Intervention assistance: is it substance or symbolism?

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In 1990, the Commonwealth of Pennsylvania revised its special education standards to require intervention-assistance services (i.e., Instructional Support Teams or ISTs) for elementary-age (K-6) public school students who experience academic or behavioral difficulty. The action was taken largely because of the increasing numbers of students being deemed eligible for special education services and because of funding patterns that penalized school districts for providing support to students prior to formal assessment and special education placement ("Brainstorming Helps," 1996; Conway & Kovaleski, 1998; Kovaleski, Tucker, & Stevens, 1996; Pennsylvania Department of Education, Bureau of Special Education, 1994). The intervention-assistance reform effort was designed to be proactive and focused on providing more effective instruction to meet students' needs in general education classrooms (Conway & Kovaleski; Kovaleski et al.). Instructional Support Teams were to operate under four guiding principles:

(a) to ensure effective use of general education services for all students prior to referral for special education services,

(b) to establish building-based, teacher problem-solving teams to assist teachers,

(c) to systematically screen students prior to referral for special education services using assessment and instructional techniques, and

(d) to provide support and assistance to general education teachers serving students with disabilities in inclusive classrooms (Conway & Kovaleski; Kovaleski et al.).

The IST mandate was phased in over a 5-yr period (1990-1991 through 1994-1995), and school districts were not required to comply with the IST mandate until they received extensive training and validation from the Commonwealth.

Pennsylvania represents one of many states that has adopted legislative policy that requires or recommends the implementation of intervention-assistance teams (Carter & Sugai, 1989; Wood, Lazzari, Holcomb-Davis, Sugai, & Carter, 1990). Over the past decade, these teams have become a frequently employed framework for alternative service provision to students and their teachers (Bahr, 1994; Whitten & Dieker, 1995). Although many permutations exist, intervention-assistance teams are characterized primarily by professional interaction among the adults in the school for the purpose of providing support and assistance to students who are experiencing failure in the mainstream of education (Carter & Sugai; Pugach & Johnson, 1989; Safran & Safran, 1996; Whitten & Dieker). Teachers and other support personnel collaborate not only to assess and develop interventions to ameliorate the academic and behavioral challenges that students experience but also to "reduce the frustrations classroom teachers experience when they are unsure what to do to avoid referring a child for special education" (Hayek, 1987, p. 2). Thus, this alternative to traditional referral-assessment-placement processes provides a vehicle for teachers to help students who are floundering and to support

colleagues who are struggling to meet diverse needs in their classrooms (Myles, Simpson, & Ormsbee, 1996; Whitten & Dieker).

Empirical Studies of Intervention Assistance

The popularity of intervention-assistance practices has prompted some educational experts to move beyond the rhetoric to explore the outcomes achieved from school-based intervention-assistance programs. Results of seminal investigations into intervention-assistance outcomes indicate that referral rates for special education evaluation decline. (1) Teachers nominate for intervention-assistance students whose standardized test scores reflect academic problems (MacMillan, Gresham, Lopez, & Bocian, 1996). Moreover, a variety of intervention-assistance approaches are being implemented in the field (Nelson, Smith, Taylor, Dodd, & Reavis, 1992); instructional methods behavioral strategies, and structural change are the most frequently reported types of intervention assistance provided (Bahr, 1994; Brown, Gable, Hendrickson, & Algozzine, 1991; Ysseldyke, Pianta, Christenson, Wang, & Algozzine, 1983).

Investigators have found that general and special education teachers harbor similar beliefs regarding the usefulness of intervention-assistance team recommendations (Myles et al., 1996). Teachers believe that intervention-assistance support systems reduce their feelings of frustration, helplessness, and isolation (Ingalls & Hammond, 1996; Saver & Downes, 1991). Some teachers are satisfied with the effectiveness of the intervention-assistance process and others are not (Bahr et al., 1999; Chalfant & Pysh, 1989; Harrington & Gibson, 1986; Ingalls & Hammond; Kruger, Struzziero, Watts, & Vacca, 1995; Nelson et al., 1992; Saver & Downes). The majority of teachers prefer school-based, problem-solving teams using teachers over those using consultants from the outside (Brown et al., 1991), and general education teachers participate in intervention-assistance programs more than their special education counterparts (Bahr, 1994).

