WYOMING EDUCATION FINANCE ISSUES REPORT

Programs for Students with Special Needs
(Disadvantaged, Limited English Proficient, Gifted)

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The Cost Based Block Grant Model and Students with Special Needs

In a diverse society that respects individual and minority rights, how best to serve students with special needs is a complex and often costly challenge facing educators. For the past three decades, the prevailing approach to this challenge in American education has been to create special programs with separate funding to provide a distinct set of educational services for students identified as eligible for those services, whether because of poverty, minority status, language, unusual intelligence, or disability. The way in which those students are to be identified and the manner in which the services are to be provided are frequently spelled out in some detail in the authorizing legislation. These special programs have come to be known as categorical programs.

The Cost Based Block Grant Model proposed by MAP represents a significant departure from the categorical model. The Model has embedded within it a strategy for meeting the challenges presented by students with special needs without resorting to categorical programs whose effectiveness is open to serious question and which, by their very structure, create incentives for bad educational practice. The MAP model assumes small schools, small classes, teaching specialists, and professional development resources for teachers. The aggregate consequence of such resources is intended to enable a classroom teacher better to cope with the characteristics of the students in her or his class. This report reviews the research supporting the Block Grant Model's approach to serving special needs students, both in general and with specific reference to three groups of students: low-income, limited English proficient, and gifted and talented. In comparison to the categorical approach, the Cost Based Block Grant Model will be shown to remove perverse fiscal incentives often associated with categorical programs, to allow instructional decisions to be made at the school and classroom level, to avoid

segregation and labeling of children, and to focus resources on instructional programs rather than eligibility determinations.

Why Move Beyond Categorical Programs?

An outgrowth of both the Civil Rights movement and Lyndon Johnson's War on Poverty, the idea of categorical aid for specific students gained favor in the late 1960s. By the 1970s special federal funding was available to school districts enrolling low income, migrant, limited English proficient, special education, and gifted students.

Good intentions often have unintended side effects. Beyond establishing access for all, categorical programs have been found wanting on a number of counts.

There is sparse evidence of the educational effectiveness of most categorical programs. In 1993, California's Legislative Analyst's Office reviewed that state's implementation of 57 categorical programs designed to meet the needs of a variety of students. Researchers found that, despite a vast amount of information and data about each program, very little was known about how well a program was meeting its objectives. Most evaluation reports reviewed were really "operational reviews," and the few sound evaluations presented mixed results for most programs. In 1998 Minnesota's Office of the Legislative Auditor reviewed remedial education services provided Title I eligible students in that state and found:

> On average, student progress in Minnesota's Title I programs has been slight. . . these programs have not bridged the gap between disadvantaged and nondisadvantaged students (p. 56)

Almost all large scale and small scale evaluations of categorical programs report show only modest positive or mixed results (Reynolds, et al, 1992; Gartner 1987; Danoff, Arias & Coles, 1977; Ramirez, Yuen & Ramey, 1991; Rossell and Baker, 1996; Hoff, 1997).

Notwithstanding the inability of researchers to identify specific positive results from categorical programs, two caveats to this pessimistic picture are in order. First, education researchers and policymakers are aware of a long-term (since the mid-1960s) dramatic improvement in the outcomes for minority students. Drop out rates have declined, and the African American high school completion rate is now little different from the white rate. Researchers have also found a significant narrowing of the test score gap between minority and white students form 1970 to 1990 (Grissmer, et. al., 1994). No researchers have yet been able to identify the causes of this progress, but it is possible that categorical programs have played a role. Nonetheless, the inability of researchers, in studies of the programs themselves, to identify success, remains troubling.

The second caveat regards special education. It is difficult to evaluate the effectiveness of traditional special education programs because there are no objective measures by which special outcomes can be measured. Each student has an individualized education program, and whether the program is successful is unique to that student. Whether special education students with mild disabilities are included in standardized tests for all students varies from place to place, and where they are included, results are rarely reported separately for special education students. It is undeniable, however, that many special education students are receiving services through "pull-out" programs that were not available 30 years ago.

Thus, while we cannot conclude definitively that traditional categorical programs have failed, we have no firm evidence of their success. Why the billions of dollars of state and federal categorical funds have largely failed to demonstrate that they produce the desired results should be a question of great concern to educational policy makers. It is likely that at least part of the reason for this apparently lackluster performance can be traced to the flaws inherent in categorical programs.

Most categorical programs encourage a focus on compliance rather than student outcomes. Perhaps because they are easier to measure, most accountability systems for

categorical programs give greater emphasis to the processes of program implementation than to the results of the program (California LAO, 1993). As the National Association of State Boards of Education stated in their examination of the Special Education categorical program:

> Governmental monitoring of bureaucratized systems tends to become merely procedural and unrelated to substantive goal-oriented matters -- which has certainly been the case in connection with special education. The separateness that currently exists between general and special education and the excess of proceduralism have become major problems. (NASBE, 1992, p.9)

In addition to draining resources away from program implementation, a focus on process rather than product encourages the creation of a litigious environment where educators are more concerned with not being sued than exploring innovative approaches (Reynolds and Wang, 1983). However, perhaps the most pernicious effect of a rules over results system is that it creates in school districts and state departments of education entrenched bureaucracies that tend to blunt efforts at substantial reform. Herrington and Orland (1991) cite district office fossilization as a primary factor in the failure of the reforms envisioned in the reauthorization of Title I to Chapter 1 in the late 1980s.[1] "Given ingrained habits of compliance and unavailability of strong policy instruments to encourage innovation and experimentation, it may not be surprising that the 'shaking up' hoped for in Chapter 1 has not occurred yet." (p.177)

Categorical program funding formulas offer disincentives to success. Categorical programs face a seemingly intractable dilemma: funds are allocated to a district to address the educational needs of a specific group of students. If those needs are remediated, then the district no longer needs the special funds (California LAO, 1993). This dilemma

[1] Title I, the federal government's largest K-12 education program must be reauthorized periodically by the Congress. During the revision and reauthorization process, the reference to the program is often changed. The current "Title I" program replaced the previous "Chapter I" program and is due for reauthorization in 1999.

creates what Reynolds and Wang (1983) term a "bounty hunter" mentality where higher numbers of students means more money. The National Association of School Boards addressed the issue head on in their report on Special Education, recommending that "State boards, with state departments of education, should sever the link between funding, placement, and handicapping label. Funding requirements should not drive programming placement decisions for students." (p.5)

Wyoming's current Compensatory Education program is a good example of a categorical program that incorporates fiscal disincentives. Students eligible for this program are those who score below the 20th percentile on a standardized achievement test, but do not qualify for special education services. While it is extremely doubtful that any Wyoming educator would do anything less than his or her best to assist low achieving students, the fact remains that schools providing weak instruction for whatever reason are rewarded with additional funding when their students are not successful.

