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AUTHOR	Vandegrift, Judith A.; And Others
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ABSTRACT

Outcomes of educational programs for at-risk youth in Arizona are described in this report for the fiscal year 1990-91. Based on 3 years of experience and data from 55 districts and schools with at-risk programs, the report determines the impact of various strategies, presents holistic and discrete intervention models, and discusses policy issues and options. Described are program characteristics, at-risk variables, and effective strategies for K-3 and 7-12 students. Outcomes in student achievement, parental involvement, and staff training are also presented. Other findings are discussed, such as factors in the quality of implementation and the state role. Eleven recommendations are offered. Ten tables and one figure are included. (16 references) (LMI)

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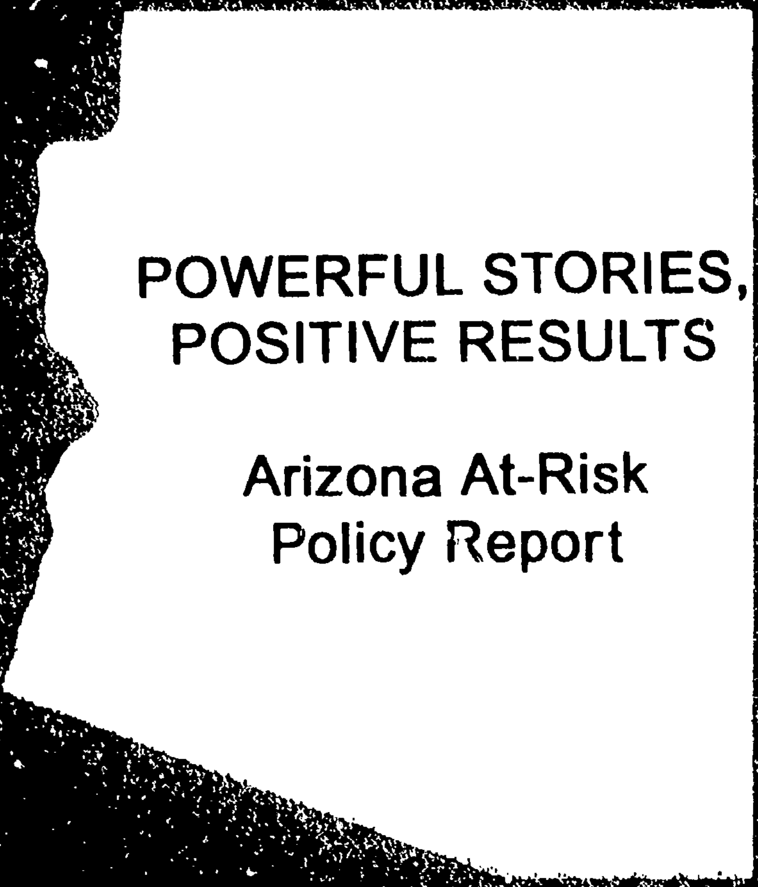

POWERFUL STORIES, POSITIVE RESULTS

Arizona At-Risk Policy Report

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POWERFUL STORIES, POSITIVE RESULTS

Arizona At-Risk Policy Report

FY 1990-91

Prepared for:
C. Diane Bishop
State Superintendent of Public Instruction
Arizona Department of Education

For Submission to:
Arizona State Legislature

November 15, 1991

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POWERFUL STORIES, POSITIVE RESULTS

ARIZONA AT-RISK POLICY REPORT
FY 1990-91

by

Judith A. Vandegrift, Ph.D.
At-Risk Research Director

and

Louann Bierlein, Ed.D.
Andrea Greene, M.A.

Prepared by

Morrison Institute for Public Policy
School of Public Affairs
Arizona State University

70 Years Ago and Today

> "...The evolution of our social order has been proceeding with great and ever-accelerating rapidity. Simple conditions have been growing complex. Small institutions have been growing large. Increased specialization has been multiplying human interdependencies and the consequent need of coordinating effort....
>
> "As the world presses eagerly forward toward the accomplishment of new things, education must advance no less swiftly....
>
> "New duties lie before us. And these require new methods, new materials, new vision... Education is now to develop a type of wisdom that can grow only out of participation in the living experiences of men... [It must] train thought and judgment in connection with actual life-situations... It is also to develop the good-will, the spirit of service, the social valuations, sympathies, and attitudes of mind necessary for effective group-action where specialization has created endless interdependency. It has the function of training every citizen, man or woman, *not* for knowledge about citizenship, but for *proficiency in citizenship*; *not* for knowledge about hygiene, but for *proficiency in maintaining robust health*; *not* for mere knowledge of abstract science, but for *proficiency in the use of new ideas in the control of practical situations*. [We need to develop] the power to *think* and *feel* and *will* and *act* in vital relation to the world's life...."
>
> -- Franklin Bobbitt
> Professor of Educational Administration
> The University of Chicago
>
> *Copyright, 1918*

Reading Professor Bobbitt's charge to education, it is difficult to ignore the parallel between the "state of the Nation" 70 years ago and today; or that our educational expectations remain essentially unchanged. What *has* changed is the fundamental composition of society.

As most people today are aware, there have been "spectacular changes that have occurred in the nature of the children who come to school" with "about one-third of preschool children destined for school failure because of poverty, neglect, sickness, handicapping conditions, and lack of adult protection and nurturance" (Hodgkinson, 1991). The phrase "at-risk" has been coined to describe those students whose school success is threatened by these types of environmental conditions.

Many of these conditions are not new, nor is failure in school. What is new is the magnitude of the numbers and the consequences of dropping out of school in today's society. In the past, opportunities existed for young people who dropped out of school to become highly productive citizens. This is no longer the case. It is predicted that the "failure to anticipate...changes in the composition of the student population and to plan appropriate responses will leave us not with the same educational problems we face today, but perhaps with problems so severe and widespread as to threaten our economic welfare and even our social and political stability" (Levin, 1989).

As we approach the 21st century, it would seem that "educational reform" is nothing short of "social reform." More than working simply to improve curricula or upgrade facilities, schools are trying to change the way parents and communities operate in relation to them. Why? Schools *need* students who are physically and emotionally healthy and "ready" to learn if they are to fulfill their charge to produce proficient citizens who can think critically and work cooperatively.

This report addresses *what* and *how* Arizona schools have done to work with pupils whose life experiences place them at risk of school failure--those who often are *not* physically or emotionally ready to learn. It also addresses program efforts in working with parents, staff, and communities towards collaborating as partners in change.

This document is based on three years of experience with and data from 55 Arizona districts and schools implementing programs for at-risk youth[1]. It provides some answers for the Arizona policy makers who initiated the pilot project. It also raises issues and concerns regarding Arizona's current efforts to support its at-risk children and youth.

Have the programs worked overall? YES. Outcomes are seen not only in such things as better attendance and improved test scores--they are manifest in *more confident students*, *enhanced relationships with parents*, *improved operations*...not perfect, but improved.

There is still work to be done....

The *Arizona At-Risk Pilot Project*: What Is It?

The *Arizona At-Risk Pilot Project* is a longitudinal evaluation study (1989-92) of 55 district and school-based programs for students at risk for academic failure. These programs have operated with annual appropriations provided by Arizona H.B. 2217 (1988). On behalf of the Arizona Department of Education (ADE), the Morrison Institute for Public Policy, School of Public Affairs, Arizona State University, has conducted this evaluation study for the purpose of:

- determining the impact of various strategies on targeted at-risk students;
- developing replicable model components for at-risk youth; and,
- elucidating the policy issues and options presented by the pilot project as a whole for Arizona.

This report provides a synthesis and discussion of key evaluation findings to date. Specifically, the report reflects on various strategies that appear promising for at-risk youth, and provides recommendations for state policy makers regarding programming options for Arizona. The full report, *Powerful Stories, Positive Results: Arizona At-Risk Project Report (FY 1990-91)*, provides a detailed analysis of all data sets and associated conclusions, and is available through Morrison Institute. The documentation of replicable model components is forthcoming in June 1992, at the conclusion of the four-year pilot project.

Where Are The Pilot Sites?

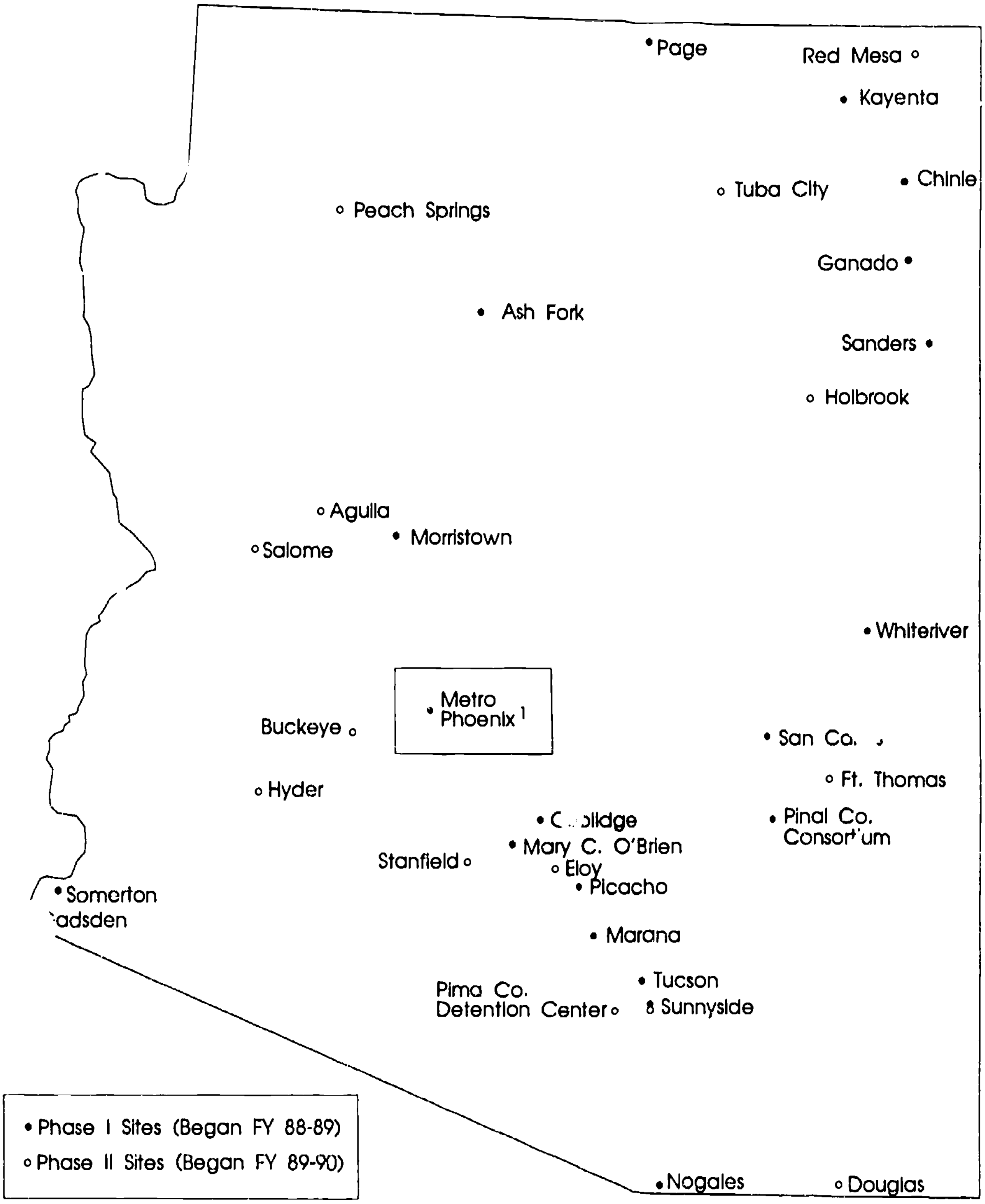
The pilot sites are geographically portrayed in Figure 1 and listed in Table 1. Sites encompass 42 programs serving students in grades K-3 and 13 programs serving grades 7-12. As of spring 1991, 33 "phase I" programs had completed three years of the four-year pilot project (funded in FY 1988-89); 22 "phase II" programs completed their second year of implementation (funded in FY 1989-90). Seven of these "phase II" sites were specifically funded as *school*-based as opposed to *district*-based programs.

Table 1. Arizona At-Risk Pilot Programs

Phase I (Began FY 1988-89)	Phase II (Began FY 1989-90)
K-3	
Urban/Suburban	
Creighton	Avondale
Laveen	Isaac
Littleton	Balsz*
Murphy	El Mirage (Dysart)*
Osborn	Los Ranchitos (Sunnyside)*
Phoenix Elementary	Scales (Tempe)*
Roosevelt	
Wilson	
Rural	
Ash Fork	Aguila
Coolidge	Buckeye
Mary C. O'Brien	Douglas
Morristown	Eloy
Nogales	Gadsden
Picacho	Hyder
Somerton	Salome Consolidated
	Stanfield
Reservation**	
Chinle	Fort Thomas
Ganado	Holbrook
Kayenta	Red Mesa
Page	Peach Springs*
San Carlos	Cameron (Tuba City)*
Sanders	Gap (Tuba City)*
Whiteriver	
7-12	
Urban/Suburban	
Creighton (7-8)	Pima Co. Detention
Dysart	
Sunnyside	
Tucson	
Rural	
Nogales	Marana
Pinal County Consortium (9 sites)	
Somerton (7-8)	
Reservation**	
Ganado	
Kayenta	
San Carlos Unified (7-8)	
Sanders	

* school-funded programs
** ≥50% Native American population

Figure 1. At-Risk Pilot Sites


• Page
Red Mesa ○
• Kayenta
○ Tuba City
• Chinle
○ Peach Springs
Ganado •
• Ash Fork
Sanders •
○ Holbrook
○ Agulla
• Morristown
○ Salome
• Whiteriver
Metro Phoenix [1]
Buckeye ○
• San Co.
○ Ft. Thomas
○ Hyder
• Coolidge
• Pinal Co. Consortium
• Mary C. O'Brien
Stanfield ○
○ Eloy
• Picacho
• Somerton
Gadsden
• Marana
• Tucson
Pima Co. Detention Center ○
• Sunnyside
• Phase I Sites (Began FY 88-89)
○ Phase II Sites (Began FY 89-90)
• Nogales
○ Douglas

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[1] Metro Phoenix area sites are:

Phase I -- Creighton, Dysart, Laveen, Littleton, Murphy, Osborn, Phoneix, Roosevelt, and Wilson
Phone II - Avondale, Balsz, Dysart, Isaac, and Tempe

Defining "What Works"

The question of "what works" was addressed using cross-site analyses, identifying patterns of program similarities and differences--in clientele, settings, strategies, and implementation. As patterns emerged, they formed a basis for aligning reports, interviews, surveys, and forms. The alignment generated multiple sources of data that were analyzed to discern consensus about "what works" in terms of issues such as: which programs reach the most students, parents, and staff; which programs prompt systemic organizational change; and, which practices are viewed as successful through the eyes of students, teachers, administrators, counselors, aides, parents, and community members.