In terms of professional practice, some conclusions are discouraging. For example, the strategies generated by the intervention-assistance team tend to be poor in both conception and implementation (Bahr, 1994; Flugum & Reschly, 1994; Fuchs & Fuchs, 1989; Sevick & Ysseldyke, 1986; Ysseldyke, Pinata, Christenson, Wang, & Algozzine, 1983). Intervention-assistance team members fail to measure and document academic and/or behavioral improvement systematically (i.e., using charting and graphing) (Bahr, Whitten, Dieker, Kocarek, & Manson, 1999; Flugum & Reschly). Furthermore, team members lack training in conflict resolution and the use of effective instructional and behavioral intervention strategies (Whitten & Dieker, 1993). However, there are also some encouraging findings. System and administrative supports facilitate the ongoing implementation of intervention-assistance programs (Fuchs, Fuchs, Harris, & Roberts, 1996) and legal mandates, state policy, and training funds seem to help intervention-assistance teams achieve superior outcomes for students (Bahr et al.).

In addition to individual studies of intervention-assistance outcomes, two reviews of the accumulated literature have appeared (Nelson et al., 1991; Sindelar, Griffin, Smith, & Watanabe, 1992). These reviews incorporate in their analyses outcome-based research as well as descriptions of service provision and attitudinal studies. Although these reviews do not contribute new empirical evidence to the intervention-assistance literature, they do expand the dialogue by organizing and synthesizing the experimental-research base. On the basis of their review, Nelson and colleagues concluded that intervention-assistance processes have the potential to produce relatively positive effects. Sindelar and colleagues were more skeptical, asserting that the available research in this area is more formative than summative and calling for replications of existing research as well as new investigations.

The knowledge base regarding the benefits of intervention assistance is predominately descriptive. Past researchers have focused on describing intervention-assistance models, confirming reduction rates in special education referrals, summarizing interventions, and reporting levels of teacher satisfaction. What is known is that intervention-assistance teams do provide some benefits to students who are experiencing academic and/or behavioral problems. What remain unknown are the costs associated with intervention-assistance programs. Safran and Safran (1996) call for continued investigation concerning the impact that these teams have had on decreasing special education referral rates and particularly whether reductions persist over time. Also absent

from the literature is a longitudinal study of intervention-assistance outcomes. Therefore, the purpose of the present study was twofold: to examine the outcomes experienced by students 2 years after they had received intervention-assistance services and to determine whether referral for special education had been avoided or simply delayed. The results of this inquiry may prove useful to schools in the identification, revision, and refinement of intervention-assistance practices that appear promising.

Method

Participants

Participants were students in grades K-5, attending nine different elementary schools in an urban Pennsylvania school district. The sample for this study included 140 children who had been referred for intervention assistance (e.g., IST) during Year 1 of the study. The records of these 140 children indicated that the reasons for referral to IST varied. Sixty-four had been referred for academic failure, 22 for behavioral challenges, 17 for both academic and behavioral concerns, 2 for academic concerns and life-skills issues, and 1 for life-skills difficulties. Thirty-four students' records did not contain a reason for referral.

Instrument

Data sheets were used to record information from existing student records on 13 variables, including

(a) the student's name,
(b) the year IST services were provided,
(c) the student's grade,
(d) the student's gender,
(e) the student's race,
(f) the reason for IST referral,
(g) the reading levels and grades (e.g., A, B, C, D, F) for Years 1 and 2, reported at each 9-week grading period and at the end of each school year,
(h) the IST-outcome for Year 1, recycled through IST-Year 2, and
(i) the 2nd-year IST outcome.

There are a small number of previous studies that have examined similar variables. Del'Homme, Kasari, Forness, and Bagley (1996) collected data from Student Study Team (SST) referral forms on 8 variables, including grade, gender, past difficulties, present problems, services prior to SST referral, type of parent consultation, and SST intervention. MacMillan and colleagues (1996) conducted a similar review; these researchers examined the school records of 150 students who were referred to a Student Study Team (SST). Data were collected on 11 variables using the School Archival Record Search (SARS) (Walker, Block-Pedago, Todis, & Severson, 1991, as cited in MacMillan et al.). The variables were

(a) number of schools attended,
(b) attendance,
(c) achievement test scores,
(d) retentions,
(e) disciplinary information,
(f) within-school referrals,
(g) eligibility for special education,
(h) placement in a nongeneral education classroom,
(i) receipt of Chapter 1 services,
(j) out-of-school referrals, and
(k) negative academic or behavioral anecdotal comments.