Categorical funding is based more on politics than student need. Although categorical programs are often viewed as an efficient way to allocate resources to students most in need, there is some evidence that the relationship between need and funding is less than perfect. Timar (1991) surveyed the extent to which the allocation of categorical funds was based on need as California shifted from a local, property tax base for education to a centralized state system of funding. He noted that the interest of the California Teachers Association in designing categorical programs where funds could be used for teacher salaries dovetailed with the interest of their legislative allies to shift money to large urban districts. Timar concluded that ". . .Need is a mediating, but not significant, determinant of Total Categorical Funding. . .On average, being an urban district in California is good for an additional $344 [per student, regardless of need]." (p.117)

Timar ends his study with this warning:

> In trying to accommodate competing demands, the legislature has proliferated the number of categoricals, thereby giving something to everyone. What has been lost in the political struggle, however, has been a commitment to either equity or reform. Finance is only marginally connected with student need, and then mostly because of federal categorical funding." (p.118)

Credence must be given to Timar's warning when one notes that every major categorical program can call upon the support of both federal and state level organizations (many programs have multiple support groups) to lobby on their behalves when it comes time to allocate education funding.

Categorical programs encourage program fragmentation and blur responsibility. Perhaps one of mostly widely shared criticisms of categorical programs is that they result in students having a fragmented educational program. Discontinuities and interruptions occur as students travel from their regular classroom to a variety of special programs, and responsibility for student achievement shifts from the classroom teacher and site principal to program administrators in the central office (Reynolds, 1983; NASBE, 1992). In some states direct categorical funding of agencies other than schools or districts further exacerbates program fragmentation (California LAO, 1993), and, in the worst of cases, funding formulas actually encourage such placement (NASBE, 1992).

Pupil identification is a flawed process. A key assumption in most categorical programs is that the students for whom the special funds are intended can be identified. But this assumption is questionable in many cases (Gartner, 1987; Reynolds, 1983; Wang, Reynolds & Walberg, 1993; Pugach, 1995). Perhaps the most salient example is the belief that there is an identifiable group of learning disabled youngsters eligible for Special Education funding. Shepard, Smith and Vojir (1983) report that:

> At least half of the learning disabled population could be more accurately described as slow learners, as children with second-language backgrounds, as children who are naughty in class, as those who are absent more often or move from school to school, or as average learners in above-average systems.

In fact the National Association of State Boards of Education (1992) cites research done at the University of Minnesota establishing that up to 80% of all students could have been classified as learning disabled in one or another of the identification systems being used to classify students in the 1980's.

The identification quandary is not unique to Special Education. Borland (1997) in writing about the identification of students eligible for Gifted and Talented Education points out, ". . .giftedness, especially in children and adolescents in the schools, is something we as a field have constructed or invented through our writing and talking, not something we have discovered." (p. 7) Not only is the construct of "giftedness" questionable as Borland indicates, but much time and effort that could be better spent on program is dedicated to the identification process.

> In some arenas, such as identification of gifted students, we seem to be bound so strongly by tradition that often the practice of serving gifted students has lagged far behind the best research, knowledge, and theory of the field of psychology, sociology, and education (Callahan, 1996, p.150).

In addition to the non-scientific nature of many eligibility determinations and the resource drain associated with identification, categorical classification systems are also faulted for labeling and often stereotyping youngsters with resultant differential behavior toward them and a general lowering of expectations for them.

As detrimental as labeling can be, perhaps the most damaging effect of a flawed identification system is that it causes educators to neglect one of the most powerful strategies for improving the educational lot of special needs students -- early intervention. This neglect is a result of the requirement in most categorical programs that only

identified students receive services as well as the difficulty of assessing very young children with standardized measures. (Reynolds and Wang, 1983).

There is little research supporting alternative instructional strategies for categorical students. An underlying assumption of categorical programs is that there is a distinct set of instructional practices different from those of general education that apply to certain students. Hence, these students must be identified and provided the special instruction they need. But this assumption is often found wanting. For example, Wang, Reynolds, and Walberg (1993) identified effective instructional practices by examining authoritative reviews, a compilation of effect sizes from meta-analyses[2], and a survey of expert opinion. They found much consistency among the three sources. More importantly, they found general agreement on the validity and importance of the instructional practices when they queried general education teachers and special education teachers. The myth of a separate set of instructional practices for categorical students is clearly seen in the similarities between some Special Education and Title I children. Pugach (1995) observes,

> Despite the general tendency to think of these programs as exclusive of one another, the similarity between special education for children with mild disabilities and Chapter 1 in terms of instruction, curriculum, and demographics is unmistakable. (p.33)

For example, regular education teachers and administrators expect special teachers to be responsible for both Special Education and Title I students. Both programs have relied heavily on the "pull-out" strategy, causing both groups of students to have a disjointed educational experience. The curriculum offered both students is also very similar, focusing on low-level, basic skills, often devoid of any contextual reference.

[2] A procedure that involves the review of a large body of research to examine the reported results of only those studies that meet specified standards of rigor.

Beyond Categorical Programs

Despite good intentions and billions of dollars, there is little evidence that categorical programs have succeeded in improving educational outcomes for the students they were intended to serve. In their wake they have left a patchwork quilt of programs often more concerned with rules than results, that emphasize eligibility rather than education, that are susceptible to political pressures, and that substitute instructional fads for well researched approaches.