The evaluation of the 55 programs has relied on the premise that understanding program processes and implementation strategies employed by districts is as important as measuring student outcomes. *The process is as important as the product.*

Critical considerations included: Who was involved in program planning? Did more involvement of program staff in program planning result in more effective practices in the classroom? How important was open communication in bringing about change? Were school/community linkages important in successful programs, and, if so, what type of linkages? How did parents want to be involved? And, ultimately, what can the state of Arizona do to promote the types of changes that will help at-risk students become successful students?

Superimposed on the question of "what works" was the additional question: "For whom?" This, in turn, prompted other questions that figured prominently in data collection and analyses, such as: How similar are at-risk students? Do different kinds of students benefit from different kinds of services? What works for parents in terms of increasing parent involvement? What works for staff in terms of developing the skills needed to work with at-risk students and their parents?

Beginning in summer 1989, Morrison Institute compiled comprehensive databases to answer such questions. The data sets collected during FY 1990-91 only are depicted in Table 2. Each database has its own merits, caveats, and limitations. Also, each database is only one of many used in defining "what works."

Table 2. FY 1990-91 At-Risk Pilot Project Data Sets

- at-risk student profiles for 3,618 K-3 and 1,627 7-12 pupils;
- program histories and participation data for all 55 sites;
- survey data from 1,021 K-3 teachers and 982 7-12 staff;
- 4,042 comments from K-3 teachers and 1,041 comments from 7-12 staff members on program services;
- program outcome assessments from 986 K-3 and 843 7-12 staff members;
- survey data from 1,627 7-12 students;
- data from 748 interviews involving: 153 parents, 460 school staff, 17 school board members, 18 community members, and 100 7-12 students;
- achievement, attendance, and other "impact" data for 3,958 K-3 and 1,307 7-12 pupils being tracked longitudinally;
- retention rates and policies for 41 of the 42 K-3 programs;
- budget information for 53 of the 55 pilot demonstration projects.

No single data set fully describes the phenomena being examined. Taken as a whole, however, trends emerge that are suggestive of programs and activities that hold promise for at-risk youth in Arizona and the policy issues that need to be addressed to enable such programs to continue and flourish.

> *"If we save one kid a year, the program is worth it. If I didn't think it was worth it, I wouldn't have continued to have been involved." -- program teacher*

Arizona's At-Risk Students: Who Are They?[2]

In general, students at risk are those whose life circumstances--being poor, hungry, transient, abused, neglected--are associated with low achievement, behavioral problems, low self-esteem and other factors making them more likely to fail in school and drop out.

As part of the study, 3618 primary and 1627 secondary at-risk students were profiled during 1990-91. Profiles show that at-risk students (K-3 *and* 7-12) generally live with both natural parents who have a high school education or less. Mothers (or female guardians) are largely not employed outside the home, while most fathers (or male guardians) occupy "blue collar" jobs. *Not* all at-risk youngsters are necessarily low achievers: roughly one out of five students is perceived as achieving satisfactorily.

There are some regional variations in factors contributing to students being at risk. Urban students' home environments are less "nuclear family-oriented" than either rural or reservation students, with fewer urban students living with both natural parents. More reservation parents (or guardians) reportedly have some college than in the rural or urban areas. At the same time, the percentage of reservation unemployment is higher than in either of the other two regions. Finally, rural areas have more students from homes in which no English is spoken.

Arizona's K-3 At-Risk Students

Beyond family demographics, K-3 student profiles gathered information regarding "at-risk indicators" (i.e., factors identified in the literature as contributing to a child being considered at risk of academic failure). These indicators, which portray a vivid picture of what makes Arizona's children at risk, are presented in Table 3. Analyses by region reveal that K-3 students across regions share the same "top nine" indicators (shown above the line in Table 3).

Table 3. K-3 "At-Risk" Indicators

	% of 3,618 children
Low parent participation	59
Low family annual income	58
Few reading/educational materials	56
Low self-esteem	50
Low parent support	49
Poor communication with parents	47
Substandard home environment	44
Low English proficiency	42
Emotional/behavioral problems	33
≥ 2 schools attended	26
Health problems	19
Substance abuse by parents	19
"Latch-key" situation	19
Abusive home	18
Responsible for taking care of siblings	18
Transience/mobility	17
Retained ≥ 1 time	16
Immigration to the U.S. within 3 years	12
Sibling dropout(s)	9
Substance abuse by child	5

Arizona's 7-12 At-Risk Students

At-risk students in the 7-12 pilot projects are characterized by a different set of indicators, as shown in Table 4. Regional analyses show that only two indicators are in the "top five" for all regions--work/responsibilities interfere with school, and low parent participation.

Table 4. 7-12 "At-Risk" Indicators

	% of 1,627 students
Work/responsibilities interfere w/school	53
Not involved in community/school	44
Suspended/expelled	38
Held back ≥ 1 elementary grade	37
Low parent participation	36
Dropout/"kick-out"	33
No telephone	30
Suicidal ideas/deeds	30
Sibling dropout(s)	29
Feels unsafe at home	21
Convicted of a crime	21
Skipped school weekly	14
Drugs/alcohol weekly	13
≥ 3 schools in 2 years	12
Substandard home	11
Has children	9
Low parent support	7
Immigration to the U.S. within 3 years	5
Poor health	5

Comparing regional data, greater percentages of urban youth are characterized by more indicators than their rural and reservation peers. Youth in rural and reservation areas are uniquely characterized by factors related to regional and environmental differences (e.g., few telephones on reservations).

Grade level analyses suggest that students in 7-8 grade programs are not as seriously at-risk as their 9-12 counterparts. Findings imply that "at-riskness" is a developmental phenomenon to some degree, and that early intervention might forestall certain at-risk behaviors.

There are clearly *distinctive* aspects of at-risk youth across Arizona, with different groups of students presenting different pictures of what it means to be "at-risk."

Achievement and "At-Riskness"

Data were analyzed to show the relations between at-risk indicators and student achievement. The degree of negative effect of each K-3 indicator is depicted in Table 5. As perceived by K-3 teachers, low achievement is most associated with a lack of reading materials at home, low self-esteem, and home environments that are "dysfunctional." However, top indicators perceived as adversely affecting achievement vary by region: for urban children, parental substance abuse is the top indicator; rural teachers felt that a lack of reading materials and low self-esteem most severely affected their students. Teachers serving large percentages of Native American children believed low self-esteem had the most negative effect on their student population.

One finding deserves particular mention, especially in view of H.B. 2217 (1988) requirements for schools to *involve* parents in their children's education. As expected, K-3 teachers indicated that large percentages of children are affected by a lack of parental *participation*. But a lack of parental *support* is believed to have a more severe negative impact on achievement.

Specific indicators have been shown to distinguish between high and low achieving K-3 at-risk students. Across all regions, one indicator--*English proficiency*--is consistently associated with achievement. Low achievers overall are less English proficient than are high achievers.

Table 5. Degree of Negative Effect of At-Risk Indicators on K-3 Achievement

Few reading materials	3.21
Low self-esteem	3.21
Substance abuse by parents	3.18
Abusive home environment	3.15
Emotional/behavioral problems	3.14
Low parent support	3.11
Poor communication with parents	3.11
Low English proficiency	3.06
Transience/mobility	3.04
Low parent participation	3.04
Health problems	3.04
Recent immigration	3.01

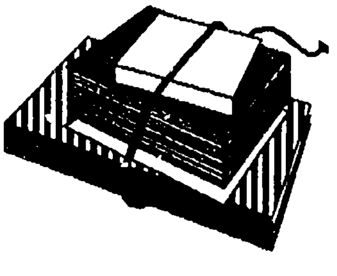
Substandard home	2.97
"Latch-key" home	2.96
Low annual income	2.96
≥ 2 schools attended	2.92
Care for siblings	2.74
Sibling dropout(s)	2.72
Sub. abuse by child	2.76
Retained ≥ 1 time	2.59

No indicator(s) <	2.50

* Lines divide ranges of mean scores and can be interpreted using the following scale:
2.0 = NO negative effect on achievement
3.0 = SOME negative effect
4.0 = LARGE negative effect

Among 7-12 students the number of at-risk indicators rises as achievement levels drop. Low achieving at-risk students are characterized to a greater degree as:

- Uninvolved in school/community activities
- Retained in at least one elementary grade
- Having a sibling who dropped out of school
- Having dropped out themselves
- Having been suspended or expelled
- Having been convicted of a crime



No More Business As Usual

One of the at-risk pilot sites adopted the motto: *No More Business As Usual.* It is a motto that is apropos to the 55 public school districts across the state as they united in a campaign to intervene in the lives of over 35,000 pupils "environmentally" at risk. Innovative initiatives were launched to develop and enhance educational alternatives; nurture competent and compassionate staff; foster reciprocal relations between schools and parents; and create collaborative partnerships with businesses and social service agencies.

Among the 42 K-3 pilot sites, a wide variety of intervention strategies were employed. Nine key strategies (shown in Table 6) encompass K-3 programs' efforts to enhance the educational environments and experiences of at-risk youngsters.

Table 6. K-3 Student Service Strategies

- **Alternative Delivery Systems**
  - **Full-day kindergartens**
  - **Multi-year classrooms**
  - **Multi-graded classrooms**
- **Reduced Student-Staff Ratios**
- **Altered Classroom Instruction/ Curriculum Modifications**
- **Supplemental Individualized Instruction**
- **Support/Enrichment Activities/Services**
- **Summer Services**
- **Improved Facilities**
- **Enhanced On-Going Student Assessment**
- **Expanded Counseling/Social Services**

The 13 programs (21 sites) serving 7-12 "retrieved" dropouts and potential dropouts offered a continuum of programs ranging from off-site alternative schools serving exclusively at-risk teens to "school-wide" reforms serving all students. As shown in Table 7, both comprehensive, "holistic" programs and "discrete" services were offered.

Sites serving students in grades 7-12 were charged with integrating academic, vocational, and support services. Essentially, the following services are representative of the types of services most frequently incorporated within their programs:

Table 7. 7-12 Delivery Systems

- **Alternative Schools**
- **Schools-Within-Schools**
- **Academic Classes/Labs/Activities**
- **Vocational Classes/Labs/Activities**
- **Support Classes/Labs/Activities**
- **"Total" School Reform**

Academic/Instructional Services:

- Small group instruction
- One-on-one tutoring
- Computer-assisted instruction (CAI)
- Self-paced curriculum

Vocational Services:

- Applied academics
- Employability skills
- Career awareness activities
- Vocational/occupational training
- Work experience/Entrepreneurial activities
- Vocational assessments
- High Tech labs

Social/Support Services:

- Life/study skills classes
- Personal counseling (individual, group, family)
- Formal student monitoring
- Formal student mentoring
- Social service linkages/referrals

Getting Parents Involved

H.B. 2217 (1988) required K-3 districts to identify "procedures for involving parents in the program." At the same time, State Board criteria for 7-12 programs required "parental communication" in conjunction with direct student services.

Both K-3 and 7-12 efforts to involve parents as partners in education included the following:

- increasing home/community outreach efforts;
- increasing opportunities for school involvement;
- upgrading parent skills; and,
- providing counseling/social services.

Broadly defined, outreach efforts entailed school personnel giving information and/or delivering services to parents in their homes and communities. All 55 programs offered some type of home/community outreach, typically through increased written or verbal communication. A number of districts also conducted formal home visits, and many K-3 programs aimed to involve parents with their children by assigning instructional activities to be completed jointly at home.

Program staff also made efforts to increase parent participation through on-site school activities. These efforts included three major categories of participation: parents as classroom volunteers, parent membership on school advisory boards for the at-risk program, and parent participation in school "events."

A majority of K-3 and some 7-12 programs attempted to involve parents by offering workshops and presentations on a variety of topics. Additionally, several districts offered or sponsored formal classes to upgrade parents' own skills (e.g., ESL classes). Finally, some at-risk programs also attempted to address the physical, social, and economic needs of parents by providing referrals to social service agencies or counseling on topics such as student absenteeism or drug abuse.

The Right Staff

Many K-3 at-risk programs focused on staff development, particularly during their first implementation year. Although staff development was *not* an area of emphasis for 7-12 programs, many sites supported additional staff training. At both the primary and secondary levels, training was provided through:

- workshops and/or in-service;
- conferences and academies;
- formal classes (e.g., college courses);
- formal at-risk program meetings; and,
- school visits and observations.

Workshops/in-service training addressed a variety of subjects. They were led by peers and professional consultants, and were offered on and off-site. Most districts also sponsored staff attendance at professional conferences, academies, or other events that offered several days of training on a related topic. ADE's K-3 Academy is a prime example of a well-received training opportunity in this category.

Districts also sponsored staff participation in university, community college, or other training classes. Generally, these classes resulted in college and/or district credits. In a few districts, staff development occurred in the context of specially designed program meetings intended to provide staff with hands-on training in various aspects of program evaluation and implementation.