The current study differs from the previous ones in that we were interested in exploring outcomes over time to gain insight into the tenacity of intervention-assistance strategies.

Procedure

The first author and the then-Director of IST for the school district recorded information from each student's file directly into a data base using Microsoft Works. Quantitative, descriptive data analyses (Vockell & Asher, 1995) were conducted to answer 7 research questions:

1. What percentage of students who participated in IST was retained in general education, by grade level, across schools?

2. What percentage of students who participated in IST was promoted in general education, by grade level, across schools?

3. What percentage of students who participated in IST was referred for special education services, by grade level, across schools?

4. Did the reason for IST referral (e.g., academic, behavioral, life skills, or combination) influence the IST outcome?

5. What percentage of students who participated in IST recycled back through IST one year later? and

6. What percentage of students who participated in IST experienced a delay in the referral for special education services?

This approach was deemed appropriate because we were interested in collecting numerical data to describe the status of subjects with regard to the aforementioned outcome variables (Vockell & Asher).

Results

Among the nine elementary schools included in this study, school size ranged from 353 to 593 students. The number of students referred to IST during Year 1 varied from 6 to 24 across the nine schools. The number of students referred to IST by grade level, across schools, ranged from 1 fifth grader to 33 second graders. Of the 140 students referred to IST during Year 1 of this study, most were in first, second, or third grade (Table 1). African American students were referred to IST in disproportionately greater numbers than their representation in the school populations of five of the schools. In contrast, in school 6, no African American students were referred to IST, and in schools 5 and 9, minority enrollment and IST referral rate were equivalent.

Table 2 displays outcomes for IST students at the end of Year 1. Overall, referral to special education was the end-of-year outcome for 35 (25.7%) of the students referred to IST. If all these children were found eligible for special education services at the completion of the multidisciplinary evaluation, and if these children were the only new students placed in special education from these nine schools, then the placement rate would have been 0.8% (35/4,329). More significantly, by the end of the first year of data collection the academic and behavioral challenges of 74.3% of students referred for IST appeared to have been resolved without the need for a referral for special education services, although about a third of these students were retained in grade at the end of the school year.

The retention rate of IST students as compared with the general school population is presented in Table 3. In all schools, there was a disproportionate percentage of IST students who were retained compared with non-IST students. But in only one school (School 5) do IST students represent the majority of retentions. Students referred for IST represented as few as 8.3% of the retentions in one school (see School 2) and as many as 80% of the retentions in another (see School 5).

In the second year of data collection, 27 students recycled through IST. At the end of their first referral to IST (Year 1), 14 of those 27 (52%) had been promoted; 10 (37%) had been retained in grade; and 3 (11%) had been referred for special education services but did not qualify on the basis of the multidisciplinary evaluation. After

their second cycle through IST (Year 2), outcomes were recorded for 23 of the 27 students: 7 of the 24 were promoted; 5 were retained in grade; and 11 were placed in special education. As Table 4 illustrates, all three students who were referred but not placed in special education after Year 1 were placed at the end of their second year in IST. 2 Among the 9 students retained at the end of Year 1 who recycled through IST during the second year, 5 were promoted at the end of the year and 4 were referred to and placed in special education; no student was retained two years in a row. Special education placement was as likely an outcome for students who had been retained and then cycled back through IST as for students who had been promoted. Although referral to special education was the end-of-year outcome for 36% of students after their first round of IST, it was the outcome for 44% of students after their second round of IST.

Among the 136 IST students in the original data set, outcomes for 113 were recorded in files at the end of the second year of data collection. Table 5 displays outcomes for the end of Year 2 for these 113 IST students, by grade level and overall. For example, at the end of Year 2, of the kindergarten students who had been referred to IST in Year 1, 47.6% were on grade level in general education, 14.3% were in general education but one year behind, none were still in kindergarten (i.e., two years behind), and 38.1% were placed in special education. Overall, of the original 113 students referred to IST in Year 1, 35 were placed in special education at the end of Year 1, and another 10 were placed by the end of Year 2. One view of these data is that 10 out of 45 students were fortunate to spend a second year in a general education classroom before being consigned to special education services. Another view is that for 10 out of 45 students, access to special education services was delayed for one year because of IST.

