

# STRATEGIES

on The Integration of Students with Severe Disabilities

California Research Institute, San Francisco State University

The California Research Institute (CRI), funded by the U.S. Department of Education, conducts research and technical assistance activities on the integration of students with severe disabilities. The research component of CRI involves a three part study designed to a) determine placement patterns of students with severe disabilities (Level I), b) identify what factors predict placement in integrated environments (Level II) and, c) identify outcomes associated with "promising practices" in the conduct of the educational programs in integrated settings across the country (Level III). In addition, CRI staff provide technical assistance to those states involved in federally funded systems change projects.

The purpose of STRATEGIES is to document and promote the process of statewide systems change and disseminate research findings on the education of stu-

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A substantial body of research has documented the beneficial effects of integrated education for students with severe disabilities. Integrated education has been associated with such high priority student outcomes as the acquisition of social and communication skills (e.g., Cole & Meyer, 1991; Kohler & Fowler, 1985; Giangreco & Putnam, 1991; Brady et al., 1984; Breen, Haring, Pitts-Conway, & Gaylord-Ross, 1985; Cole, 1986; Cole, Meyer, Vandercook, McQuarter, 1986; Haring, Breen, Pitts-Conway, Lee, & Gaylord-Ross, 1987; Hunt, Alwell, Goetz, & Sailor, 1990; Strain & Odom, 1986), the display of more positive effect (e.g., Park & Goetz, 1985), increased achievement of IEP objectives (Brinker & Thorpe, 1984; Wang & Baker, 1986), greater levels of independence (Anderson & Farron-Davis, 1987; Freagon et al., 1985), improved attitudes toward peers with severe disabilities (Donaldson, 1980; Fenrick & Peterson, 1986; Haring et al., 1987; Sasso, Simpson, & Novak, 1985; McHale & Simeonsson, 1980; Voeltz, 1980, 1982), and more positive parental expectations for their child's future (Anderson & Farron-Davis, 1987; Hanline & Halvorsen, 1989; DREDF, 1985).

A number of educational "best practices" have been described and investigated in an attempt to identify factors that may be present in integrated programs that might promote positive student outcomes such as those described above (c.f., Halvorsen & Sailor, 1990; Meyer, Eichinger, & Park-Lee, 1987). These practices include the degree of physical and social integration of the students with disabilities into the activities of the school and community (Brinker, 1985; Murray-Seegert, 1989; Meyer et al., 1987) and state-of-the-art educational strategies such as functional, generalized skill development, systematic, data-based programming, community-based instruction, and the use of a transdisciplinary model for the provision of ancillary services (Giangreco, 1986; Goetz & Gee, 1987; Gee, Harrell, & Rosenberg, 1987). Best practices in integrated educational programs also include principal and special education teacher-related behaviors such as the degree to which the principal is involved in the special education programs in the school, the extent to which the special education teacher partici-

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pates in general education activities, the degree to which the teacher interacts respectfully and positively with his or her students, and the teacher's level of education, inservice training, and experience (Murray-Seegert, 1989; Stetson, 1984; Meyer et al., 1987; Fredericks, Anderson, & Baldwin, 1979; Wang, Vaughan, & Dyman, 1985).

However, much of the "best practices" literature is sporadic and highly theoretical, with relatively few published studies using anything but very small samples in highly circumscribed circumstances. CRI attempted, in the study to be described to you, to investigate the relationship between educational practices and positive student outcomes using research methodology that included large samples, 312 teachers and families from five states, and a broad range of educational practice and student outcome variables.

Survey questionnaires were completed by the families and teachers of 312 students with severe disabilities who attended integrated educational programs in California, Colorado, Kentucky, Utah, and Virginia. A random selection process was used to identify the participating school districts within each of the five states. Special education administrators within each school district were then asked to randomly select a specified number of teachers of students with severe disabilities within their district to serve as the first respondent group. Participating teachers then randomly identified three families of students in their program to participate as the second respondent group.

The survey questionnaires had been designed to measure 12 educational "best practices" applied in integrated settings and seven

student outcome variables, which included the development of communication and social skills, the display of positive effect, increases in the proportion of IEP objectives achieved, increased independence, positive nondisabled peer attitudes, and positive parent expectations for their child's future. Three demographic variables were also included with the twelve educational practices as factors which may be strongly associated with student achievement, peer attitudes, and positive parental expectations: the age of the participating students, the socio-economic status of the community, and the type of community (i.e., urban, suburban, or rural).

The most common format for each survey question was an ordinal scale rating of the degree to which an educational practice or student outcome variable was perceived to be present. In most cases a number of items were selected to measure a single factor. Table 1 on page 10 lists each of the educational practice and student outcome variables investigated. Also presented are the type of information sampled for each factor and the designated respondent group (teacher and/or parent).