Finally, several programs sponsored visits by their staff to other schools. These visits allowed staff to observe other programs in operation, and provided opportunities to acquire new skills and ideas to enhance their own at-risk programs.

How Many People Were Served By The Programs?

During FY 1990-91 alone, at-risk programs:

- served nearly 35,000 at-risk pupils (over 24,000 K-3 students and an estimated 9,385 7-12 students);

- touched over 10,000 parents of at-risk pupils (roughly 9,210 parents of K-3 pupils and 1,532 parents of 7-12 students);

- recorded over 6,500 staff participants in various training activities (with an estimated 5,470 K-3 and 1,068 7-12 participants attending workshops and other in-service activities).

So...What *Does* "Work" For K-3 Students?

Key early childhood strategies identified as "promising" include: reducing student-staff ratios, implementing full-day kindergartens, and supplementing individualized instruction.

Reduced student-staff ratios, full-day kindergartens, and tutorial programs (particularly those delivered during the school day) consistently appeared as "effective" strategies holding promise for at-risk youth. National research supports this finding. These strategies share one critical feature: children receive more, and more individualized, time and attention.

Although the interpretation of class size research has been highly controversial, a recent meta-analysis of class size research reveals that smaller classes result in higher student achievement, and these effects are cumulative (Mitchell & Beach, 1990). Further, a longitudinal experimental study of class size shows a large positive effect for minority students (Finn & Achilles, 1990). The minority factor is particularly germane to this at-risk study since over 80 percent Arizona's pilot program students are ethnic minorities.

Interview respondents praised those school districts that had hired ***additional teachers and aides*** in an effort to reduce class sizes and student-staff ratios. The main benefit of these efforts, parents and staff said, was that students received extra individual attention.

- Regarding one student who had benefitted from extra attention, an urban teacher said: "[Before] they would have just dumped him in a special education class. Nothing was really wrong with him. He just needed time to develop."

Extending the traditional half-day kindergarten schedule to a full day appears to be another promising practice for serving at-risk students. A recent review of the research on full-day kindergarten (Puleo, 1988) reveals that the available evidence largely favors full-day programs over half-day, particularly for lower ability and low socio-economic status (SES) students. Additionally, achievement effects are shown to be long-term, with favorable findings continuing when students are followed into the upper grades, even as high as eighth grade.

Urban parents and staff, in particular, frequently cited ***full-day kindergarten*** as one of the most effective components of an at-risk program, with one parent noting it was an "absolute necessity."

Parents and staff also applauded *tutorial programs*.

- Said an urban teacher: "I don't know how we functioned without [the tutors]...it is very difficult to individualize to the extent that some children need, and the in-class tutoring program has made this possible." A reservation teacher echoed these sentiments: "We might be sending non-readers on to third grade if it were not for this one-on-one opportunity." One mother said simply: "My son feels that he is being helped."

Teachers believed that tutorial programs were effective, but only if implemented under the appropriate conditions. For example, before- and after-school tutorials were not as well-received as during-school programs. If tutorials *were* conducted during school, teachers preferred that they took place within the classroom setting rather than on a pull-out basis. Other considerations for delivering tutorials were the frequency and intensity of the tutoring, the process by which students are identified, and the skills identified for tutoring.

In general, "promising practices" for at-risk children appear to be those that increase both individual attention and instructional time for students. Notably, these are also costly reforms.

Developmentally appropriate practices (DAP) appear promising, but evidence is inconclusive.

The use of DAP is desirable and well-supported in the early childhood literature and research. As defined by the National Association for the Education of Young Children (Bredekamp, 1987), these types of practices address the total educational environment of children including curriculum, teaching strategies, social-emotional development, motivation, parent-teacher relations, the physical environment of classrooms, evaluation techniques, and class size, among other factors.

Within Arizona, virtually all K-3 at-risk pilot programs focused on the increased use of DAP through implementing curriculum modifications incorporating "whole language" and experiential math programs. Many programs used at-risk funds to purchase the instructional resources needed to implement DAP, such as classroom libraries, books with audiotapes, and math manipulative materials.

However, the actual effectiveness of DAP in Arizona's at-risk pilot programs was difficult to assess because of wide variations in the extent to which they were understood and employed. In addition, DAP tended to be incorporated into other intervention strategies, making it difficult to separate them for analysis. Morrison evaluators, ADE personnel, *and* some district personnel have expressed concerns regarding apparent inconsistencies in the understanding and implementation of DAP. Further district efforts are required to enhance uniformity of practice so there can be meaningful analysis of whether or not these practices "work" with Arizona's at-risk pilot students.

Nevertheless, parents and staff generally agreed that DAP worked. These practices, said parents and staff, had made language arts and math "fun" for children. They had also helped raise students' self-esteem and enthusiasm for school. Among the comments:

- "The holistic curriculum is why my son is in this school," said one urban mother. "The [at-risk program] sneaks learning in with the fun stuff," a rural parent said. "[My daughter] is excited about school," said a reservation father.

Many staff pointed out that a transition to developmentally appropriate practices requires a wealth of new instructional materials. As noted, in many cases program funds were allocated to purchase these new materials, prompting one veteran reservation teacher to call it "a dream come true." Teachers, in general, were extremely positive about the benefits of new materials for enriching the educational environments of the students. But, staff and parents said that many more new educational materials were needed, especially in rural and reservation schools.

- Lamented one rural teacher: "You can't use whole language without books." A frustrated reservation teacher asked: "How can we do hands-on activities when we don't have materials for the kids?"

The implementation of developmentally appropriate practices needs to be assessed further.

...And What "Works" For 7-12 Students?

In this evaluation, alternative programs appear most "promising" for at-risk 7-12 students; however, other delivery systems *did* produce positive outcomes related to the services they provided (e.g., vocational services produced vocational outcomes).

There is a great deal of program diversity at the 7-12 level. This diversity added to the complexity of the evaluation efforts undertaken and produced findings that suggest that each type of program has some specific merits. For example, alternative and school-within-school students rated behavioral and attitudinal outcomes positively "across the board;" academic components produce positive academic outcomes; vocational components produce positive vocational outcomes; and support service components produce positive outcomes related to self-esteem and coping skills. Which practices are most promising? It depends.

The Holistic Models

1) Alternative Schools: Evaluation results consistently point to the alternative school model as the most effective and positively perceived delivery system for at-risk students at the secondary school level. By incorporating a variety of instructional, vocational, and support strategies into a comprehensive system, customized to the unique and diverse characteristics of older at-risk students, alternative schools seem to be providing a viable option for students who have been disenfranchised from the "regular" educational system. While mainstreaming and heterogenous grouping are important goals for serving at-risk students at the primary level, this approach may not be as desirable for older students who appear to function well when grouped with students similar to themselves.

The "credibility" issue is important in looking at the alternative school, since there is a perception among non-alternative school staff that they offer an "easy out" for students who have not succeeded in the mainstream. High academic standards and quality curriculum must be in place if alternative schools are to be viewed as a positive intervention for at-risk students.

Regional differences must also be considered; eight of the ten alternative schools in the pilot project are in rural areas. Alternative schools may *not* be the best delivery system for reservation districts where the majority of the population is considered to be at risk. But the concept of an integrated versus a fragmented, delivery system such as that provided through alternative schools deserves consideration.

"I know people say this school is for trouble makers, but that's only when they start. When they finish, they will be different. ...This school lifted me to a higher level in life and I will never forget how this school treated me." --17-year old student in an alternative school

2) **Schools-Within-Schools (SWS):** The SWS model provides educational programming that is a compromise between alternative schools and mainstreaming programs, and their effectiveness is also shown to be somewhere in the middle in terms of student and teacher perceptions. Students, however, consistently rated behavioral and attitudinal outcomes positively, and were the only group of students to do so other than alternative school students.

3) **School-Wide Reform:** Another holistic approach implemented in two at-risk programs is school-wide reform. Only one of these efforts was formally assessed as part of this evaluation: a reservation program that instituted a four-period day during year three of the project. This school reform model has affected every student in the high school, all of whom are considered to be at risk, as well as every staff member. After the first year of implementation, responses to the change were positive overall, with students somewhat more positive than staff. This totally integrated approach to serving at-risk students warrants close examination and may be particularly applicable for reservation sites with large at-risk populations.

The "Discrete Intervention" Models

1) **Academic and Instructional Strategies:** Academically-focused activities produced feelings of academic success among students. However, there was no consensus between students and teachers about which instructional strategies were most effective. Students preferred self-paced instruction, while teachers believed that this method does not provide adequate direct instruction. Computer-assisted instruction appeared to be effective when used as one aspect of a comprehensive program, but not as a stand-alone strategy. Tutorials were well-received, but again must be planned as a part of an integrated system. In sum, each separate instructional strategy appeared to be effective only in terms of how well it was incorporated into a total synergistic system.

2) **Vocational Services:** The wide range of vocational services implemented resulted in improved attitudes and abilities in work-related areas. Students enrolled in vocational programs reported an increased awareness of career opportunities and felt better prepared to enter the workplace than students not enrolled in these programs. Although staff believed that vocational services were effective, they also felt that vocational opportunities were limited and sometimes difficult to access.

3) **Support Services:** *More* is the operative word. Support services were viewed positively by most students and resulted in better self-esteem and coping skills. Especially among students in 7-8 programs, support services were rated highly. Because at-risk behaviors are not as pronounced at this level, support services may be particularly desirable in these grades. Perhaps more severe at-risk behaviors could be averted by intervening earlier with more support. At all levels, however, more qualified social service staff are needed to serve more students in a timely manner.

Since clear conclusions regarding the most effective strategies for secondary level at-risk students were difficult to establish, Morrison Institute staff revisited national at-risk literature, specifically reviewing studies pertaining to interventions similar to those evaluated in the *Arizona At-Risk Pilot Project* (e.g., alternative schools, tutorial programs, and vocational and social services). Throughout the national literature, similar research problems were documented (e.g., limited access to longitudinal quantitative data on student outcomes) and inconclusive results were reported regarding "what works" (Catterall & Stern, 1986; Gold & Mann, 1984; Reilly, 1986). Much of the research validated such notions as: 1) implementation *processes* need to be assessed, and 2) attitudinal changes are important student outcomes. The conclusion of the Gold and Mann study is particularly relevant to the present at-risk evaluation:

> "Whether programs are successful will vary from student to student, teacher to teacher, program to program... But exploration of the underlying processes has shown that those programs did indeed produce marked change in particular attitudes and perceptions of certain identifiable students in a way conducive to better behavior and greater scholastic achievement" (p. 160).

Evaluation findings strongly suggest the need for more "holistic" approaches to working with at-risk teens. While such self-contained programs hold promise, however, they may not be realistic options in some areas.

Discrete services can be effective, if "impact" is sought in a discrete skill. Nonetheless, a better solution for implementing discrete services is greater systemic integration of services for meeting the needs of the "whole" student.

What Evidence Is There That Programs Made A Difference?

In addition to bi-annual site visits, extensive program documentation, hundreds of interviews, and thousands of survey results, selected student outcome data were analyzed for both K-3 and 7-12 students. Evaluation data indicate that, overall, students are making academic progress in the areas of attendance, achievement, grade promotion, and credits earned.

Student Attendance: Based on the assumption that student learning is adversely affected by high rates of absenteeism, evaluators examined variations in student attendance during the program implementation period.

Tracking 2353 K-3 students and 527 students in grades 7-12, *FY 1990-91 data reveal that absenteeism--for both groups of students--is the lowest of all three years studied* (Figure 2).

- For K-3 students, absenteeism rates have declined steadily throughout the implementation period of the at-risk programs.

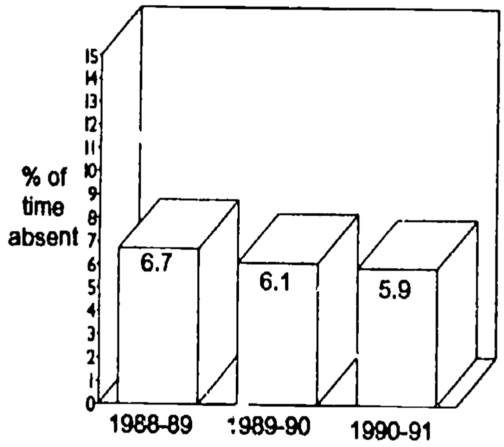
- For 7-12 students, absenteeism has declined, reversing a two-year trend.

Reduced absenteeism implies that students received "additional" instructional days. Programs also "increased" instructional time through such strategies as one-on-one tutorial assistance and summer school. Thus, it may be concluded that *both the quantity and quality of instructional time were addressed by at-risk programs.*

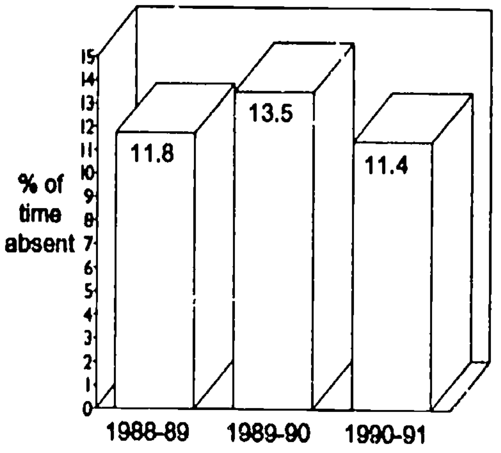
At both K-3 and 7-12 levels, there were regional variations in attendance patterns. Specifically, among reservation students tracked longitudinally, attendance decreased steadily (i.e., absenteeism increased).

K-3 Student Achievement: ITBS scores for approximately 550 students for whom three years of data were available were examined to discern any changes in test performance over time. Three-year trends in student achievement were examined using normal curve equivalent (NCE) scores. (NCE scores were used to compare a student's gain with the average gain for similar students who took the test. If the student grew, but *less than* the "average" student, the NCE declined.)

Figure 2. K-3 Absentee Rates (N=2353)



7-12 Absentee Rates (N=527)



Net NCE gains were made in reading and language over the three-year period, while math NCE scores declined. In other words, *reading and language subtests revealed average growth (or more), while the math subtest showed less than average growth* (Figure 3).