Outcomes of IST were explored in relation to the reasons for IST referral (see Figure 1). Forty-one percent of students who were referred to IST for academic reasons were placed in special education by the end of Year 2. Four of these 26 students (15.3%) were not placed until a year after their first IST experience. In comparison, 18% of students who were referred to IST because of behavioral challenges were placed in special education by the end of Year 2. Two of these 4 students (50%) were not placed until a year after their first IST experience. When academic and behavioral problems were both cited as the reason for referral to IST, almost 60% of the students were placed in special education by the end of Year 2. Four of the 10 students (40%) were not placed until a year after their first IST experience. (2)

Discussion

Legislative policy and a keen interest in reducing referral rates to special education have contributed to the popularity of intervention-assistance teams within the educational community (Bay et al., 1994; Safran & Safran, 1996). Intervention-assistance teams provide teachers with a framework for creative brainstorming that reflects multiple perspectives and levels of expertise in an effort to solve students' learning and behavioral problems without a referral to special education (Bay et al.; Korinek & McLaughlin, 1996; Whitten & Dieker, 1995). But studies have reported both increases and decreases in referral rates associated with implementation of intervention assistance (see Safran & Safran). And whatever else it accomplishes also remains an enigma (Safran & Safran.). The data we collected adds one more piece to the puzzle of intervention-assistance outcomes.

As in previous studies (e.g., Reschley, 1988), students in this study who were African American were more likely to be referred and deemed eligible for special education services than students who were Caucasian. Although intervention-assistance practices have been recommended as one strategy to combat over-identification of minority children, in this study they mirrored rather than eliminated the racial inequalities experienced during the traditional referral process. This finding conflicts with the findings of MacMillan and colleagues (1996) who reported that intervention-assistance referrals did not discriminate against ethnic minority children. However, it is consistent with the conclusions of the Twentieth Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act (1998) that students who are racially and ethnically diverse continue to be disproportionately represented in special education programs, regardless of whether intervention-assistance processes are used.

Retention was another common outcome experienced by students in this study who were referred to IST. In 3 of our nine schools, students who were referred to IST constituted a substantial number of the students retained in grade at those schools, and in one school they were much more likely to be retained than their non-referred peers. In light of research that underscores the futility of retention as an educational intervention (see Shepard & Smith, 1990), it would appear that IST teams recommending this option are not engaging in best educational practices. For example, there is some evidence that students who are retained are more likely to drop out of school (McLesky & Grizzle, 1992; Shepard & Smith). Our findings regarding student retention are not consistent with previous research reported on IST. Kovaleski and colleagues (1996) maintain that during a 3-year period, IST schools had decreased retention rates by 67%; however, it is important to note that Kovaleski and colleagues used school summary data reported by IST teachers. In our research, we collected data independent of those who implement IST. Furthermore, it is not clear whether Kovaleski and colleague's data were about schoolwide reductions in retentions or decreases in the use of retention as an outcome for students who were referred to the IST.

Another noteworthy finding in the present study was the number of students who were placed in special education one year after experiencing IST. These "late referrals" for special education services represent a delay in the provision of a free appropriate public education to students with disabilities. Intervention-assistance systems were designed to reduce unnecessary and inappropriate special education referrals, not simply to delay necessary services to students who need them (Safran & Safran, 1996). To date, no additional studies could be located that have explored this issue.

The reason for student referral to IST seemed to influence the outcome. Students who were referred because of behavioral problems were far more likely than students referred for other reasons to be on grade level and in general education 2 years after being in IST. These students were also much less likely to be placed in special education. Yet of those students with behavioral referrals who were placed in special education, half experienced a delay in the placement process. In contrast, students who were referred to IST for academic reasons were as likely to be in general education on grade level as to be placed in special education, and relatively few of those placed were late referrals. Also, these academic referrals were most likely of the three groups to be retained in grade after the first IST cycle. Students who were referred because of academic and behavioral concerns were most likely to be placed in special education, with 40% of those placed being "late referrals."