Surveying the categorical landscape, Wang, Reynolds and Walberg (1993) write:

> The increasing diversity of students in today's schools has led to much categorization and labeling and to a set of fragmented categorical programs. In principle, an inclusive school system should provide for the diverse needs of all students, including those requiring special, remedial, or compensatory education. (p.1)

MAP's Cost Based Block Grant Model provides the structure for such an inclusive system and is a powerful response to the weaknesses of the categorical approach. The following three sections demonstrate specifically how the needs of low income, limited English proficient and high-ability students are addressed in the Cost Based Basic Grant Model.

Special Support for the Children of Poverty

Although any student might be at risk of academic failure, the strong relationship between family poverty and student achievement argues for special support for children from low income families. The MAP model acknowledges this relationship and recommends supplemental funding for schools with significant concentrations of students from poor families. An alternative approach in which supplemental funds might be allocated to schools based on the number of low achieving students has been rejected as such a system would create fiscal disincentives, rewarding schools for failing to educate students.

The rationale for providing supplemental funding only to those schools with concentrations of poor students (rather than for each child living in poverty) rests on two premises explored in detail in this section: 1) the basic school allocation in the MAP model provides sufficient resources to address the needs of low income students in schools enrolling relatively few such students, and 2) the relationship between poverty and schoolwide achievement becomes more pronounced as the concentration of poor students in a school increases.

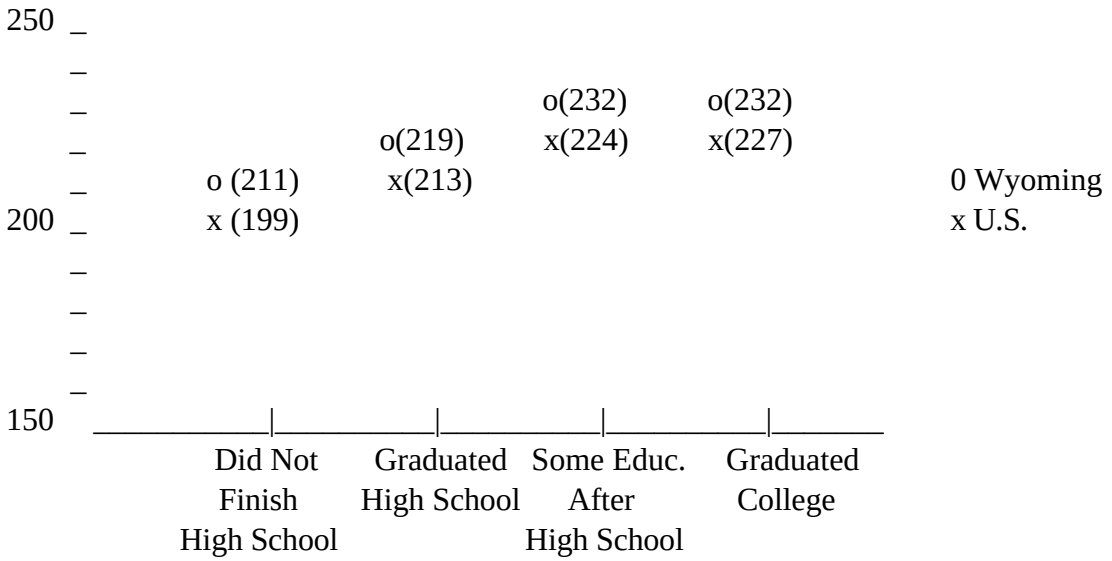
Poverty and Student Achievement

Research confirming the relationship between poverty and student achievement is not difficult to find. Fetler (1989), for example, found higher dropout rates and lower achievement among students living in poorer neighborhoods. Similarly, Clune (1995) reports a 55-60% passing rate on the New York State Regents Comprehensive Examination for pupils attending low-poverty schools in that state compared to a 0-7% rate for students in high poverty schools. The relationship was clearly found in a 1987 study of the effects of summer school by Heynes. She reported, "The gaps in

achievement between advantaged and disadvantaged children are exacerbated far more dramatically when schools are closed than during the regular year (p. 1156)."

Wyoming students from lower socioeconomic status are not immune from this relationship. Table 1 displays the results for Wyoming Students of the 1992 National Assessment of Educational Progress for 4th Grade Reading by parent education level, a good indicator of socioeconomic status (National Center for Educational Statistics, 1993).

TABLE 1
1992 NAEP 4th Grade Reading Results by Parental Education,
Wyoming and U.S.



The exact reasons why poverty is so directly and consistently linked to achievement are matters of some conjecture. In general, economically successful families have the resources and life experiences to ensure that their children receive a "good education." The homes of the economically advantaged are more likely to provide an environment where the intellectual skills necessary for school success are acquired, and the financial resources for education are more readily available in such homes. As Diane

Ravitch and Chester Finn (1987) report in their study of American high school students' knowledge of history and literature,

> Families provide models of behavior, set levels of expectations, choose whether to enroll their children in prekindergarten and kindergarten, express attitudes about the value of education, and determine the extent to which children grow up in a literate environment. In some home settings, children are richly endowed with the attitudes, behaviors, and values that contribute to school success; in others, they are not. Schools are not powerless to reduce the difference between the extremes, nor are individual students incapable of surmounting the disadvantages of poverty, but it would be misleading to ignore the major contribution of family background to students' success in school. (p. 122)

All Poverty is not Equal

Although the relationship between poverty and student achievement is well established, all poverty is not equal. The dampening effects of poverty on students' academic success are much more pronounced where poverty is concentrated and where children are in poverty for extended periods of time. Orland (1990) examined the achievement of both poor and nonpoor students by the concentration of poor students in a school. The results are displayed in Table 2.

Table 2

Percentage of Students Whose Achievement Scores Fall Below the 25th Percentile, by Student and School Poverty Status

Student Poverty Status	School Poverty Status		
	Low Poverty (<7% Poor)	Medium Poverty (7-24% Poor)	High Poverty (>24% Poor)
Nonpoor	11.0	20.7	36.9
Poor	27.6	39.2	56.0
All Students	11.9	23.9	47.5

In addition to the obvious finding that school poverty and student achievement are related, Orland points out that 1) the percentage of low achievers increases dramatically as school poverty increases, and 2) the effects of poverty affect the achievement of nonpoor students as well. In fact, Orland writes, ". . .a nonpoor student in a poor school is actually more likely to be a low achiever (36.9%) than is a poor student in a low-poverty school (27.6%)."