Data analyses suggest that aggregate trends can be misleading. For example, between 1990 and 1991, pupils in all regions showed gains in reading, but actually only urban children made steady growth, while rural and reservation children remained relatively stable. Also, most of the overall decline in math scores can be attributed to reservation children who represent nearly half of the children remaining in the cohort.

One thing is important to remember: *declines in NCE scores do not mean that students made no progress*. In fact, looking at grade equivalent (G.E.) scores, all students, in all areas, showed steady developmental progress over the three year period. In general, however, students' end-of-year grade equivalent scores show that they would enter the next grade slightly below grade level.

- *"I have seen progress in many of the at-risk pupils. However, we are not reaching all of them...."*

- *"Many students are struggling to learn English as a second language, so... many are still behind a year...."*

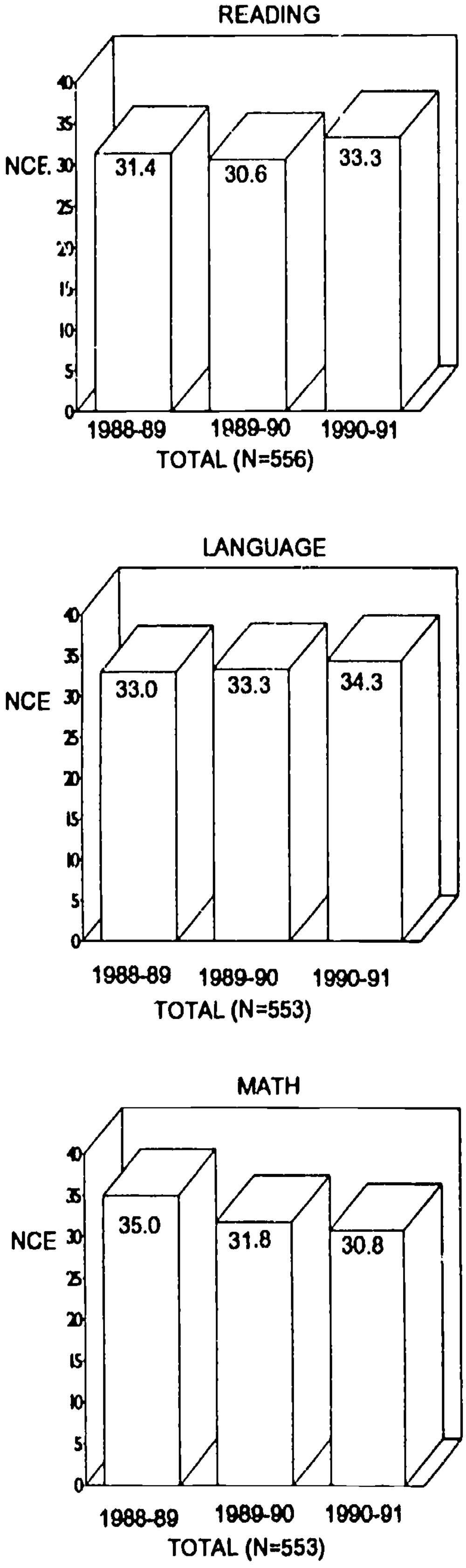
- *"The emphasis on standardized test scores does not provide opportunities for creative teaching techniques which at-risk pupils need."*

- *I have seen some improvement in the academic performance of the children labeled as at-risk...since the adoption of this program by my district...."*

- *The consistency of the whole language curriculum and the immersion of children in a literate environment keeps the students 'on-track'."*

--K-3 program teachers

Figure 3. K-3 Cohort ITBS NCE Results (1989-91)



n's vary slightly by year and by subtest

7-12 Student Achievement: ITBS and/or TAP scores were examined for over 260 students for whom three years of data were available. Three-year trends in student achievement were examined, as based on NCE scores. As Figure 4 shows, there are gains in all three areas compared to FY 1988-89 NCE scores, with most gains reflected in language.

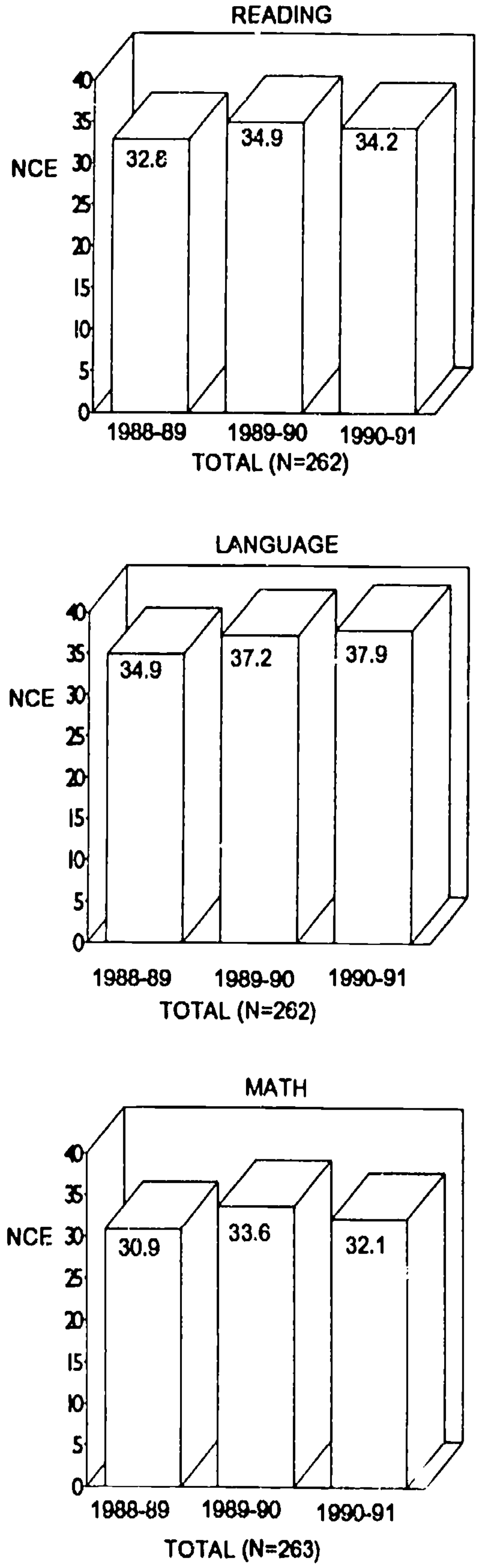
Regional analyses show that, in a majority of cases, rural at-risk students are out-performing their urban and reservation peers in all areas. Notably, reservation students demonstrate considerably lower reading scores than their peers.

> - *"The [district is] totally committed to assisting students to stay in school and having programs which will give students appropriate skills when graduating. Many concerns for making this happen in this rural community are being addressed."*
>
> - *"To get academic credit, our [at-risk program] students have to stay on-task, and demonstrate knowledge in a subject area comparable to the regular classroom."*
>
> - *"Our programs still need a lot of work, but we are trying to...meet the needs of our students as well as maintain the academic environment."*
>
> *7-12 program staff*

As with K-3 scores, ITBS/TAP NCE scores were also examined in relation to more "meaningful" grade equivalent (G.E.) scores. The analysis showed that students are making steady developmental progress from grade-to-grade. However, the question was posed: "What kind of progress is being made?"

The median and range for grade equivalent scores by grade level using FY 1990-91 data are depicted on the next page (Table 8). Using the median (which indicates the grade equivalent at which 50% of the students score below and above), a majority of students demonstrate skills "below" grade level. Range scores, however, reveal the variation in individual student skill levels and show that there are students performing at or above grade level as well.

Figure 4. 7-12 Cohort ITBS/TAP NCE Results (1989-91)



n's vary slightly by year and by subtest

Table 8. FY 1990-91 Grade Equivalent ITBS/TAP Scores For 7-12 Cohort (N = 264)

FY 1991 Grade Levels*	Reading G.E.		Language G.E.		Math G.E.	
	Median	Range	Median	Range	Median	Range
8th (n ≤ 81)	6.8	3.4-19.8	6.8	4.1-19.5	7.2	5.0-19.2
9th (n ≤ 76)	7.8	3.0-14.7	7.9	4.2-14.4	7.6	3.6-13.2
10th (n ≤ 35)	[illegible].6	3.6-16.2	8.1	4.0-14.0	7.8	4.9-16.2
11th (n ≤ 43)	8.2	3.7-17.1	9.9	4.2-14.0	8.1	4.8-14.0
12th (n ≤ 24)	10.3	7.0-14.4	9.9	6.0-13.5	8.7	5.0-15.8

* Each designated grade level represent a subgroup of the cohort for whom three years of data were available. Therefore, 1991 eighth graders were 1988-89 sixth graders and 1990-91 seventh graders, and so on.

Another analysis of standardized test scores examined the exit skills of students leaving grades three and 12. Third and twelfth grade students' NCE results were compared for two consecutive years, since changes in scores *may* reflect changes as a result of program participation (even though there are other variables which contribute to such changes).

Figure 5 (page 16) shows that exiting third grade students in FY 1990-91 performed higher than their FY 1989-90 counterparts in reading, language, and the composite. Math NCE scores, however, declined. Seniors graduating in 1991 exited with higher level language and math skills, and lower reading skills, than their predecessors (Figure 6, page 16).

With respect to overall ITBS findings, it is encouraging to find increased language skills at both the K-3 and 7-12 levels. Much research indicates that language proficiency is a key "predictor" of academic success, and evidence derived from this evaluation study corroborates this finding.

K-3 Student Promotion/Retention: In theory, repeating a grade is supposed to provide a child with a "second chance" to master skills. But recent research (Center for Policy Research, 1990; Shepard & Smith, 1989) illustrates that retaining, or "flunking," children is of questionable value: if any gains are made during the repeated year, they are short-lived. Further, it has been found that children who have been retained are more likely to drop out of school later in life than children who have not been retained. Considering both the costs ducating a child for one additional year (or mor , and evidence suggesting that retention does not provide long-term benefits, alternatives to retention might be more cost effective.

It is posited that the greater the use of educational alternatives to providing remediation, the less the need for retention as an educational solution. Since many at-risk pilot sites attempted to use research-based alternatives to retention, Morrison Institute evaluators investigated the incidence of retention at these sites. *Findings through FY 1990-91 indeed showed a decline in retention rates during the period of at-risk pilot program implementation* (Figure 7).

Figure 7. K-3 Retention Rates (1988-91)

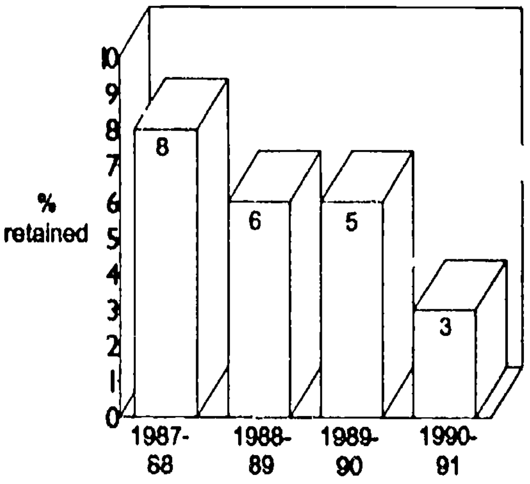
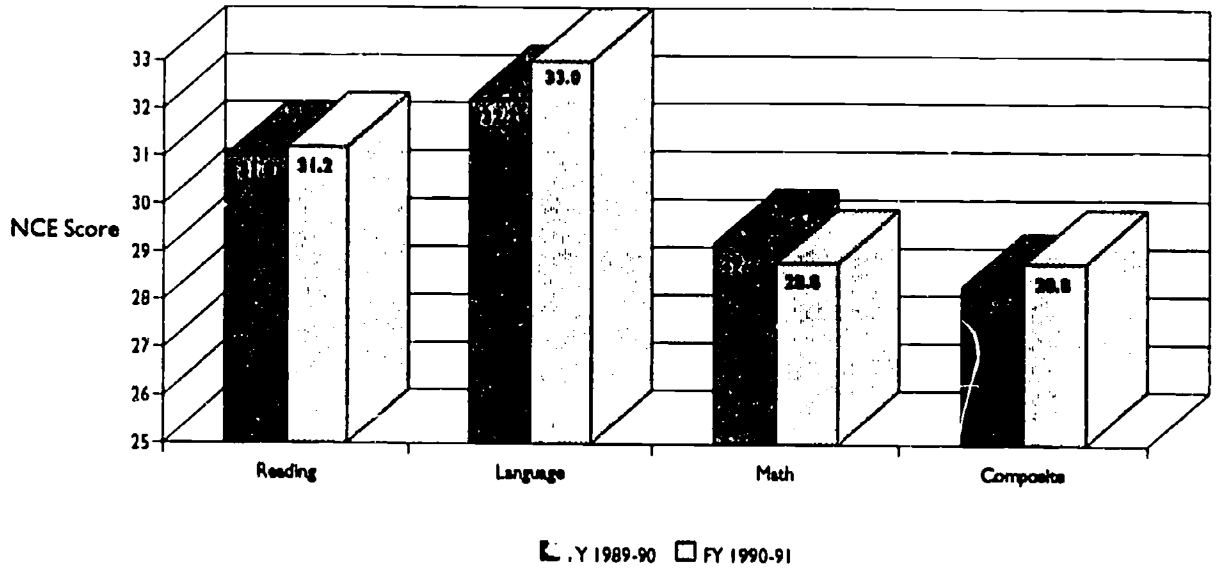
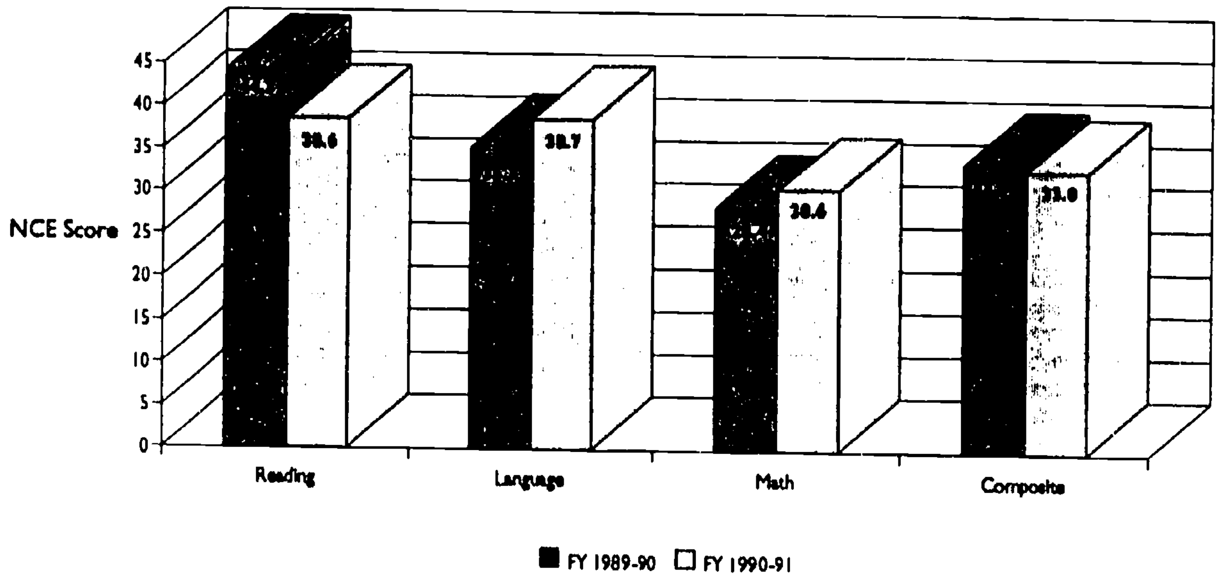


