96

### **ABSTRACT**

**PURPOSE:** The purpose of this project is twofold: (1) to identify hearing loss in children with already confirmed disabilities using traditional audiometric screening and assessment procedures combined with recently developed technology using Transient Evoked Otoacoustic Emissions (TEOAE) testing; and (2) to compare the sensitivity and specificity of traditional screening programs with TEOAE testing programs in a group of normal children and a group of children identified as having one or more disabilities.

**METHOD:** Approximately 750 students between the ages of 5 and 7 who are currently classified with one or more disabilities will be screened for possible hearing loss using TEOAE and traditional audiometric procedures. The TEOAE testing procedure allows for a quick, noninvasive test of cochlear function without assistance from the person being evaluated, and thus is expected to allow for early detection among children with developmental disabilities in particular.

**ANTICIPATED PRODUCTS:** The project will result in: (1) sensitivity and specificity measures of traditional pure tone screenings as compared to TEOAE screenings; (2) a cost-effectiveness comparison of TEOAE procedures and traditional audiometric screening techniques; (3) recommendations for use of TEOAE with various degrees and types of developmental disabilities in children; (4) an analysis of demographic variables contributing to delayed identification of hearing loss among children confirmed as hearing-impaired; (5) data regarding the perceived utility of TEOAE to identify children with hearing loss in school settings; and (6) a videotape and procedural manual.

## Teaching Workplace Literacy

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H180G40079

BEGINNING DATE: 1/01/95

ENDING DATE: 12/31/97

### ABSTRACT

**PURPOSE:** This project will articulate how interactive instruction can be used to foster higher order thinking and how cooperative learning, specifically the group investigation method, will promote interpersonal skills development for secondary students with learning disabilities.

**METHOD:** The first study will examine the effects of the interactive instructional model on higher order thinking in mathematics. Relying on a mastery of basic mathematical concepts, students will use elementary spreadsheet skills to calculate averages, determine trends in data, and ask "what if" questions. The second study will build on Study 1 by linking math problem solving to expository writing. Again, the interactive instructional model will be used. The third study will shift focus from higher order thinking to interpersonal skill development, examining the integration of mathematical problem solving and expository writing in the context of cooperative learning. The final study will be an evaluation of our interactive instruction and cooperative learning practices to teaching workplace literacy at Phase 1 of secondary schools. This study will occur in mainstreamed classroom settings and will closely examine how the systematic research conducted earlier in experimental conditions translates into actual practice.

**ANTICIPATED PRODUCTS:** The main product of this project will be the Integrated Learning Curriculum, containing exercises for integrating mathematical problem solving, expository writing, and strategies for structuring cooperative learning groups for this kind of instruction. This material will be designed explicitly for practitioners and inservice courses. Instructional vignettes will also be recorded on videotape for further dissemination.

## Computer-Assisted Cooperative Learning in Mathematics in Integrated Classrooms for Students with and without Disabilities

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H023N40027

BEGINNING DATE: 9/01/94

ENDING DATE: 8/31/96

### ABSTRACT

**PURPOSE:** The project will analyze the effects of computer-assisted cooperative learning in mathematics instruction within integrated educational settings.

**METHOD:** In the first project year, heterogeneous students (including regular education and students with mild disabilities) in integrated classrooms will be grouped to learn math with the help of computer technology in class. A commercial computer software package will be used to teach math concepts, computation, applications and problem solving. Effects of cooperative learning will be examined by comparing this instructional method with traditional whole-class teaching and learning. Subjects will include 120 5th-grade students, 30 of whom have disabilities. Six math teachers will be randomly assigned either to cooperative learning or whole-class instruction. In the second project year, computer-assisted math learning methods will be used for 160 5th-grade students, of whom 40 have disabilities, in integrated classrooms. Effects of cooperative learning with computer-assisted instruction compared to an individual learning method will be measured. A pre-post test comparison group design with students nested within teachers will be used. Outcome measures will assess students' math achievement, attitudes toward math and computer-assisted curricula, and social relationships among students in the integrated classrooms. In addition, interviews will be conducted with the students with disabilities to investigate their attitudes and feelings in the class.

**ANTICIPATED PRODUCTS:** Project staff will present study results at a regional conference for regular education and special education teachers and practitioners. Results will also be presented in at least two national conferences for professionals in math education and special education. Furthermore, project findings will be published in journals addressing both research and practical applications. Consultation will also be provided to local regular and special education teachers based on the procedures used and the results obtained in the studies.

## Pathways for Learning

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H180A40069

BEGINNING DATE: 6/01/94

ENDING DATE: 5/31/97

### ABSTRACT

**PURPOSE:** This project will develop, demonstrate, evaluate, and disseminate effective organizational support and professional development strategies that promote the effective use of technology, media, and materials (TMM) to improve learning outcomes for students with disabilities in grades 1-8.