Survey packets were sent to each participating teacher with instructions for dissemination to the three families participating from their programs. A single questionnaire was distributed to parents. Two questionnaires were developed for teachers: one designed to measure variables related to general program characteristics and a second which measured variables related to characteristics of the three students and their families. Teachers completed one "general" questionnaire and three "student-specific" questionnaires (one for each participating student).

The responses to items on the questionnaire provided by each of the teachers and families were then used to estimate the strength of the association between each of the 12 educational practice and demographic variables with each of the seven student outcomes variables. The results of a series of multiple regression analyses are described in Table 2 on page 10. The table presents those measures of association (i.e., the standardized slope) between each educational practice and student outcome variable that were determined to be .20 or better ( $p < .001$ ).

A review of this table indicates that a single program variable — the degree to which students are integrated into school and family activities — completely dominates this list of significant relationships. Measures of the extent of integration were significantly associated with social and communication skills development, positive affective demeanor, the percent IEP objectives achieved, level of independence, positive nondisabled peer attitude, and positive parent expectations for their child's future.

These results make a significant contribution to the existing research literature which demonstrates the beneficial effects of integrated educational placement for students with severe disabilities. It is the third in a series of three studies designed and implemented by CRI that utilized survey methodology and large samples to increase our understanding of integrated educational programs: the extent to which they exist (Haring, Farron-Davis, Karasoff, Zeph, Goetz, & Sailor, 1990), student, family, and program characteristics as well as administrative and logistical issues associated with, and possibly promoting, their existence (Hunt, Haring, Farron-Davis, Staub, Rogers, Beckstead, Karasoff, Goetz, & Sailor, 1991), and, finally, educational practices in integrated settings which are associated with the highest levels of student achievement and positive peer attitudes and family expectations.

*The results of this final study suggest that out of a group of what are considered to be educational "best practices", only one — the extent to which the child participated in integrated settings and activities — was*

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strongly linked to each one of the high priority student outcome variables.

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VARIABLES	TYPE OF INFORMATION SAMPLED	RESPONDENT GROUPS: TEACHER (T), FAMILY (F)
<b>Educational Practices</b>		
1. Integration: School and family activities	Ordinal scale: Level of participation in school and family activities	T, F
2. Integration: Community recreational activities	Ordinal scale: Level of participation in community recreational events and educational activities	F
3. Functional educational program	Ordinal scale: Degree to which educational activities and IEP objectives include instruction in community, domestic, vocational, leisure, and social skills domains	T
4. Data-based instructional programs	Ordinal scale: Degree to which weekly data are collected for educational programs	T
5. Community-based instruction	# of hours per week teaching in community settings	T
6. Transdisciplinary model	Ordinal scale: Degree to which ancillary services are integrated into educational activities in the school and community	T
7. Teacher integration	Ordinal scale: Degree to which the special education teacher participates in campus activities	T
8. Program reflects respect for students	Ordinal scale: Degree to which staff behavior communicates respect, and opportunities are provided for choice and risk-taking	T
9. Teacher inservice training	Ordinal scale: Level of participation in workshops and conferences	T
10. Teacher education	Highest college degree held	T
11. Teacher experience	# of years experience as a teacher	T
12. Principal involvement	Ordinal scale: Level of supervision of special education programs	T
13. Community type	Category: urban, suburban, rural	T, F
14. Family SES	Ordinal scale: Yearly income and education	F
15. Age of student	Actual chronological age	F
<b>Student Outcomes</b>		
1. Social skills	Ordinal scale: Level of appropriate behavior, communication, and interactive play	T, F
2. Affective demeanor	Ordinal scale: Level of pleasure and involvement in social situations with familiar people	T
3. Communication skills	Ordinal scale: Level of communication skills	F
4. Percent IEP objectives achieved	Percent IEP objectives achieved	T
5. Independence	Ordinal scale: Level of independence and participation	F
6. Positive nondisabled peer attitudes	Ordinal scale: Level of normalized, friendly, and approach behaviors	T
7. Positive parent expectations	Ordinal scale: Level of future independence and participation	F

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Table 2  
Regression Analyses

STUDENT OUTCOME VARIABLES	PROGRAM VARIABLES	Standardized Slope	t	p value
Social skills	Extent of integration: School & family activities	.39	6.16	.000
Affective demeanor	Extent of integration: School & family activities	.24	3.61	.000
Communication skills	Age	.36	5.08	.000
	Extent of integration: School & family activities	.30	4.61	.000
Percent IEP objectives achieved	Extent of integration: School & family activities	.21	3.29	.001
Independence	Extent of integration: School & family activities	.26	3.98	.000
	Teacher experience	.20	3.40	.000
Positive nondisabled peer attitude	Extent of integration: School & family activities	.36	5.88	.000
	Age	-.23	-3.44	.000
Positive parent expectations	Extent of integration: School & family activities	.41	6.68	.000

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