Figure 5. A Comparison of 1990 and 1991 Third Grade Students' ITBS Scores



FY 1989-90 Third Grade Students (Reading n = 550; Language n = 542; Math n = 549; Composite n = 537)
FY 1990-91 Third Grade Students (Reading n = 497; Language n = 498; Math n = 501; Composite n = 483)

Figure 6. A Comparison of 1990 and 1991 Twelfth Grade Students' TAP Scores



FY 1989-90 Twelfth Grade Students (Reading n = 46; Language n = 40; Math n = 43; Composite n = 40)
FY 1990-91 Twelfth Grade Students (Reading n = 40; Language n = 41; Math n = 40; Composite n = 37)

The evaluators also explored whether or not at-risk programs directly contributed to lower retention rates by administering a special survey on retention. Responses to the survey were enlightening. For the most part, pilot districts did not have *specific* retention policies or share definitions of what constitutes a retention. Moreover, no standard criteria for making retention decisions existed among districts.

The retention survey also addressed the question of whether or not retention policies had changed *since* and/or *because* of at-risk program implementation. Over half of the 42 pilot sites (23 districts) responded that there *had* been policy changes since the implementation of the K-3 at-risk program which had affected both policy and practice. Several districts indicated that, as a result of the implementation of the K-3 at-risk program, they had already or were currently reviewing, evaluating, revising, and adopting retention/promotion guidelines and policies. In summary, many districts focused attention on retention policies, and many instituted changes, because of the emphasis of the at-risk programs on students most likely to be retained.

7-12 Credits Earned: Twenty credits are required by the state for graduation, and therefore, five credits is the "average" number of credits needed per year for four years of high school. Analyses were conducted to determine how many students were "on track" toward graduating, both in terms of credits earned during F ,90-91, and in total cumulative credits.

For all students for whom data were available for both FY 1989-90 and 90-91, *a little over one-third of the students (35 percent) earned five or more credits; about two-thirds (65 percent) earned less than five credits.*

Table 9 shows that half or less than half of the students in grades nine through 11 *are* "on-track" in accumulating an average of five credits annually, while 71 percent of the twelfth grade students have accumulated enough credits to graduate. The shaded area indicates those students who *are not* on track, and might be considered "overage" going into the next grade.

Table 9. 9-12 Cumulative Credits Earned (as of FY 1990-91)

Grade	< 5 credits	5-9.5 credits	10-14.5 credits	15-19.5 credits	> 20 credits	% "on-track"
9th (n=185)	49%	48%	3%	<1%	<1%	51%
10th (n=138)	10%	46%	35%	7%	2%	44%
11th (n=55)	4%	13%	38%	31%	14%	45%
12th (n=68)	0%	3%	12%	15%	71%	71%

Summary of Student Outcomes

For K-3 Programs:

- A trend toward decreased absenteeism has occurred since the inception of at-risk programs; this implies that children are receiving "additional" instructional days. These additional days, combined with modifications in the *types* of services children receive, mean that at-risk pilot sites are addressing both the quantity and quality of instructional time.

- Teachers perceive, and data confirm, that students are making developmental progress.

- *For the children represented by the K-3 cohort:* 1) ITBS NCE results show student progress in language and reading--the two areas emphasized within the at-risk programs; ITBS NCE scores show net declines in math; and, 2) ITBS GE scores show that students are making steady developmental progress from year-to-year in all areas, but are still advancing "below grade level."

- *For consecutive groups of third grade children represented by the K-3 cohort,* ITBS NCE results show progress in reading and language, and declines in math.

- Consistent results indicating net gains in reading and language are encouraging, particularly because these skills appear most predictive of academic achievement.

- Consistent results indicating below-average developmental growth in math indicate a need to review math curricula to determine whether math skills are receiving adequate attention, or whether poor ITBS scores are a result of test-curriculum incompatibility.

- Decreased retention rates have been observed in at-risk sites, and there is some evidence that these are associated with at-risk program implementation.

For 7-12 Programs:

- Absenteeism decreased for the first time (in FY 1990-91) since the inception of at-risk programs; thus, at-risk youth received "additional" instructional days.

- *For the teenagers represented by the 7-12 cohort:* ITBS/TAP NCE results show relatively stable performance in reading and math, and an overall trend toward increased language skills.

- *For the teenagers represented by the 7-12 cohort:* ITBS/TAP NCE results, when converted to grade equivalent scores, show that students are making steady developmental progress; however, a majority of students still are advancing "below" grade level.

- *For consecutive groups of seniors represented by the 7-12 cohort,* TAP NCE results show that FY 1990-91 students are exiting with higher language and math skills, but lower reading skills than their predecessors. Overall performance has remained stable between years as reflected by the composite scores.

- Results indicating net gains in language are encouraging, as these skills are correlated with academic achievement; low reading levels, however, are cause for concern--particularly among reservation youth.

- A majority of students *are not* earning an average of 5 or more credits per year.

- A majority of students in grades 9-11 *are not* "on track" regarding cumulative credits earned; however, 71% of the twelfth grade students longitudinally tracked earned sufficient credits to graduate.

What About Parent Involvement?

Research findings suggest two distinctly different aspects of "effective" parent involvement: parent *support* and parent *training*.

Efforts to involve parents were required as part of the K-3 at-risk legislation, and all programs did indeed offer parent involvement components. Overall, parental involvement is believed to have improved since the initiation of the at-risk programs, but much more progress is needed and desired.

Much was learned from the evaluation about the lives of at-risk children and their parents. Many parents exist in a cycle of poverty and lack the most basic necessities. By and large, they are not well-educated, and speak English poorly if at all. Most care about their children, but do not feel comfortable in the school environment because they themselves met with failure there.

One key finding centers on K-3 teachers' perceptions of parental *support*. Although lack of *parent participation* is considered pervasive, it does not have as negative an impact on a child's achievement as lack of support. Therefore, garnering parental support becomes a *de facto* role of schools attempting to improve the educational outlook for their at-risk students. Evaluation results indicate that the most effective means of getting parent participation is through social events where food is served. But, to build parent support, verbal, one-on-one communication from the classroom teacher or another staff member is the best strategy.

Parent workshops, particularly of the "hands-on" variety (e.g., make-and-take), have been shown to be somewhat effective. These workshops, however, tend to reach a relatively small number of parents--often *not* the ones who need the contact most. In rural areas, classes that upgrade parents' own skills (e.g., ESL and G.E.D.) have met with some success. In sum:

1) Parent involvement initiatives, targeted specifically toward parents of at-risk youth, should first consider the existing level of parent support. Garnering support seems a necessary prerequisite for parent involvement. Activities that promote school-parent rapport and establish schools as comfortable, non-threatening environments may initially hold more promise than parent workshops or other parent training activities.

2) Workshops that require the active participation of parents are more successful than those that merely present information; adult education classes also hold promise for eliciting parent support and participation.

Parent participation is problematic at the higher grade levels.

The older the student, the less parent involvement, and the lower the expectations that schools should expend resources to garner parent support and involvement. Some staff firmly believe that schools should be reaching out to more parents; others are adamantly opposed to spending their time and energy on what they perceive as "not my job." Still, the same strategies that work in the primary grades work at the secondary level; namely, holding school events and making personal verbal contacts. Middle school students responded more positively to the benefits of increased parental support than did 9-12 students. Therefore, parents of middle school students appear more likely to respond to these strategies than do parents of high school students.

Parent involvement is weak among 7-12 programs. Given that parent participation is socially perceived as desirable, it may be beneficial to develop initiatives specifically targeted for secondary level parent activities.

Based on K-3 program evaluation findings, it seems prudent to point out that any initiatives should first take into consideration the level of parental support for public instruction since garnering support appears to be a necessary prerequisite for parent involvement.

...And Staff Training?

At-risk pilot sites must have the "right" people for programs to succeed--those with appropriate training and commitment to work with at-risk youth.

Evaluation data on staff services make a strong case for drawing the conclusion that quality and commitment of staff are key aspects of program success. Yet data also suggest that *pre-service and in-service training often fail to prepare staff for the challenge of working with at-risk populations.* Program personnel recommend that pre-service training include more and earlier practical teaching experiences in diverse settings, including those with at-risk populations, and that students be encouraged to exit undergraduate programs with ESL certification. Internships, mentoring programs with master teachers, and five-year undergraduate programs are additional options for improving pre-service programs. Other district recommendations include more collaboration and closer linkages between schools and universities, and greater input in establishing teacher training requirements.

Quality on-site in-service training is often difficult and costly to provide. Making better use of available communication technologies could alleviate some of these problems, especially in rural and reservation area. Suggested incentives for promoting professional development include: giving teachers control of resources at the building level, paying for college courses with the stipulation that teachers stay with the district for a designated number of years, providing stipends for teachers who fulfill a staff development function in the school, and paying teachers to attend training offered during the summer.

Staff training--both pre-service and in-service--is an area in need of state and local attention. In particular, strategies for providing training in more isolated districts need to be explored further.

Quality of Implementation

Program implementation issues are key factors affecting the likelihood of program success.

The issue of "quality of implementation" was addressed in several ways. Predominantly, primary and secondary staff were surveyed regarding various aspects of program implementation. These aspects were identified by program directors as elements that they felt either contributed or constituted a barrier to the successful implementation of their programs.

Of fifteen aspects included on the staff survey, primary and secondary level staff shared six key concerns:

- lack of an integrated school-district *plan* for meeting needs of at-risk students;
- lack of alignment between *philosophies* toward at-risk students;
- poor communication regarding the at-risk program;
- poor pre-service staff training with respect to at-risk issues;
- poor in-service staff training with respect to at-risk issues; and,
- lack of school and community collaboration.

Planning issues were subject to heavy criticism in some districts. Some staff and school board members said their districts did not react to problems until threatened with a crisis. Others were characterized as having no master plan, stating that their programs lacked focus and direction, and that planning was slipshod.

- Said one staff member: "...the program has had no direction... [it] is in limbo...." Regarding district management, another teacher said, "They're reinventing the wheel without consulting us first." • Stated an exasperated teacher: "It's hard to tell if the program is working when it changes every year."

In some districts, poor program management was seen as contributing to poor planning, prompting staff to call for better administrative support, guidance, and direction. Staff in other districts indicated that their programs had clarified goals and improved leadership during the past year. These factors had helped focus their at-risk programs and eliminate confusion and cross-purposes, staff said. Not surprisingly, staff generally perceived that effective programs had good leadership.

Another key area of concern involves ***lack of staff communication and links within schools and districts***. For example, staff at some schools felt that teachers and administrators were well informed about their at-risk program components; others felt the opposite was true. They recommended better formal and informal contacts between program staff, non-program teachers, and administrators.

Yet, several staff interviewed indicated that overall district communication had improved as a result of the at-risk programs. Group planning efforts had pulled people together.

- Said one teacher: "We are no longer just a staff of individual teachers...there is a feeling of being a group." Said another teacher: "There is a team spirit here....a pride in improving the school.... We understand what we have to do."

Several programs were criticized for ***late implementation and slow progress*** in effecting changes. Also, some staff bridled under forced classroom reforms "from the top" that did not have their input or support, even though these same staff admitted that reforms were needed. The notion of ***systemic reform*** was a common thread throughout the interviews. Although many respondents said that more reform was needed, several staff and parents indicated that great strides had been made already.

- Said a reservation teacher: "Prior to at-risk funding, we had the attitude that, 'these kids can't fit into the system.' Now we are asking, 'How can we change the system to fit the kids?'"

Particularly at the 7-12 level, interviewees called for better ***linkages between discrete program components, between programs and schools/districts, and between programs and the community***. Several respondents noted a lack of follow-up on students making the transition from junior high to high school, and from alternative programs to mainstream programs. With respect to program-community linkages, staff from some urban districts reported improved community links as a result of at-risk programs. Examples of good linkages included job placement programs and family support services linked to social service agencies. In contrast, establishing good community linkages proved problematic for rural and reservation districts.

- Said one reservation staff member: "Kids fall through the cracks without contacts with outside agencies."

As evident in the preceding discussion, several persistent barriers to success relate, directly or indirectly, to leadership and program management. There appears to be a strong link between unstable leadership, problems with program implementation, and poor communication.