**METHOD:** Within the project approach, regular and special education teachers across grade levels (e.g., grades 1-3, 4-6, or 6-8) will form a Pathway Team. As a team they will design, implement, and evaluate curricula that span their grade levels, focus on outcomes that revolve around building deep understanding and communication, and integrate a variety of TMM applications to meet student needs. A designated group of students, including those with cognitive, physical, sensory, and emotional disabilities will be included in the pathways. As a group, these students will travel from one teacher on a Pathway Team to another through successive grades, provided with the technology they need to make all transitions smooth. Over the 3 project years, staff will carry out a formative evaluation to gather evidence about the success of the components, problems that arise, and repertoires of solutions devised. Staff members will collect all data through observations of meetings and classroom instruction, interviews, and collection of work samples, as well as videotaping the progress of selected students. Intervention efforts will combine organizational support and professional development, consisting of three structures to promote collaborative work among stakeholders: a district-wide Coordinating Committee, School Management Groups, and school-based Pathway Teams of teachers. Electronic networks, video conferences, and print materials will support the work of these three structures.

**ANTICIPATED PRODUCTS:** As a result of this project, district administrators will develop an understanding of cooperation between stakeholders, a cadre of facilitators will be created that can promote change throughout school districts, and regular and special education teachers will more easily work together in collaborative Pathway Teams.

**Practice Improvement Center on the Effective and Efficient Use of Technology, Media, and Materials in the Provision of Education and Related Services to Children and Youth with Disabilities**

**PRINCIPAL INVESTIGATOR:**

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GRANT NUMBER: H180N20013

BEGINNING DATE: 10/01/92

ENDING DATE: 9/30/97

**ABSTRACT**

**PURPOSE:** This project has two goals: (1) to collect, analyze, validate, and extend extant research regarding effective and efficient use of TMM to improve outcomes for children and youth with disabilities; and (2) to provide access to research and promote its use by practitioners so that they may better meet the educational and related service needs of children and youth with disabilities.

**METHOD:** A Delphi method will be employed with key stakeholders from each of several disability groups to identify priorities for that group. Based on these findings, staff will select topics for review and dissemination and revise the strategic plan accordingly. For each topic identified, research leaders, with input from others in their area of expertise, will synthesize extant research literature. Based on the strength and consistency of research findings, project staff will carry out one or more follow-up activities to validate and extend the findings. Among follow-up methods to be employed will be telephone surveys, focus group sessions, on-site field visits, video conferences with facilitated discussion at designated download sites, and commissioned research that extends ongoing research efforts.

**ANTICIPATED PRODUCTS:** Formats for dissemination efforts will include: (1) research briefs; (2) training manuals; (3) videotapes with accompanying print materials; (4) an on-line multimedia magazine containing text, still pictures, sound, and video; (5) videoconferences broadcast via PBS stations across the country; (6) tapes of teleconferences with accompanying facilitator's guides; and (7) electronic bulletin board discussions.

# *APPENDICES*

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## ADDENDUM

### Personal Captioning for Students with Similar Language-Related Special Learning Needs

**PRINCIPAL INVESTIGATOR:**  
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Boston, MA 02134  
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GRANT NUMBER: H180E30021  
BEGINNING DATE: 9/01/93

ENDING DATE: 8/31/96

#### ABSTRACT

**PURPOSE:** The project will expand the use of a promising educational technology and conduct a comprehensive evaluation of its implementation and its efficacy with students who are deaf, students who are hard of hearing, and students with learning disabilities.

**METHOD:** In 1991, WGBH developed a captioning workstation designed for students. In the current project, applications of that workstation will be furthered explored with more than a dozen teachers and their students at six schools. Students will use video as a stimulus for facilitating comprehension of content, generating ideas and language, and supporting short-term memory; using a word processor, they will write text that matches or enhances the video; finally, they will superimpose their text over the video, resulting in a captioned videotape, which reinforces learning. In collaboration with project staff, each teacher will establish specific language and literacy goals for the students and develop appropriate captioning activities to accomplish those goals. Project staff from the National Technical Institute for the Deaf will evaluate the project from several perspectives: student performance on a variety of measures; attitudes of teachers, students and administrators toward learning and using the technology within the curriculum; and implementation issues. Evaluation results will inform use of the technology during the project period and after. Participating schools will include both special and integrated settings. Students in K- 12 will participate; they will be deaf and hard of hearing, or have a language-based learning disability.

**ANTICIPATED PRODUCTS:** Project findings will be disseminated through traditional outreach channels as well as via a comprehensive teachers's manual and demonstration videotape. Captioning software for the PC will also be available.