The concentration of students from low-income families clearly should be a factor in allocating any additional funding to low income schools, and this is what the Cost Based Block Grant Model proposes to do for school districts (and ultimately for schools when data are available) where the number of students who qualify for the federal free and reduced price lunch program exceeds 150% of the state average.[3]

Strategies That Overcome the Effects of Poverty

An examination of the adequacy of resources in MAP's model to meet the needs of low income students obviously rests on the answer to a prior question: Are there educational interventions that can overcome the effects of poverty? Evaluations of the nation's principal program for overcoming the effects of poverty, Title I, have shown little evidence of measurable success. The most recent study of Title I's predecessor, Chapter 1, showed the program failed to meet its stated goal of closing the achievement gap between low-achieving students and their classmates (Hoff, 1997). But there is evidence that the less than impressive results for Title I may say more about the deficiencies inherent in categorical programs described in Part One of this report than about the possibility of mounting programs to combat the effects of poverty.

[3] In its May 1997 report, MAP recommended that the state choose a measure of poverty and use eligibility for free and reduced price lunches as a placeholder. Problems with eligibility for the federal lunch program notwithstanding, it may be the most objective and most reliable measure available to Wyoming schools. An important question for the state to address is whether to include all students eligible for free and reduced price lunches. Eligibility for reduced price lunches expands to 185 percent of poverty. Thus, students from a family of four with an annual income of over $30,000 would qualify for the reduced price lunch program.

Recently the Office of the Legislative Auditor of Minnesota undertook a study of the extent to which schools were implementing education programs to help low-achieving students succeed academically (1998). The findings mirror those of the national Title I evaluation -- much effort with only modest results. However, the report points out that at least part of the failure of school district efforts to improve student achievement might, in fact, be due to a failure to introduce instructional strategies supported by educational research. For example, researchers found that only 15% of high-poverty elementary schools in the state were using adult-to-student tutoring as an instructional approach, despite the strong research support for that approach. Conversely, 49% of high-poverty elementary schools reported individualized computer-assisted instruction as a remedial intervention, despite the largely unproven effectiveness of such an approach.

In fact, research indicates that there are several strategies that singly or, more powerfully, in concert can work to overcome the negative effects of poverty in schools. Underlying all these strategies, however, is one key concept: early intervention. Keith Stanovitch (1987) provides an insight into why early intervention is so crucial in his description of the "Matthew Effect."[4] Stanovitch reviewed the relevant literature in an attempt to answer the question of whether processing differences cause variation in reading achievement or if reading achievement itself affects cognitive development. Stanovitch concluded that reading itself was an important contributor to cognitive development and further language growth. In other words, students who are able to read, read more. Not only do they become better readers in the process, but they also increase their vocabularies and enhance their knowledge of language structure at the same time. Thus, children who get a good early start (typically the children of middle and upper class families) pull away from the pack. Children who start out poorly do not gain the cognitive benefits of early reading and fall back. In this manner, even small differences in

[4] "For unto every one that hath shall be given, and he shall have abundance: but from him that hath not shall be taken away even that which he hath." (Gospel according to Matthew, XXV:29)

achievement get magnified overtime leading to the "achievement gap" between advantaged and disadvantaged students described earlier. Stanovitch's recommendation: "Identify early, remedy early, and focus on phonological awareness." (p. 394)

Finn and Cox (1992) provide an additional example of how early differences become magnified over time. Based on teacher questionnaire responses, Finn and Cox categorized each of 1388 Tennessee 4th graders into one of three groups based on their level of participation in school: nonparticipants, passive participants and active participants.[5] Looking back at the students' records, they found that differences in achievement were significant among all three groups as early as first grade and persisted over time. They concluded:

> Participation in class is important beginning with the child's earliest school experiences. At the same time, a degree of academic success is necessary to assure that identification will occur and that participation, rather than withdrawal, will become the youngster's habitual form of behavior. (p. 145)

Acknowledging the importance of early intervention is not enough, however. Early intervention strategies must be selected based on demonstrated effectiveness. As Stanovitch points out, taking poor readers out of regular reading classes and subjecting them to untried instructional approaches (Stanovitch suggests an earlier fascination with visual training to overcome reading difficulties) might only exacerbate the Matthew Effect.

An early intervention strategy supported by research is class size reduction. Perhaps the best documented example of class size reduction in this country was Tennessee's STAR (Student Teacher Achievement Ratio) project. Begun in the fall of 1985, STAR randomly assigned 7000 kindergarten pupils to one of three treatments: small classes (13-17), regular classes (22-26), or regular classes with an aide. Students

[5] Examples of active participation include paying attention in class, doing more than the assigned work, trying to finish even difficult assignments.

stayed in their treatment groups through second grade when they returned to the regular class size of the district.[6]

Students in the small classes outperformed students in regular classes and students in regular classes with aides throughout the state in each year of the study. In addition, in the small classes there was more early identification of children needing special attention. In a follow-on study of STAR pupils in the eight grade, students from the small classes were still outperforming students from the other two groups, although the differences were smaller (Achilles, Finn & Bain, 1997-98; Achilles, et al, 1994).

In a related STAR study of particular importance to the question of class size reduction and low income students, sixteen of Tennessee's poorest school districts reduced class size in K-3 to about 15:1. The average achievement of these districts was well below the state average. After six years of reduced class sizes, these districts were near or above the state achievement average (Achilles, et al, 1996). The STAR results are unique, however, because education research does not normally conduct controlled experiments to assess possible reforms. Yet controlled experiments are the best possible way to assess the validity of possible new approaches. We would have more confidence in this recommendation (smaller class sizes) if, as good scientific method recommends, the Tennessee experiment had been, and was being, replicated in numerous similar studies. Because it is not, we cannot have as much confidence in smaller class sizes as we would like. Nonetheless, based on this single experimental result (along with the judgement of professional educators), small class sizes are now more firmly established as a recommended approach than virtually any other.