Investigating this link, Morrison Institute examined the extent of administrative staff turnover among phase I sites since they began in FY 1988-89. Table 10 shows the results of this investigation and indicates that more rural and reservation programs have lost their program directors compared to urban programs. Moreover, more school and district administrators (e.g., principals, superintendents) have left reservation schools than rural. Table 10 shows that, overall, there has been greater than a 50 percent turnover in key program staff and/or administration since the beginning of the programs--almost 70 percent among 7-12 programs.

High rates of key personnel turnover are cause for concern--particularly in the more isolated and rural programs. Strategies to reduce turnover should be developed in all programs.

Table 10. Phase I At-Risk Programs: Administrative Turnover*

	Programs (by Region)	At-Risk Project Director		District/School Administration	
K-3:	Urban (8 programs)	2 out of 8	25%	4 out of 8	50%
	Rural (7 programs)	4 out of 7	57%	4 out of 7	57%
	Reservation (7 programs)	4 out of 7	57%	5 out of 7	71%
	TOTAL (22 programs)	10 out of 22	46%	13 out of 22	59%
7-12:	Urban (5 programs)	2 out of 5	40%	2 out of 5	40%
	Rural (4 programs)	3 out of 4	75%	3 out of 4	75%
	Reservation (4 programs)	4 out of 4	100%	4 out of 4	100%
	TOTAL (13 programs)	9 out of 13	69%	9 out of 13	69%

* Turnover data were extracted from Morrison Institute formative and summative evaluation reports: September 1990; January 1991; and June 1991.

Research supports the relation found in this study between "effective schools" and implementation patterns. One example is a 1988 evaluation of a California school reform initiative wherein "high gain" schools were noted to have "implementation patterns" associated with factors including: clear and consistent district reform visions...; more active use of...implementation plans; stronger implementation coordination between the school and the district...; greater use of initial training; active administrator pressure and monitoring; substantially more on-going assistance, both from district and school leaders; on-going administrative commitment and leadership; and tight coupling between schools and their districts (Odden and Marsh in Hannaway and Crowson, p.55).

Preliminary comparisons[3] of site evaluations, staff perceptions, and outcome data corroborate the notion that successful sites do, in fact, have a clearer vision of their at-risk programs, better communication and involvement at all levels, high expectations, teacher commitment, and strong and stable program leadership.

Specifically, *effective communication* at every level of the organization is essential for successful program implementation: when communication is lacking or inadequate, programs suffer. Communication, including the active participation of everyone who will be affected by an organizational change, needs to be initiated early in the change process so that changes are not initiated in a top-down fashion. Teachers want to be involved in program planning and decision-making activities, not just in implementing programs, and they want time to participate in these activities. New programs must be aligned with a well-articulated and shared district mission that has been locally defined through a participatory process.

In addition, schools and social service agencies must *collaborate* if programs are to effectively serve at-risk students. Because of the extreme nature of the social and emotional needs of at-risk students, providing social services has become a *de facto* function of the schools. Because urban, rural, and reservation programs exist in such different contexts and environments, local collaboration is believed to be the most effective means of planning how to deliver services. Social services are most desirable when they are based at the school site and provided by qualified social service staff; however, teachers need training on how to work with social service providers. By moving services closer to the students, social services will also be more readily accessible to their families.

Strong and stable leadership and administrative support are necessary for programs to succeed: lack of this support has been an impediment for many programs. One problem with school leadership has been extremely high administrative turnover. When new administrators are placed in programs every year, they bring their own personal goals, beliefs, and directions. Often they have not been provided with historical knowledge of the programs for which they are responsible, and usually they had no involvement in program planning. In some instances, the only program continuity has been provided by a stable teaching staff, who tend to become cynical watching administrators come and go. Turnover of program leaders has been a concern for nearly all programs, but has been especially severe in reservation programs. An incentive structure to create stability at the administrative level should be thoroughly explored.

Several districts that are "ahead of the game" began to address at-risk issues prior to H.B. 2217 (1988). When these districts received additional funding, they had a clear idea of what kinds of programs and activities were needed to supplement their district efforts. At-risk programs were designed to meet specific needs for particular children, and greater efforts were made to integrate these services within a "total delivery system." In contrast, Morrison Institute evaluators reported some districts' struggles to implement "top-down" programs with ill-conceived objectives, lacking any integration with overall district or school initiatives. As a case in point, one district showing the least gains in ITBS scores is one that has experienced considerable political conflict between the school board, district/school administration, program administration, and teaching and support staff.

Collectively, these findings suggest the need to create a "school climate" conducive to program success. Moreover, an argument can be made in support of preliminary program planning, with technical assistance if needed, to involve staff and administrators in developing a comprehensive plan incorporating staff training, school-community partnerships, and on-going monitoring and evaluation.

At the 7-12 level in particular, the issue of philosophical differences among staff regarding at-risk students and programs needs to be more systematically addressed.

Philosophical differences among staff in their attitudes toward at-risk teens and programs are very pronounced at the 7-12 level. These differences are evidenced by numerous descriptive and statistical differences among 7-12 staff in all data sets, and in staff survey responses in particular.

Differences between program and non-program staff are most troubling. It was anticipated that program staff would be more positive than non-program staff regarding program efforts; however, it was not anticipated that *one of every ten staff members surveyed had no knowledge of their district's programs for at-risk youth.* In addition, many non-program staff expressed opinions that were unsympathetic regarding at-risk youth and *against* at-risk programs (e.g., "At-risk kids are simply troublemakers looking for easy ways out;" "Our [programs] and policies are a joke;" "It should be called: How to earn a credit in 3 easy minutes!").

There is more consensus among staff at sites which implemented self-contained programs (e.g., off-site alternative schools). In addition, a greater percentage of students in these programs said they felt "respected" as human beings, despite their reputations. Notably, more "holistic" changes in attitudes and behaviors were observed among students in these delivery systems. Many at-risk teens said they were more comfortable in these settings because they didn't feel as "different."

In contrast, more staff discrepancies were documented in districts implementing more discrete interventions (e.g., one class a day). *Program staff* felt confident that they were making progress with their pupils; among *all* staff, however, there was more diversity in attitudes and little consensus regarding "what works" for at-risk teens. It is obvious that within such delivery systems, at-risk pupils interface with non-program staff members for a significant proportion of the day. Perhaps it is because some staff members have negative opinions of at-risk students that students in discrete interventions express fewer changes in attitudes and behaviors.

Research has suggested that successful dropout programs create a school climate that is secure, safe, and comfortable. As Hamby states: "The emotional atmosphere must be positive so that students will not fear a loss of self-esteem by being there" (1989, p. 83). To the extent that philosophical differences among 7-12 staff reflect their behavior toward at-risk students and programs, students undoubtedly receive "mixed messages." The evaluation of Arizona's at-risk sites demonstrates that a cohesive philosophy among staff in the more holistic programs is associated with a greater number of positive attitudinal outcomes among students. Programs in which staff have notable philosophical differences are associated with fewer changes in students' attitudes.

At the 7-12 level, greater efforts should be implemented to achieve consensus regarding at-risk youth and appropriate interventions.

On The Whole? Programs *Have* Produced Positive Results

All evidence suggests that the at-risk pilot programs, as a whole, have had a positive impact on the lives of at-risk students and parents.

Arizona's K-3 at-risk pilot programs have implemented a number of educational alternatives to help children at risk of academic failure. Since their implementation, there has been a steady decrease in the number of children retained within pilot sites. Additionally, attendance has been on the rise and net ITBS gains have been witnessed in language and reading, with third grade students exiting at higher skill levels than their predecessors. Consistently, staff and parents have praised their school's efforts to give more individualized attention to students and parents alike.

The 7-12 at-risk programs continue to embrace the challenge of working with teens who are well-acquainted with school failure. During FY 1990-91 alone, nine out of every ten program participants reportedly remained in school or graduated. Attendance rose for the first time since the inception of the programs. Standardized test gains were made in language and math--with twelfth grade students exiting at higher skill levels than their predecessors in these areas. Staff, students, and parents have attributed a number of attitudinal and behavioral changes to program participation, often crediting helpful and caring staff with providing more individual attention. Staff and students, particularly at the junior high school grades, noted increased parent involvement and participation in the programs.

For both primary and secondary programs, staff have increased their awareness of appropriate instructional strategies for working with at-risk (and all) youngsters. Schools have received much-needed funding to add staff and purchase supplies and materials to enrich their students' educational experiences. Greater numbers of parents have begun to play a role in the educational system--some coming to school for the first time since their own adolescence. And, there has been unprecedented accountability among these programs.

Unfortunately, schools cannot make "at-riskness" disappear because students are at-risk for reasons that are largely environmental and outside the scope of a school's control. There are still barriers to overcome and progress to be made. For example, K-3 children need to exhibit greater skills in all areas, particularly math, to advance at grade level. Schools need to address philosophical differences regarding retention and "social promotion."

Clearly, at-risk teens need to exhibit greater skills in all areas, and reading in particular. But more important perhaps, schools need to address philosophical issues such as: the comparability of curriculum between "traditional" and "alternative" courses of study and desirable types of delivery systems for at-risk youth.

At all levels, more parents of at-risk pupils need to support and become involved in the educational process. Schools need to establish more collaborative partnerships with social service agencies, and make greater efforts to reach out to parents and community members. Staff must continually upgrade their skills and keep abreast of the latest research and technology that will enhance their abilities to provide individualized instruction. Especially at the secondary level, staff training needs to target non-program staff as well program staff. Also, more staff are needed--instructors, counselors, and social workers as well.

At-risk students have shown progress in the Arizona At-Risk Pilot Project. Additional progress is dependent on continued support at the state and local levels.

What Other Findings Are Important?

Student attrition is a valid concern among at-risk programs.

From the 3958 primary level students targeted for tracking in FY 1989-90, 2814 remained at the end of FY 1990-91 (71 percent). Three out of every 10 students were unable to be tracked longitudinally. Excessive mobility is a substantial concern for several districts, primarily in the urban and rural areas. In three districts, student attrition was over 50 percent.

For 1307 secondary level students targeted for tracking, 320--or 25 percent of the original group--remained two years later. Of the 75 percent who left the cohort, 10 percent graduated or received a G.E.D.; only 15 percent were known dropouts. The whereabouts of the other 50 percent were unknown either because students transferred or no records were kept. Student attrition, particularly during the summer months, affected accurate recordkeeping and reporting of student outcomes. Poor records, in turn, made it difficult to understand thoroughly the nature of student *transience versus dropouts* at the upper grade levels.

Programs may not be able to make much of a difference if students do not remain in the same school.

Consistent descriptive and statistical differences suggest that at-risk students, programs, and staff vary regionally, and in somewhat different patterns at the K-3 and 7-12 levels.

Arizona's **reservation** at-risk K-3 children are affected by more at-risk factors than are children in other regions. Reservation students appear to reflect "at-riskness" more on the basis of life circumstances over which they have little control than because of behavioral problems. More 7-12 reservation students indicate that they have responsibilities that interfere with school work and live in homes that do not have year-round electricity, plumbing, and/or telephones. Most disturbing, more older reservation pupils report feeling unsafe and/or unprotected at home. In fact, a majority of program directors estimated that three out of every four reservation pupils are from an abusive home environment.

ITBS scores for the K-3 cohort group suggest that reservation at-risk pupils score lower on these tests than do their rural and urban peers; likewise, absentee rates at both program levels are consistently higher. Program staff turnover is higher than in other programs, and staff working in reservation districts consistently rate the effectiveness of services (for students, parents, and staff) and outcomes less positively than do their colleagues.

The isolation of these districts compounds their problems. Parent involvement is difficult, given that many parents do not have telephones or access to transportation. Unemployment may also be a factor contributing to a lack of parent involvement. Staff qualifications pose particular problems, both in recruiting qualified staff and keeping them once trained. Providing appropriate training is also problematic since it is difficult and costly to recruit qualified trainers to provide on-site in-service; it is equally demanding and costly to send staff to other locations for training. Social service linkages are hard to establish because of the tremendous demands on those services and the tribal infrastructure governing most of these services.

Rural at-risk students in Arizona live between two worlds. They have the isolation of small communities, yet access and exposure to metropolitan areas. In virtually every K-3 data set, rural at-risk children fall in the middle of the extremes represented by reservation and urban children. Rural children appear at-risk primarily due to poverty and the conditions that accompany being poor--a lack of educational/reading materials, substandard living conditions, parents who work and therefore are not home after school contributing to the latch-key status of many rural children.

At-risk youth in the 7-12 rural pilot programs represent a more mobile population and a greater percentage of recent immigrants to the United States. It is not surprising, given this, that more at-risk rural youth speak a language other than English at home and have language difficulties in school. They tend *not* to be involved in any school/community activities, and have a history of academic failure (with one or more grade retentions in their elementary years). Relatively more rural youth report using drugs and/or alcohol on a weekly basis.

As with reservation districts, rural isolation appears to exacerbate low parent involvement and difficulties recruiting and keeping qualified staff and administrators. Unlike reservation areas, however, rural communities are increasingly becoming the "crossroads" linking metropolitan areas. Therefore, rural areas are being increasingly exposed to problems more symptomatic of urban areas. For example, one rural community was described as the "drug connection" between Tucson and Phoenix, and one at-risk third grade student was "busted" for pushing drugs on behalf of his gang member parents.

Rural K-3 staff perceive moderate success in their programs. In contrast, rural 7-12 staff and students are the most positive of all regions. And students in the 7-12 programs, which are largely "holistic" in their approach to at-risk pupils, are more likely to attribute their own changes in behaviors and attitudes to program participation. Moreover, rural 7-12 program students are out-performing their peers academically, unlike their K-3 counterparts.

Urban/suburban programs portray yet another picture of at-riskness. At the K-3 level, a profile of poverty and neglect emerges. The effects of parental substance abuse and abusive home environments are particularly pronounced for urban children, and this finding suggests that many urban children are most at-risk when their home environments are "dysfunctional." Urban K-3 children are less likely to remain in the same school than the children in the other regions.