These findings are consistent with research conducted by Del'Homme and colleagues (1996), who reported that referral and placement in special education was more likely for students referred to a Student Study Team for academic reasons. Based on previous investigations, these same authors posit that behavioral referrals to intervention-assistance teams are underrepresented and that they are often not addressed seriously by the intervention-assistance team. They also contend that characteristics associated with Emotional/Behavioral Disorders may be mistaken for learning problems. Consistent with Del'Homme and colleagues, we also found that the number of students referred to IST for academic difficulties outnumbered those referred for behavioral problems by 3 to 1.

Even a cursory glance at these outcomes by reason-for-referral findings suggests that teachers may need to acquire increased levels of knowledge and expertise in academic interventions. It may well be that students referred for academic problems require distinctly different approaches to intervention assistance, including different sets of team problem-solving skills and intervention options than students referred for behavioral problems. For example, when an intervention-assistance team receives a behavioral referral, they may decide to use an elaborate version of behavioral consultation because research has shown that more thorough behavioral consultation affects student behavior more successfully than abbreviated versions (Fuchs, Fuchs, Bahr, Fernstrom, & Stecker, 1990). The intervention-assistance team may also consider employing behavioral interviewing techniques to ensure more accurate specification of target behaviors (Gable & Rosso, 1988) and consider conducting functional behavioral analysis to develop an individualized behavioral support plan (Chandler, Dahlquist, Repp, & Feltz, 1999). Or, they may simply decide that a differentiated approach is

unnecessary because 30% to 40% of behavioral problems can be ameliorated at the elementary level with nothing more than effective instruction (R. A. Gable, personal communication, May 17, 2000). Any further discussion regarding this issue is beyond the scope of this paper and to discern whether differentiation is warranted, further research and discourse are necessary.

IST was used more frequently by teachers for students in the primary grades (e.g., K-3). This is consistent with data reported by Ysseldyke and colleagues (1983) who found that 70% of the students referred for prereferral intervention were in grades K-3 and 30% were in grades 4 through 6. In our study, 87% of the referred students were in grades K through 3 and 13% were in grades 4 and 5 across the 9 elementary schools. Retention was a common outcome for students referred to IST during kindergarten and first grade. Third graders were more likely to be promoted and less likely to be retained or placed in special education. Promotion or special education placement were commonly experienced outcomes for 4th-grade students. Delayed special education placements were evident across all grades and schools, although not for 3rd-grade students. Finally, 2 years after receiving IST services, fewer than half of the students were being educated in general education classrooms on grade level.

Viewed together, our findings suggest that intervention-assistance processes are more symbolic than substantive in facilitating changes in educational outcomes for students who are poor performing, at-risk, or mildly disabled. The findings of the present study appear to indicate that intervention-assistance systems of instructional and behavioral support represent structural change in schools. That is, they transform the manner in which teachers approach the referral process for special education services. But 2 years after a referral to IST, more than half of the students who received IST services have experienced retention or special education placement. In addition, of those students placed in special education, 22% are late placements, not placed until 1 year after their IST experience. This contradicts the assertion of Kovaleski and colleagues (1996) that schools with IST procedures have reduced special education referral rates by one third to one half compared to schools without IST. Our data are consistent with national and state-level statistics, however; The Twentieth Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act (1998) reports that the number of students receiving special education services in the nation and in the Commonwealth of Pennsylvania have increased at a rate greater than the general school enrollment. This increase has occurred despite the widespread implementation of intervention-assistance teams. The issue we raise is not whether retention or special education placement are desirable or undesirable outcomes, but that IST may have delayed necessary services to students who need them. To achieve more substantive changes, several recommendations for IST are warranted.

Moving beyond the data derived from the present study, yet on the basis of a thorough review of the literature, we have identified a series of specific and practical recommendations to enhance the substantive outcomes achieved by intervention-assistance teams. Table 6 presents strategies that are aimed at preventing delayed special education referral and placement. The table also delineates general methods intended to improve the substance of intervention assistance. Together, they may help school-based intervention-assistance teams provide more effective and efficient solutions to students' academic and behavioral problems.