A second early intervention strategy supported by research is one-to-one tutoring. Although there is ample evidence to support programs of student-to-student tutoring, either cross age or peer (Cohen, Kulik & Kulik, 1982), the strongest effect are found for

[6] Preschool education is another early intervention strategy supported by research (Campbell and Ramey, 1995). It's consideration is beyond the scope of this report, and MAP is not in a position to comment on it's cost-effectiveness in the context of Wyoming school districts.

trained adult-to-student tutoring. Warik and Slavin (1993) reviewed 16 studies of adult one-to-one tutoring of first grade students. Although the studies reported on different programs, Warik and Slavin found positive effect sizes in nearly every case, with greater effect sizes in those instances where the tutoring was done by certified teachers.

One of the better-researched examples of one-to-one, adult-to-student tutoring is the Reading Recovery program. Developed in New Zealand in 1976, Reading Recovery is a highly structured program of reading instruction for first grade students at risk of falling behind their age mates. Identification only occurs when a child begins to fall behind, but not much after. Participants are selected from among the lowest 20% of readers in a classroom--making identification relatively simple. No student is excluded from initial participation for any reason, including physical handicap, home language, or learning disability.

One-to-one, adult-to-student tutoring is the core of the program. Reading Recovery lessons are provided daily for each participating student for 30 minutes, for an average of 12 to 14 weeks.

Shanahan and Barr (1995) investigated the effectiveness of Reading Recovery by conducting a systematic analysis of all empirical work on Reading Recovery available at the time. They concluded:

> Evidence firmly supports the conclusion that Reading Recovery does bring the learning of many children up to that of their average-achieving peers. Thus in answer to the question, "Does Reading Recovery work?," we must respond in the affirmative. It is clear that many children leave the program with well-developed reading strategies, including phonemic awareness and knowledge of the spelling. Although some initially low-achieving students will succeed without Reading Recovery, evidence indicated that many who would not succeed do so as a result of this intervention. (p. 989)

Shanahan and Barr further found that after leaving the program, Reading Recovery students do better than similar children not enrolled, but the effect size diminishes over time, leading to the possibility that continued support of these students may be needed.

The discussion here is not meant to be an endorsement of Reading Recovery, but an example of a well documented early intervention strategy that would, no doubt, be appropriate for many Wyoming schools enrolling low to moderate numbers of students in danger of falling behind in the acquisition of early literacy skills.

Another rather straightforward but often overlooked strategy to improve the achievement of low performing students is to increase the quality of school libraries. As Stanovitch pointed out in his discussion of the Matthew Effect, the quantity of reading a student does, especially in the early years, not only improves reading ability, but enhances cognitive development as well. Krashen (1993) concurs, point out that a program of voluntary free reading improves not only reading comprehension, but writing fluency and complexity, self-esteem, second language acquisition, and attitude toward school. But quantity of reading is, in part, determined by access to books.

Krashen (1997-98) summarizes the research that examines the relationship between the quality of school libraries (and local public libraries as well) and reading achievement. He reports on his own research showing that among the best predictors of scores on the National Assessment of Educational Progress 4th grade reading test is number of books per student in the school library. Similarly, Lance (1993), in a study of 221 Colorado public schools found that size of a school's library media center and size of its collection were good predictors of academic achievement, whether the schools were in rich or poor communities and whether the adults were well or poorly educated.

The quality of school libraries is of particular importance in identifying strategies to improve outcomes for students for low income families. There is some evidence that low income students have less access to print through libraries than do middle and upper class students. Smith, Constantino and Krashen (1997) looked at the access to books of

40 public school children living in three California communities: Beverly Hills, extremely affluent; Compton, working class; and Watts, working and underclass. The results of their investigation are displayed in Table 3.

TABLE 3

Print Environment in Three Communities

Community	In Home Mean #	In Class Mean #	School Library Total	Public Library Total	# of Bookstores
Bev. Hills	199.2	392.4	60,000	200,595	5
Watts	.4	53.8	23,000	110,000	0
Compton	2.7	47.3	16,000	90,000	1

The authors concluded, "The differences in access to books among these communities is astounding. We expected to find that children in more affluent communities have more books in the home, but the degree of the difference was far beyond our expectations." (p8) Although differences of this magnitude are unlikely in Wyoming, it seems probable that differences in access associated with community poverty and rural isolation do exist.

A Comprehensive Approach

In contrast to the categorical program approach to remediating the needs of low performing students, many schools around the country have reported success by linking together research based intervention strategies into a comprehensive plan. This approach has become so widespread that the federal government has now launched a program to encourage schools, especially low performing Title I schools, to adopt one of the well established comprehensive reform models.

Three of the comprehensive models most widely known and included in the federal initiative are Success for All, developed by Robert Slavin of Johns Hopkins University, Accelerated Schools, developed by Henry Levin at Stanford University, and the School Development Program, developed by James Comer of Yale University.[7] All three models have a common goal of improving achievement for underachieving students, and, despite differing strategies, share many similarities in terms of design. All focus on elementary schools and reading and language skills in particular. All emphasize small class sizes and the development of student-faculty relationships. All stress parental involvement and include mechanisms for site based management. And all provide some evidence of student success, with Success for All offering the strongest evidence (Slavin, 1997-98).

Serving Low Income Students in Wyoming

As in other states, addressing the needs of low income students is a challenge facing Wyoming educators. As the previous section shows however, there are strategies and approaches available that should be employed in meeting that challenge. A critical question, then, is to what extent can those strategies and approaches be used in Wyoming within the parameters of MAP's Block Grant proposal, and in what instances might additional funds need to be allocated?

The MAP Block Grant model clearly incorporates two proven strategies for improving the educational achievement of low income students: small class sizes, with class sizes ranging between 16 and 20 across all grade levels; and improved school libraries

[7] The other models included in the federal Comprehensive School Reform Demonstration include Atlas Communities, Audrey Cohen College, The Basic Schools Network, Coalition of essential Schools, Comer School Development Program, Community for Learning, Co-NECT: Technology Supported Learning, Direct Instruction, Expeditionary Learning Outward Bound, High Schools That Work, Modern Red Schoolhouse, National Alliance for Restructuring Education, Paideia, Talent Development High School, and Urban Learning.

by providing funding for a school librarian or similar position and by augmenting the funding currently available for the purchase of library resources.