At the 7-12 level, urban youth are characterized by *the most* at-risk indicators. Urban youth represent a broader ethnic spectrum than youth in other regions and tend to be from the least "nuclear family-oriented" households. More urban youth have children, have a sibling who has dropped out of school, have dropped out themselves, indicate poor health, have seriously considered or attempted suicide, skip school, been suspended or expelled, been convicted of a crime, and have parents who are neither supportive of nor involved in their education.

K-3 urban staff consistently express more positive attitudes about their efforts and accomplishments than do their colleagues in rural and reservation areas. Students function higher than children in other regions, and show more academic progress--at least for those children who remain in the system long enough to track. Urban staff are more stable than staff in other regions, and it is easier to offer them training given the proximity to universities and community colleges.

In contrast to their K-3 colleagues, urban 7-12 staff are more negative regarding program implementation and more reserved in their assessment of program outcomes. Students in grades 7-12 are *not* functioning higher than their peers, but they *are* performing on a par with them. Notably, urban students, more than their rural and reservation peers, view program staff as helpful and caring, and credit their programs with involving their parents more with their education, improving their grades, helping them stay in school, helping them set future goals, and increasing their self-esteem.

Overall, these findings strongly suggest the need for local autonomy in program planning, implementation, and evaluation so that the unique aspects of at-risk student populations may be appropriately addressed.

Consistent descriptive and statistical differences suggest that at-risk youth in grades 7-8 differ from their 9-12 peers.

The most noteworthy finding regarding 7-8 grade pilot program students is: overall, they exhibit fewer indicators of "at-riskness" than their 9-12 peers.

The image that emerges from a collation of all data is that these students are truly at a stage in their development where they could "go either way." A majority of at-risk indicators for middle school students suggest emotional-behavioral problems (not involved, drug/alcohol use, suspension, juvenile delinquency). It may be of practical significance that more of these indicators are potentially predictive of academic success among these students than for high school students. This implies that interventions have a better chance of "preventing" school failure.

The interventions that have been studied primarily involve supplemental services, although there are several school-within-school models. Notably, middle school students responded most positively to social support: *these kids need people to care about them.* Moreover, survey respondents in 7-8 programs are in greater agreement that program participation has prompted their parents to help them more with schoolwork, and that programs have provided more opportunities for parents to become involved.

Evaluation findings have not provided definitive answers regarding successful interventions for junior high students; however, there are some components perceived as "making a difference" in the eyes of students. Urban students respond to support groups and a self-contained class that provides academic and social support as well as opportunities for work experience. Rural pupils respond to school-within-school settings, which allow for more individualized attention and self-paced curriculum. And, reservation youth respond to vocational activities that incorporate applied academics and social support.

More intervention programs are desirable at grades 7-8 because at-risk behaviors are not well-defined as yet. Programs may, therefore, have more impact in "curbing" the further development of at-risk behaviors among early adolescents. However, such programs should be implemented by qualified staff who are committed to working with this challenging population.

The label "at-risk" has, for many, negative connotations.

Many pilot district personnel have expressed a dislike for the label "at-risk" because it is viewed as focusing on "the child as the problem." Educational leaders are increasingly advocating alternatives to the "at risk" label precisely because the label itself may connote underachievement and/or contribute to lowered expectations. For example, Levin (Hopfenberg et. al., 1990) has adopted the term "accelerated schools" to shift the emphasis away from the "child as the problem" to the "school as solution."

Dislike for the term goes beyond a semantic debate: it has had visible consequences in terms of program implementation. For example, the labeling of funds, programs, and students as at-risk has contributed to poor communication within districts and between districts and communities. In some cases, there has been a reluctance to publicize that a district is the recipient of "at risk funds" for fear that parents, community members, and staff may find the term offensive. Many districts created their own program acronyms and were successful in communicating the goals and objectives of their at-risk programs; yet many others did not.

The label has served a useful purpose in focusing attention on students at risk of academic failure because of poor environmental conditions, and in creating resources targeted toward these students. But the time is ripe for the state to provide leadership by adopting terminology that shifts the emphasis from "problem students" to school solutions.

There should be some consideration of coining a more positive label than "at risk."

What About The State Role in the Pilot Project?

The scope of this project was extensive since it included the monitoring and evaluation of programs within over one-quarter of Arizona's most "at-risk" districts. Much has been learned by the evaluators, by the pilot sites, and by the Arizona Department of Education, regarding the arduous task of monitoring and evaluating long-term, large-scale programs. In retrospect, many "systemic components" necessary to complete the project in the most efficient and effective manner did *not* exist at the time the pilot was initiated--streamlined state "request for proposal" (RFP) procedures, a Department of Education infrastructure for program monitoring, valid performance-based student outcomes measures, and a funding cycle that encourages and allows long-term planning.

Adequate program planning was not evident in a majority of district proposals; however, adequate time for planning was not available prior to receiving program funds.

Initial H.B. 2217 (1988) funds were appropriated in June 1988 for use during the school year beginning August 1988. However, prior to the distribution of funds it was necessary for the Arizona Department of Education (ADE) to develop an RFP process--a process taking several months. Once procedures were completed, districts had about six weeks to develop their proposals. A lack of local planning and/or grant writing expertise coupled with the short time frame resulted in very little "creative" planning. Further, while the RFP required the development of specific program objectives, most proposals included objectives that were nebulous, unrealistic, and unmeasurable. Primarily because of time constraints, proposals were accepted despite their poor quality, and funding was distributed. Generally, timing and planning concerns continued throughout the project.

A lack of adequate long-term planning has had several consequences. Some programs have developed in a "piecemeal" fashion, lacking integration within the district/school. Other programs have failed to involve personnel in planning who are charged with implementing the programs. Such "top-down" initiatives have often been difficult to implement due to lack of faculty support. Initial limitations in the proposals (e.g., regarding objectives) were never adequately addressed in some cases, resulting in a lack of local program focus and systematic evaluation.

Why is planning important? Evaluation data reveal that sites that had developed more comprehensive plans based upon extensive input from staff *did* demonstrate greater outcomes. District and school personnel have acknowledged repeatedly the importance of initial planning and on-going review and adjustments. Those who conducted self-evaluations were better aware of program adjustments that needed to be made, and produced better results.

District and school personnel have acknowledged that although planning is important, it frequently does not occur without some outside requirements or "pressure." Further, many personnel do not like to invest time in planning without some guarantee that their time will be worth the effort (i.e., the grant money will be available). Finally, many districts simply need technical assistance in long-term planning. Although the movement in Arizona and across the nation is away from state "requirements," even the Governor's Task Force for Educational Reform has recommended that schools develop plans *prior to the receipt of at-risk funds*.

Districts and/or schools should be required to develop comprehensive program plans. Adequate time (3-6 months) and technical assistance from the state department and/or planning monies is/are essential.

The current funding cycle, dependent upon annual appropriations rather than formula funding, does not promote long-term planning and effective programming.

Late adjournments of recent legislative sessions have resulted in the authorization of funds occurring only weeks prior to the beginning of the next school year. This time frame has effectively curbed district/school efforts to create long-range plans involving at-risk monies. Beyond influencing planning, however, the funding cycle has also affected program implementation.

Once funds were authorized, the flow of paperwork between agencies resulted in funding delays--up to six and seven months in some cases. Some smaller districts could not afford to count on the fact that "the check is in the mail;" funding delays sometimes prevented services from being offered and, ultimately, affected the quantity and quality of program outcomes available for study. Although greater efficiency in processing paperwork could alleviate some problems, a more fundamental issue centers on the annual funding cycle. Used as a funding mechanism, annual appropriations simply are not conducive to long-term planning and quality implementation.

The alternative is to create permanent funding for at-risk programs through formula funding. However, unlike most existing formula funds that are "block grants" (i.e., unrestricted funds), interviews with program staff have repeatedly revealed that "targeted" funding for at-risk students is preferable. Unless funding is targeted, districts report, there are too many demands on a their budgets and not enough advocates for at-risk students when it comes to budget decisions. Pilot districts want the accountability associated with targeted funding[4]; but, they do not want extensive restrictions on the use of these funds.

There is a need to establish permanent funding for at-risk programs, to ensure program continuity. Direct formula funding "targeted" toward at-risk programs is a preferred funding mechanism.

The identification of district/schools as "at-risk" and the determination of grant amounts were appropriate for a competitive grant process; however, new mechanisms need to be created if permanent formula funding is utilized.

Consideration needs to be given to the criteria used as part of an "at-risk weight." Several weights currently provide additional funds for students who are identified as having certain characteristics (e.g., handicapping condition, LEP). The definitional characteristics for these weights are *very specific* in order to avoid labeling students for funding purposes. "At-risk," however, is a term not easily defined since there are a variety of reasons a student may be at-risk. Unfortunately, reliable and comparable data on most at-risk indicators are currently *not* available. Moreover, it is important not to base funding on indicators over which districts/schools have some control (e.g., low test scores, absenteeism). If these factors are utilized, then improvements may result in a funding loss.

As a solution, indicators which cannot be manipulated and which serve as a "proxy" for at-riskness are being used in several states. New Jersey and Kentucky are using *poverty*, as measured by eligibility for federal free lunch programs, as their at-risk weight proxy. Poverty is frequently chosen because of its underlying linkages to at-riskness[5]. This does not mean that only poor students can be served with the at-risk weight funds, but instead it provides a mechanism for providing additional funding to the schools. Once the funding is received by the district/school, they are allowed to serve those students they believe to be at-risk.

Within Arizona, preliminary discussions with state school finance experts reveal that three at-risk indicators have established databases and represent factors over which districts have little control: poverty, mobility, and LEP. Since the state already partially funds a LEP weight, the current thinking is that the other two factors would be used to establish an at-risk weight--*poverty and mobility.*

Two options for the measurement of poverty appear to be available and are being analyzed. One option--using census data (similar to federal Chapter 1 funding)--poses several problems: 1) necessary data will not be available until at least 1993, 2) data will not be available at the school-level, and 3) the database is updated only once every decade. The second option is to use the number of eligible students for the federal free lunch program. This too has problems since many high schools and some elementary schools do not offer such a program. In addition, the percentage of families that actually apply are fewer than those who are eligible. However, the advantage is that these data are available at the school-level and are updated annually. Continued work on the mechanics of funding is underway.

Finally, consideration must be given to an "adequate" level of funding. For the pilot grant project, districts/schools were allowed to request any amount within a certain range. If an at-risk weight is utilized, however, a specific amount needs to be placed in the formula. This amount should be no less than the average expended per student by these pilot programs (i.e., $227 for K-3 and $251 for 7-12). In addition, dependent upon the expectations for training, parental involvement and social service coordination, the amount should be higher than the average. For example, Levin (1989), an economist from Stanford University, estimates at-risk funding should be about half again as much as is spent on nondisadvantaged students (e.g., approximately $2,000). In Kentucky, $528 per free lunch student was provided during FY 1990-91 for both general programming and for Family Resource Center support. Since nearly one-third of Arizona's students qualify for free lunch status, these amounts may not be realistic; however, they are offered as a starting point for discussion.

Additional funding (over the base weight amount) should be provided to small and rural schools, and for programs wishing to develop more comprehensive services such as alternative schools. A minimum amount (e.g., $5,000-$10,000) should also be considered for all except the very smallest of schools.

Unique among 7-12 programs, the Pima County Detention Center served an important role as a dropout "interdiction" program. Students were reenrolled who had dropped out of school and potential dropouts were kept on school rosters after being placed in the detention facility. Funding should be considered for these types of educational programs.

An at-risk weight based upon poverty and mobility indicators would provide a mechanism for directing funds into a district/school; local decisions would then be made at that point as to which students are to be served. Additional funding should also be considered for small and rural schools, more comprehensive services, and detention center programs.

Arizona Department of Education technical assistance efforts contributed to project outcomes; however, the current state-level infrastructure for monitoring efforts needs continued refinements.

The Arizona Department of Education contracted with Morrison Institute to conduct the evaluation study, but retained the functions of program monitoring and technical assistance. As a whole, the pilot programs responded positively to the available technical assistance. The greatest concern was that "more" was needed, particularly in reference to the initial grant writing process and on-going program refinements. Also, because many of the at-risk programs are in reservation and rural areas, these sites do not have easy access to university training or staff support. The on-site visits and state-wide meetings/conferences were viewed as extremely helpful.

Program monitoring also proved to enhance program success; however, improvements to this process need to occur. There was initial uncertainty about the role of the external evaluator and ADE in reference to annual reapprovals. Indeed, some of the information gathered by the external evaluators was also requested by ADE and vice versa. Although individual evaluation reports prepared by Morrison Institute were available to ADE, this information was used inconsistently as part of the reapproval process.

Most important, however, was a perception by districts that there were no real "consequences" for failing to implement activities outlined in their proposals. Many districts complied with evaluation requirements in an untimely manner, resulting in delays of the external evaluation. In the two and one half years of Morrison Institute's involvement with the project, only one deadline was met by *all* districts--when ADE "threatened" to withhold annual reapprovals. Although several programs were placed on probation, most districts were conditioned to believe that negative sanctions would not be enforced.

Historically, ADE efforts in reference to state-funded programs have focused primarily on monitoring budgets, not programs. As a result, the necessary program monitoring infrastructure is still being developed. Further, it is difficult to provide both technical assistance (e.g., help a district in trouble) and enforce sanctions (e.g., withhold funding if improvement efforts are not being made). Perhaps these two tasks cannot be performed by the same entity. In several states, a separate "accountability" office has been established to address this concern. Within Arizona, the Governor's Task Force has recommended that the Auditor General's Office take on the task of program monitoring. This separation of responsibilities should be given serious consideration.

Findings suggest that expanded technical assistance be made available and that state monitoring continue. However, monitoring may need to be moved to a separate agency or department for the explicit purpose of ensuring quality compliance with funding requirements by enforcing sanctions when necessary.

Overall, the external evaluation process had a positive effect on program implementation; there is, however, a need for greater emphasis on district self-evaluation/analysis.