Summary

There are limitations associated with this study. This study of the outcomes of intervention assistance relied on a review of students' records; data were sometimes missing or incomplete from one year to the next. Also, because the study was conducted in a large, urban school district, many of the students were transient and difficult to follow from year to year. But despite these limitations, the results begin to answer some important questions regarding the outcomes of intervention-assistance practices. Approximately one third of the students who were referred to IST during Year 1 of this study were on grade level, were in the mainstream 2 years later, and were not receiving special education services. Conversely, nearly one fifth of the students in this study were retained in grade at the end of the first year after IST intervention, and another third were placed in special education within two years of their IST experience. For some students with learning and behavior problems, IST intervention assistance effectively solved the problems; for others it did not. What this research suggests is

that the guiding research question in outcome studies should not be, "Are intervention-assistance support systems effective or ineffective?" The answer to that question has been explored but will remain controversial. Rather, a guiding research question must be, "How can educators redesign and refine intervention-assistance team processes to ensure that students truly in need of special education interventions receive them in a timely fashion?"

We are tempted to ask the proverbial question, "Is the intervention-assistance glass half full or half empty?" How one views the current data is a matter of personal perspective. It seems reasonable to conclude that if one is still thirsty after drinking from a half-empty glass, then more water is needed. Accordingly, it may not be useful for a student to wait an additional year before he or she receives the support available from a more timely referral for special education services. The students who experienced retention and delayed placement in special education may have benefited from more timely and substantive forms of intervention-assistance support had it been available. To say that creating substantive changes in intervention-assistance processes will be a difficult task would be an understatement. However, with the reauthorization of 1997 IDEA and its focus on collaboration between general and special education, it is now incumbent on school districts and educational researchers to work on how to do this.

TABLE 1
Year 1 Referrals to IST, by School, Grade Level, and Race

	Enrollment by grade						
School	K	1	2	3	4	5	Total
School 1	80	63	55	46	47	62	353
School 2	110	108	90	92	85	87	572
School 3	65	82	69	61	73	63	413
School 4	108	104	92	102	95	92	593
School 5	89	105	77	85	82	72	510
School 6	95	109	70	66	61	81	482
School 7	98	79	83	80	78	76	494
School 8	72	91	62	62	72	74	433
School 9	91	113	85	79	48	63	479
Total	808	854	683	673	641	670	4,329
ref to IST (#)	24	32	33	29	17	1	
ref by grade (%)	3.0	3.7	4.8	4.3	2.7	0.1	

School	Students referred to IST (#)	School enrollment referred to IST (%)	African American school enrollment (%)
School 1	12	3.4	38.1
School 2	24	4.2	9.7
School 3	12	2.9	57.1
School 4	21	3.5	45.1
School 5	20	3.9	89.5
School 6	6	1.2	67.2
School 7	16	3.2	35.3
School 8	12	2.8	44.6
School 9	17	3.5	100.0
Total ref to IST (#) ref by grade (%)	140 (a)	3.2	54.1

	African American

School	IST referrals (%)
School 1	58.3
School 2	Unknown
School 3	66.7
School 4	57.1
School 5	90.0
School 6	0.0
School 7	43.8
School 8	75.0
School 9	100.0
Total ref to IST (#)	67.2
ref by grade (%)	

(a) 4 students with grade level not recorded.

TABLE 2

Outcomes for IST Students at the End of Year 1 by Grade Collapsed Across Schools

Grade across schools	Number of IST students	Number (%) promoted to next grade
K	24	15 (62.5)
1	32	12 (37.5)
2	33	16 (48.4)
3	29	22 (75.8)
4	17	7 (41.1)
5	1	--
Total	136	72 (52.9)

Grade across schools	Number (%) retained in grade	Number (%) referred to special ed.
K	4 (16.7)	5 (20.8)
1	13 (40.6)	7 (21.8)
2	6 (18.1)	11 (33.3)
3	2 (6.9)	5 (17.2)
4	3 (17.6)	7 (41.2)
5	1 (100.0)	--
Total	29 (21.3)	35 (25.7)