In addition to reducing class size and beefing up libraries, schools serving low income students, especially at the elementary level, should be encouraged to implement approaches using one-to-one tutoring or the more comprehensive approaches briefly described in the previous section. In fact, Minnesota's study of the overall effectiveness of remediation efforts in that state traced the lack of general success at least partially to the fact that districts had failed to adopt and implement proven strategies like Reading Recovery and Success for All. ". . . our survey results, weighted to reflect statewide numbers, showed that only about 11 percent of elementary schools were using either of these programs (Office of the Legislative Auditor, 1998, p. 64)."

Ross, et al (1995) compared the relative effectiveness of Reading Recovery and Success for All in three schools in one rural school district on the outskirts of a small city in the far west. Two schools implemented Success for All and the other, Reading Recovery. As might be expected, the researchers found that Reading Recovery showed better results for tutored students (compared to students tutored in Success for All), but Success for All did better with all students in the school. The authors suggest that Reading Recovery might best be used in a school with a good basic program and relatively few students at risk of failure, while Success for All might be more appropriate for schools serving large numbers of at risk students.

If that logic is applied to Wyoming schools and the MAP finance plan, to what extent might additional funding be necessary? Clearly, Reading Recovery can be implemented with the resources provided by the Legislature in SEA #2 (1998).[8] Assuming the good basic school with relatively few students at risk to be the prototypical Wyoming elementary school of 288 used in MAP's finance plan, there

[8] All subsequent calculations are based on the level of resources provided in SEA #2 (1998) as signed by the Governor.

would be approximately 50 first grade students, the target population for Reading Recovery. Reading Recovery aims to provide tutoring to the lowest 20% of the first graders in a school, or in the Wyoming example 10 students. The primary reason Reading Recovery is viewed as an expensive intervention with an estimated average cost of $4000 per student per year is that tutoring services are provided to each participating child for 30 minutes a day for 12 to 14 weeks by a specially trained teacher. Therefore, each teacher can tutor no more than 16 students a year, with 10 students annually being a more realistic figure (Shanahan and Barr, 1995).

However, because the MAP model provides for two additional teachers in addition to the contingent of classroom teachers at the prototypical school, Reading Recovery's major cost component is already addressed and the program could be offered for the additional annual costs of $325 for professional development for the Reading Recovery teacher, $350 for instructional materials, and $1,021 for the services of a Teacher Leader to provide the training. All of these costs could fit in MAP-proposed budgets for professional development, instructional materials and salaries for specialized certified personnel.

As Ross, et al suggest, a school with greater numbers of at risk students would be well advised to select a more comprehensive approach like Success for All. Of the widely used comprehensive models, Success for All is considered one of the most expensive (King, 1994), and, thus, provides a good test of the adequacy of the MAP finance plan. Key funding components of Success for All include the following:

- A Program Facilitator who works with the school principal to oversee the program

- Reading Tutors provide one-to-one tutoring for students having difficulty keeping up in reading, generally between 30% and 60% of first graders. During the daily 90 minute reading periods, teacher tutors serve as additional reading teachers, reducing class size for reading.

- o A part-time Parent Liaison to work with parents.

- o A social worker, full or part time depending on need.

- o An attendance aide, full or part time to ensure that the goal of 95% attendance is met.

- o Specific instructional materials must be purchased

- o Between 6 and 10 days a year are required for staff development which are provided by facilitators from the Johns Hopkins staff. Only a few of these days (7 over three years) are entire school staff development days requiring special stipends for teachers.

Based on the prototypical Wyoming elementary school of 288 students, Success for All cost estimates for "high-need" schools (75% low performing students), "moderate-need" schools (50% low-performing), and "low-need" (25% low performing) are displayed in Table 4 (Slavin, et al, 1992). The cost figures use the MAP estimates of teacher cost at $41,433 and aide costs of $11,995.

TABLE 4
Average Annual Program Costs
For Implementation of Success for All

	High-Need		Mod-Need		Low-Need	
Component	FTE	$	FTE	$	FTE	$
Facilitator	1.0	41,433	1.0	41,433	1.0	41,433
Tutors						
Cert. Teacher	1.0	41,433	1.0	41,333	1.0	41,433
Aide	2.0	23,990	1.0	11,995	.5	5,998
Social Worker	1.0	41,433	0.5	20,716	--	
Parent Liaison	1.0	11,995	0.5	5,998	.5	5,998
Attendance Aide	1.0	11,995	0.5	5,998	--	
Materials, Training & Consultation*		33,000		33,000		33,000
Staff Release Days**	2.5	11,500	2.5	11,500	2.5	11,500
Total		216,779		172,073		139,362

* These costs vary from year to year, with first year cost higher than later years. This analysis is based on average costs over a three-year period.
** The number of days the entire staff must be released for professional development varies from year to year. This analysis is based on a three-year average.

Table 5 repeats the Success for All cost analysis, but eliminates those costs that a school might be reasonably expected to absorb by directing staff and other resources provided for in the MAP block grant funding model to the implementation of Success for All. Thus, the cost of a Facilitator is not included in this example as the SEA #2 funding level provides for three additional certificated staff at the school site, one of whom could serve as the Facilitator. Similar reductions have been made for the certificated tutor and

aides providing tutoring. The $33,000 cost of materials, training and consultants has been reduced by $20,000 since the MAP model allocates $26,000 for professional development, a good portion of which would no doubt be dedicated to these efforts, and $62,000 for supplies and instructional materials.