A majority of pilot districts indicated that the evaluation process ultimately benefitted the programs, although complying with such requirements was an extra burden on their staffs. Having an external evaluation prompted greater attention to implementation processes, services provided, students served, and desired outcomes. District personnel, on the whole, felt the external evaluation provided greater accountability and found the information provided to them important--both as a means to validate their efforts and as input for program improvement and local decision-making. In addition, the external evaluation has resulted in a wealth of general information for state policy makers.

In efforts to determine the overall effectiveness of the total at-risk pilot project as well as of specific strategies, common data sets were collected to allow for individual program comparisons and aggregate analyses across all K-3 and all 7-12 programs. While this approach provided a wealth of data regarding the total project in a holistic sense, many of the unique characteristics and impacts of specific programs were "lost" in the aggregate. Although districts were encouraged to collect and report self-evaluation data, few districts did so. Instead, they relied solely on the external evaluation as their feedback loop. Many programs did not, therefore, have their own unique data upon which to base refinement decisions. The external evaluation should *not* serve as a replacement for a systematic internal evaluation. Many districts acknowledged that they would have liked to conduct their own internal evaluations, but do not have the staff, time, or the expertise to do so.

It appears that the external evaluation efforts have resulted in positive benefits at both the local and state level; such evaluation efforts should continue to be supported, but with additional emphasis on training district personnel to conduct quality studies of their own.

Valid measures of student outcomes and consistent recordkeeping and reporting mechanisms are lacking.

The public is demanding the measurement and reporting of specific program outcomes. The development of appropriate assessment measures at the state level is highly desirable, particularly since many districts lack the expertise to define and measure program outcomes independently. Arizona has jumped ahead of most states through the development of its *Arizona Student Assessment Program* (ASAP). Unfortunately, this program was not available for use during this evaluation study. Indeed, on-going difficulties experienced in defining common outcome measures (in addition to standardized tests) lends support for the expeditious completion of the new assessment program.

Within this evaluation project, desired outcomes among programs were identified and categorized so that common data sets could be collected across districts. However, determining adequate measures of these outcomes proved to be extremely difficult. Lack of standardization existed among districts on variables such as absenteeism, dropout rate, and grade retention. Most districts had never collected data on parent involvement and staff training activities. Extensive efforts were necessary just to determine *how many* students, staff, and parents were served, with even greater energy required to measure the *impact* of these services. Data reporting standards had to be designed and then "taught" to the districts. The results often included calculation errors, requiring a tedious and lengthy verification process. Great gains in the measurement of program outcomes were achieved; further efforts to create comparable assessment measures (such as ASAP) will serve to enhance future external evaluations in this state.

There is a need for continued/expanded support for the development of more standardized outcome measures. Districts and/or schools are ready to be held accountable, but most current assessment efforts and procedures are rudimentary at best and require continued state support and attention.

RECOMMENDATIONS

Many suggestions are embedded in the previous sections of this report. This section synthesizes the findings in terms of key recommendations. It is by no means a comprehensive listing, but is intended to highlight state-level actions that could further the development of comprehensive programming for Arizona's students at risk. For the purpose of the recommendations, "state" is used when both legislative and Arizona Department of Education actions are encompassed within the recommendation.

1. The Arizona Department of Education (ADE) should create a single, comprehensive unit which supports and assists local at-risk initiatives.

By streamlining state and federally-funded program at-risk related personnel (e.g., K-3 At-Risk, 7-12 At-Risk, LEP, Chapter 1, Migrant, substance abuse) into a single unit, the state can create the infrastructure and provide leadership to model and promote practices associated with successful program implementation at the local level. This is particularly needed in relation to "at-risk" districts and/or schools that do not have their own stable infrastructure.

- **Develop a comprehensive plan for meeting the needs of at-risk populations.** Examine programs, funding goals and expectations, required paperwork, and existing accountability measures for the purpose of integrating these into a comprehensive plan.

- **Define *general* standards for local district/ school recipients of at-risk funds,** including expectations for local comprehensive plans to specify linkages among related programs (e.g., at-risk and LEP).

- **Specify criteria and measures for program accountability** that meet federal and state requirements. Develop common criteria for non-test indicators (e.g., absenteeism, retention) since disparities currently exist in local definitions and reporting.

- **Coordinate/consolidate program reporting functions** with the explicit goal of reducing paperwork.

- **Design a computerized database and record-keeping system for compiling and analyzing outcome data** (as determined by the comprehensive unit) and disseminate the technology statewide.

- **Define and implement consequences for programs that either do not complete requirements or provide unusable information in meeting requirements** to reinforce that the *quality* of programming, data collection, and reporting must be an integral part of compliance.

- **Coordinate technical assistance to at-risk populations/programs.**

2. The legislature should establish permanent funding mechanisms to support at-risk programs at *all* grade levels, provided that the Arizona Department of Education has created the infrastructure to handle funding requirements and ensure local accountability.

At-risk youth have shown progress within the context of the *Arizona At-Risk Pilot Project*. Continued support is required to serve additional students (e.g., grades 4-6) and allow programs to evolve and improve. Pilot project personnel have repeatedly expressed that "targeted" formula funding is preferable to both block and competitive grant funding.

- **Create an at-risk weight to provide basic targeted funding.** Use factors such as poverty and mobility, as these indicators would provide a mechanism for directing funds into a district/ school; local decisions would then be made as to which students are to be served.

- **Provide a small and rural school supplemental stipend, stipulating a base minimum.** These schools typically have smaller enrollments that would limit an at-risk allocation based on formula funding, and therefore need additional resources to provide services as costly to implement as in larger districts (e.g., paying an additional teacher).

- **Fund educational services within county detention centers,** using the Pima County Detention Center program as a model.

- **Institute an "education venture fund" with a separate request for proposal (RFP) process** to encourage and reward innovative and comprehensive programs such as Family Resource Centers or alternative schools that require greater resources than provided by formula funding. Require that proposals are submitted jointly by a local educational agency in collaboration with a local business partner such as a social service agency, association, or other organization.

3. The state should adopt an alternative label to "at risk."

The adoption of an alternative label associated with funding (e.g., Comprehensive At Risk Education, or CARE) could get a lot of mileage in terms of creating a positive "state climate" for further program development. Although the at-risk" label has been useful, it is generally perceived as a negative term when applied to children, their parents, and districts.

4. Local districts and/or schools should develop comprehensive plans, aligned with state standards, as a *condition* for initial at-risk funding and reapproval.

Local autonomy is essential in creating appropriate programs to match the needs of the local population. Evidence from this evaluation has shown, however, that local programs based on district/school plans have been more effective than those without such plans.

- **Require that plans describe *how* services targeting at-risk children are coordinated with related educational and social services.**

- **Establish "planning grants" and/or allow adequate time to assist local districts develop their comprehensive plans.** Based on feedback from pilot districts, good planning that involves staff, parents, and/or community members, takes time--at least three to six months.

- **Provide *individualized* technical assistance upon request to facilitate the *development* of quality plans.**

5. The Arizona Department of Education's new "comprehensive at-risk education" unit should ensure that local plans are implemented.

- **Provide *individualized* technical assistance upon request to facilitate the *implementation* of quality programs.**

- **Designate within ADE's comprehensive unit an "at-risk broker"** who would link local programs to an identified state-wide network of technical assistance, and disseminate information about at-risk intervention strategies that have proven to be successful in model sites.

- **Monitor/audit programs annually at first, then on a two-three year cycle, to ensure** progress toward locally-defined goals commensurate with state expectations. Consider separating this function from technical assistance.

- **Require districts to submit periodic self-evaluation reports (annually at first, then on a two-three year cycle).** Program evaluation is essential for accountability and as a tool for program improvement. The state should develop model evaluation designs aligned with specific intervention strategies and other resources for use by district personnel.

- **Develop the expertise at ADE and throughout a state-wide technical assistance network to review district/school self-evaluation documents and compile quality outcome reports to assist in future decision-making.**

6. The Arizona Department of Education should use successful at-risk pilot sites to *demonstrate* "what works" for at-risk pupils.

Pilot sites have invested four years in developing at-risk programs. Successful sites, and replicable programs (to be identified in Morrison Institute's forthcoming "what works" report), have staff who are valuable resources for sharing their expertise with ADE and other districts.

- **Contract with at-risk educators in successful programs to act as consultants/mentors regarding "promising practices" for at-risk children and** to provide peer training.

- **Subsidize training held "on-site" at these demonstration schools.**

7. The state should designate as its highest priority programs that specify improved language and literacy outcomes.

Extensive efforts have been expended to evaluate "what works" for Arizona's at-risk population. First and foremost, these efforts have corroborated 20 years of research that points to low language proficiency as a key correlate of academic failure, and low self-esteem as a by-product of such failure. Pilot sites have demonstrated progress toward improving students' language skills and self-esteem. The state should actively promote practices that have contributed to such progress. Promising practices include full-day kindergarten and reducing student-staff ratios at the K-3 level. At the 7-12 level, more "holistic" delivery systems (e.g., alternative schools) appear promising. In general:

- **Advocate increased individualization of instruction for at-risk pupils at all grade levels.**

- **Expand the delivery of vocational/occupational education for older students, and the** use of applied academics in particular.

- **Promote continued development of support** services both on-site (e.g., counseling) as well as with community social service providers (e.g., Family Resource Centers).

8. The state should develop mechanisms to assist local districts/schools to improve parent involvement.

- **Reinforce requirements that K-3 districts/schools incorporate parent outreach as a condition for initial or continued funding.** Virtually all K-3 personnel say that parent involvement is desirable. They also acknowledge that parent programs are difficult to implement, and that they might not have focused on parent services if not for the requirements of H.B. 2217 (1988).

- **Launch a public awareness campaign to encourage parents to support their children's education.**

- **Allow expenditures for food purchases related to school social events (e.g., refreshments) to support district/school efforts in garnering public support.** Latitude is required regarding what constitutes "acceptable" parent involvement activities. For many districts, efforts to attract parents to the school environment may be most effective when they involve non-academic activities.

- **Advocate secondary-level parent involvement programs.**

- **Disseminate "promising practices" for increasing parent involvement** including: workshops that actively involve parents, face-to-face communication (e.g., home visits), and model strategies used among 7-12 programs.

9. Arizona's state university teacher training programs should emphasize at-risk issues.

Two issues are encompassed in this recommendation. First, here needs to be a greater emphasis on at-risk issues for *all* teachers, and a wider range of training opportunities. Second, there needs to be greater focus on recruiting and training minorities to be teachers/administrators.

- **Prepare *all* students in teacher training programs to work with students at risk.**

- **Develop a curriculum for at-risk specialization.**

- **Establish procedures for greater collaboration and articulation among schools and universities in planning and delivering preservice programs.**

- **Provide a wider range of pre-service training** including: teaching experience with at-risk populations, internships with master teachers, and exposure to multicultural/multilingual issues.

- **Use demonstration sites for student teaching and internships.**

- **Review the effects of the Pre-Professional Skills Test (PPST), used as a requirement for admission into teacher training programs, on minority admissions.**

- **Provide more training opportunities *within* rural and reservation communities** to assist more *local* personnel in obtaining teaching and administrative certificate with a goal to reduce the "revolving door" syndrome apparent in these communities.

10. State and local educational agencies should improve in-service training with respect to at-risk populations.

- **Use technology for in-service training delivery** (e.g., workshops and college courses offered via satellite).

- **Establish procedures for greater collaboration and articulation among schools, community colleges, and universities in planning and delivering in-service programs.**

- **Use demonstration site personnel as peer trainers for new district/school at-risk program staff.**

- **Extend state efforts to provide in-service training by offering regularly scheduled at-risk** conferences and/or academies, as these have been well-received.

- **Be a catalyst to influence local districts to reassess existing incentive programs** for staff development, since some district policies regarding teacher compensation for advanced training are perceived as inadequate by the teaching staff.

11. The Arizona Department of Education should waive annual at-risk funding reapprovals for current pilot sites that have demonstrated success.

Pending reapproval of these programs in relation to a revised state comprehensive plan, some districts/schools should be eligible for continued funding and should immediately be placed on an extended evaluation cycle (i.e., every two-three years). At the discretion of the funding agency, however, other continuing districts/schools should be required to submit comprehensive plans and remain on an annual evaluation cycle.

Endnotes

1. The Arizona At-Risk Pilot Project is described in full in the reports: *Arizona at-risk pilot project FY 1989/90 project report* (Bierlein, Vandegrift, Hartwell, Sandler & Champagne, 1990) and *Powerful Stories, Positive Results: Arizona At-Risk Project Report FY 1990-91* (Vandegrift, Bierlein & Greene, 1991)

1. K-3 Student Profiles were completed by teachers or other school staff; 7-12 Student Profiles were completed by students themselves.

2. Individual district data *have* been examined to determine patterns of "what works;" however, a more definitive analysis of individual districts' successful programs will be highlighted in an additional report: *Promising Practices for At-Risk Youth* (forthcoming in June 1992).

3. Unlike, for example, K-3 direct formula funds that provide direct funding without any state restrictions/requirements. A wealth of anecdotal evidence is available to show that the $100 plus dollars currently being provided for each K-3 student would have resulted in greater outcomes if targeted toward those students.

4. The use of at-risk indicators as part of formula weighting is currently being analyzed by Dr. T.S. Lyons from the University of Nevada at Las Vegas and Dr. K.F. Jordan from Arizona State University. Their findings from regression analyses show that of eleven at-risk indicators currently used in Texas, one indicator--poverty--accounted for 90 percent of the variance, while mobility accounted for the next 1.5 percent of the variance, and LEP accounted for 0.4 percent (telephone interview with K.F. Jordan, October 1991).

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Morrison Institute for Public Policy
School of Public Affairs
Arizona State University
Tempe, Arizona 85287-4405
(602) 965-4525
(602) 965-9219 (fax)

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School of Public Affairs
Arizona State University
Tempe, Arizona 85287-4405
(602) 965-4525

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