TABLE 3

Retention Rate of IST Students as Compared to General Population

School	Students retained after IST (%)	Non-IST students retained (%)	IST students retained (%)
1	2/12 (16.7)	13/341 (3.8)	2/15 (13.3)
2	1/23 (4.3)	11/549 (2.0)	1/12 (8.3)
3	5/20 (25.0)	20/393 (5.1)	5/25 (20.0)
4	4/21 (19.0)	32/572 (5.6)	4/36 (11.1)
5	4/20 (20.0)	1/490 (0.2)	4/5 (80.0)
6	3/6 (50.0)	5/476 (1.1)	3/8 (37.5)
7	3/16 (18.8)	14/478 (2.9)	3/17 (17.6)
8	3/12 (25.0)	4/421 (1.0)	3/7 (42.9)
9	4/17 (23.5)	24/462 (5.2)	4/28 (14.3)
Total	M = 19.7	M = 3.0	M = 19.0

TABLE 4

Outcomes for Students Recycled Through IST in Year 2

	Status at end of Year 1			
	Promoted (N = 11)		Retained (N = 9)	
	Promoted (%)	Special ed. (%)	Promoted (%)	Special ed. (%)
Status at end of Year 2	7 (64)	4 (36)	5 (56)	4 (44)

	Referred to special ed. (N = 3) (%)
Status at end of Year 2	3 (100)

Note. A total of 27 students recycled back through IST. At the end of Year 2 no outcomes had been recorded for 4 of the 27 students. Underlined values refer to "late" referrals to special education.

TABLE 5

Outcome for IST Students, by the End of Year 2

Grade across schools	Number of IST students referred in Year 1	Number (%) promoted 2 years later	Number (%) retained 2 years later	Number (%) placed in special ed. 2 years later
K	21	10 (47.6)	3 (14.3)	8 (38.1)
1	30	8 (26.7)	10 (33.3)	12 (40.0)
2	23	7 (30.4)	5 (21.7)	11 (47.8)
3	22	13 (59.1)	2 (9.1)	7 (31.8)
4	16	7 (43.8)	2 (12.5)	7 (43.8)
5	1	1 (100.0)	--	--
Total	113	46 (40.7)	22 (19.5)	45 (39.8)

TABLE 6

Strategies to Improve the Substance of Intervention Assistance

* Develop a follow-along component and incorporate it into the intervention-assistance model (Bahr et al., 1999).
* Ensure stringent implementation of quality academic and behavioral interventions that are based on empirically validated principles of teaching and learning (Whitten & Dieker, 1995). Develop a file system for maintaining current literature pertaining to best educational practices.
* Include school psychologists as members in the intervention-assistance team to assist with the monitoring of academic- and behavioral-intervention implementation (Bahr, 1994).
* Conduct cost/benefit analyses when deciding on interventions to help maximize limited classroom time and effort (Noell & Gresham, 1993).
* Objectively evaluate the effectiveness of interventions on a student-by-student basis, using graphing and charting procedures, comparison of baseline and intervention data, and systematic observation of student performance in the classroom (Bahr et al., 1999).
* Recognize and reward teachers for high fidelity of intervention implementation.
* Be creative and brainstorm alternatives to traditional outcomes. Consider "spiral" or combination grade-level classroom assignments rather than retention in grade level.
* Summarize IAT student data annually, using charts and graphs (Shriner & Spicuzza, 1995).
* Conduct regularly scheduled team-building exercises (Korinek & McLaughlin, 1996).

* Develop university partnerships to design model programs and secure ongoing training (Safran & Safran, 1996).
* Advocate for systems change of "the identified policy that is blocking adoption of preferred practices" (Fuchs et al., 1996, p. 264).
* Promote legal mandates, encourage the adoption of state policy, and request training funds to improve effective school-based practices for alternative service-provision models to meet the needs of all students (Bahr et al., 1999).

NOTES

(1.) See, for example, Andringa & Keller, 1991; Bay, Bryan, & O'Connor, 1994; Graden, Casey, & Bonstrom, 1985; Fuchs, Fuchs, & Bahr, 1990; McKay & Sullivan, 1990; Myles et al., 1996.
(2.) The initial portion of the text that addresses recycling issues refers to the lend of Year 1 outcomes experienced by the 27 students who recycled back through IST. The latter portion of the same paragraph refers to 23 of the original 27 students whose outcomes were known and recorded for Year 2. At the end of Year 2 no outcomes had been recorded for 4 of the original 27 students. Accordingly, Table 4 illustrates outcomes for the 23 students with known outcomes at the end of Year 2.

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