TABLE 5

Average Annual Program Costs for Implementation of Success For All using the Cost Based Block Grant Model

	High-Need		Mod-Need		Low-Need	
Component	FTE	$	FTE	$	FTE	$
Facilitator	1.0	MAP	1.0	MAP	1.0	MAP
Tutors						
Cert. Teacher	1.0	MAP	1.0	MAP	1.0	MAP
Aide	2.0	MAP	1.0	MAP	.5	MAP
Social Worker	1.0	41,433	0.5	20,716	--	
Parent Liaison	1.0	11,995	0.5	5,998	.5	5,998
Attendance Aide	1.0	11,995	0.5	5,998	--	
Materials, Training & Consultation		13,000 (+MAP 20,000)		13,000 (+MAP 20,000)		13,000 (+MAP 20,000)
Staff Release Days	2.5	11,500	2.5	11,500	2.5	11,500
Total		89,923		57,212		30,498

The MAP model proposes funding districts with concentrations of poor students over one -and-one-half times the state average with an additional $500 for each such student. Since the current state average for such concentrations is approximately 27%, a hypothetical school just over the 150% threshold would receive approximately $58,500 in special funding[9], more than enough to implement Success for All in the low- or even moderate-need school. In fact, a high-need school with approximately 63% of its students participating in the free and reduced price lunch program could implement Success for All with no additional funding, despite the fact that such a school would doubtless be receiving federal Title I funding.

[9] 40.65% x 288 students = 117 students; 117 x $500 = $58,500

Special Support for Limited English Proficient Students

Although there is extensive support in the literature for special instruction for students who do not speak English, as well as a clear ethical imperative to provide appropriate educational services for these students, the bedrock basis for bilingual education and other approaches to the education of limited English proficient (LEP) students in contemporary American public education is legal. Over the past three decades, educational policy in this area has been based on an evolving legal structure based of federal legislation and regulation along with key court decisions.

The Legal Framework for the Education of Language Minority Students

The landmark event in establishing the current legal structure for the education of language minority students was the 1974 Lau v. Nichols unanimous Supreme Court decision. In Lau the Court found that some 1,800 Chinese students in San Francisco were not being provided an education equal to that of their English-speaking peers.

> There is no equality of treatment merely by providing students with the same facilities, textbooks, teachers, and curriculum; for students who do not understand English are effectively foreclosed from any meaningful education.
>
> Basic English skills are at the very core of what these public schools teach. Imposition of a requirement that, before a child can effectively participate in the education program, he must already have acquired those basic skills is to make a mockery of public education. We know that those who do not understand English are certain to find their classroom experiences wholly incomprehensible and in no way meaningful. (Lau v. Nichols, 1974)

Although the Court cited bilingual education and English as a second language (ESL) instruction as possible remedies for San Francisco students, it stopped short of endorsing those as the only alternatives available to school districts.

The federal Office of Civil Rights (OCR) responded to the Lau decision by drafting a set of guidelines which were issued on August 11, 1975. These guidelines served as the basis for OCR regulatory action and specified procedures for student identification, appropriate instructional treatments, deciding when students should be ready for mainstream classes, and teacher qualifications. These "Lau Remedies," as they came to be called, strongly endorsed bilingual instruction, requiring it as a remedy in some cases at the elementary level, but they were never published in the Federal Register and lacked the legal status of federal regulations.

In essence, current federal policy regarding appropriate instruction for limited English proficient students rests on the 1974 Lau decision and a set of standards derived from several court decisions. The most important court decision among these is Castañeda v. Pickard. In this 1981 case, the Fifth Circuit Court of Appeals set forth three criteria for evaluating programs for limited English proficient students: 1) the program must be based on "sound educational theory," 2) it must be "implemented effectively," with adequate resources and personnel, and 3) it must be evaluated and shown to be effective in both the teaching of English and providing access to the full curriculum. Castañeda has since been used as the standard for program adequacy in other cases. For example, it was used as the basis for analysis in 1983 when a federal court ordered the Denver schools to make significant changes to its program for limited English proficient students. OCR formally adopted the Castañeda tests as its standard in 1991.

Program Models

As school districts have experimented with various approaches to meeting the federal legal guidelines and instructional needs of LEP students, a distinct set of program options has emerged. These options are display in Table 6, along a continuum from those that use the least amount of the students' first language (Submersion) to those using the first language extensively.

TABLE 6

Program Models for LEP Students

Submersion

English Language Development

Structured Immersion/Sheltered Instruction

Transitional Bilingual Education/Early Exit

Transitional Bilingual Education/Late Exit

Developmental/Maintenance Bilingual Education

Dual Language Programs

Submersion: Often erroneously referred to as "English immersion", submersion programs place limited English proficient students in English-only mainstream classrooms alongside English-speaking students with little or no first language support and little or no modification to the presentation of the curriculum. In essence, this is what the Supreme Court found unconstitutional in Lau v. Nichols.

English Language Development: Also called English as a Second Language Programs, English Language Development Programs provide limited English proficient students with one or more periods (at the secondary level) or lessons (at the elementary level) of instruction designed to improve their English. For the remainder of the instructional day, LEP students are in mainstream English classes.

Structured Immersion: In addition to the English Language Development lessons described above, LEP students in Structured Immersion or Sheltered Instruction Programs are taught one or more core academic courses through specially designed instruction in

English. Modifications in the instruction are designed to make the lessons as comprehensible as possible to the non-native speaker of English by using visual aids, modifying speech patterns, and building on the students' background knowledge.

Transitional Bilingual Education Programs/Early Exit and Late Exit : In addition to an English Language Development component, Transitional Bilingual Programs include one or more core academic classes taught in the LEP student's primary language. In the early stages of Transitional Programs, much of the content instruction is done in the primary language, but as English proficiency increases, content instruction shifts to the sheltered English mode described above, and finally to mainstream English.

The speed with which this shift occurs is what differentiates Early Exit programs from Late Exit programs. In Early Exit designs there is the expectation that all students will make the switch to mainstream English instruction within a specified amount of time, usually three years. In Late Exit programs, a student's progress through the program is based on criteria related to English acquisition and content mastery. Thus, some students may take significantly longer than three years.

Developmental Bilingual Education: Developmental Bilingual Programs are similar in many respects to Late Exit programs with one significant difference: students do not leave the program when they have mastered English, but remain in the program and continue development of their primary language. Such programs are rare in the United States.

Dual Language Programs: A variant on French Immersion programs developed in Canada at the behest of English-speaking parents concerned that their children were not learning French, Dual Immersion Programs in the United States are designed to promote bilingualism in both English learners and native speakers of English. In these programs both groups of students receive substantial amounts of instruction, including core academic subjects, in the minority language in the early grades (often as much as 90%). English is introduced gradually, and, in most cases there is an eventual 50%-50% balance

between the two languages. Programs are designed to enroll students for at least 5 to 7 years.

Program Effectiveness

The question of the effectiveness of bilingual education programs versus programs which use English almost exclusively is a contentious one, with advocates on both sides marshalling research studies and evaluation reports to buttress their respective cases. That arriving at a clear answer is problematic should not be surprising given the difficulty faced by researchers and evaluators. Crawford (1995) summarizes the three most basic challenges. First, in large scale studies (to be described shortly) the diversity of programs and degrees of program implementation are lost. Hence well designed and implemented programs are mixed with less well thought through and implemented programs, masking program effect. Second, the technical obstacles facing educational researchers in general are even more daunting in multiple language situations, often serving immigrant students with a wide range of previous educational experiences. Third, even research and evaluation are subject to political pressures, especially in a field as provocative as this.

Despite the obstacles, several key studies are frequently cited in the ongoing debate over bilingual instruction. The first of these is a study conducted by the American Institutes for Research of the federal Title VII program (Danoff, Arias & Cole, 1977). Thirty-eight bilingual programs with more than 7,000 students in 150 schools were included in the study. The studies main finding, that there had been "no consistent significant impact" on the achievement of LEP students was hailed by bilingual education's detractors while methodological flaws (chiefly lumping together a variety of programs under one label) were cited by advocates (Crawford, 1995).

In August 1980 the Carter administration asked the Office of Planning and Budget to review the research literature on the effectiveness of bilingual education. The report, known as the Baker-de Kanter Report after its chief authors, was based on the findings of

28 research studies and evaluation reports judged to be methodologically sound from an initial pool of 300. Baker and de Kanter summarized their findings saying:

> No consistent evidence supports the effectiveness of transitional bilingual education. An occasional, inexplicable success is not reason enough to make TBE the law of the land. . .The time spent using the home language in the classroom may be harmful because it reduces English practice. (quoted in Crawford, 1995)

In a final landmark study in the ongoing debate about bilingual instruction, the Ramirez Study (Ramirez, Yuen & Ramey, 1991), compared documented examples of both early exit Transitional Bilingual Education and Structured Immersion, finding only minor differences between the two. The U.S. Department of Education thus advised that "the three[10] most common bilingual education methods (ESL, Structured Immersion, Transitional Bilingual) are effective in teaching LEP students." Therefore, "school administrators can choose the method best suited to their students, confident that, if well implemented, it will reap positive results." (quoted in Crawford, 1995, p. 150)

Since the release of the Ramirez Study, other reports have continued the debate along the same lines. In a reprise of the Baker-de Kanter study, Rossell and Baker (1996) reviewed 300 evaluations of TBE or other second language programs for methodological soundness and found 72 to be acceptable. In 60 studies comparing TBE to Submersion in teaching English reading, Rossell and Baker found 22% of the evaluations favored TBE, 45% showed no difference, and 33% favored Submersion. In comparisons with smaller numbers of English Language Development programs and Structured Immersion programs, the inadequacy of TBE was even more pronounced, although the vast majority of the Structured Immersion programs included in the study were from Canada. In fact, the only time TBE was shown to be superior was in the single evaluation comparing TBE

[10] Although late exit Transitional Bilingual Education programs were included in the Ramirez study, no direct comparisons were made with either Structured Immersion or early exit Transitional Bilingual Education programs for technical reasons.

to Maintenance Bilingual Education. In the 3 studies comparing Structured Immersion with English Language Development programs, Structured Immersion was superior in all three cases.

Rossell and Baker conclude, ". . .there is as yet, . . .no consistent research support for transitional bilingual education as a superior instructional practice for improving the English language achievement of limited English proficient children." (p.18).

On the other side of the debate, Thomas and Collier (1997) looked at the results from five large urban and suburban school districts in various regions of the United States. Over 700,000 language minority student records were examined. Particular attention was paid to long-term effects, with academic achievement in the final year of high school serving as the most important measure of academic success.

These authors concluded:

> . . .we have found data patterns similar to those often reported in other short-term studies focused on Grades K-3--little difference between programs. However, significant differences in program effects become more apparent as students continue their schooling in the mainstream. Only those students who have received strong cognitive and academic development through their first language for many years (at least through Grade 5 or 6), as well as through the second language (English), are doing well in school as they reach the last of the high school years. (pp.1-2)

Program Costs

In the most extensive analysis done to date, Chambers and Parrish (1992) estimated the added cost of implementing five of the previously described instructional models for LEP students in California during the 1989-90 school year: ESL (English Language Development), Sheltered English (Structured Immersion), Early Exit (Transitional) Bilingual Education, Late Exit (Transitional) Bilingual Education, and Double (Dual) Immersion. They applied the Resource Cost Model originally developed

at the Institute for Research on Educational Finance and Governance at Stanford University. The analysis was carried out at 15 elementary school sites in 11 school districts. The 15 schools were chosen through a nomination and site visit process to find well implemented examples of the five program types.

Overall Chambers and Parrish found the average marginal cost per pupil for special services for LEP students was $361. There were, however, significant differences among the five program models as shown in Table 7.

TABLE 7

Cross Program Model Cost Comparisons

Program Model	Marginal Cost Per Pupil
ESL Pullout Program	$1,278
Sheltered English	235
Early Exit Transitional Bilingual Ed.	275
Late Exit Transitional Bilingual Ed.	241
Double Immersion	956
Average Marginal Cost for All Programs	361

The differences between the ESL Pullout Program and the Double Immersion Program on the one hand, and the Sheltered English and Early or Late Exit Bilingual Programs on the other is due almost entirely to costs associated with resource teachers ($1,088 of the $1,278 for ESL Pullout and $831 of the $956 for Double Immersion).

The first order of business in Wyoming should be to establish a common set of state procedures for identifying students with limited English proficiency. Although there are no federal guidelines in this area, accepted practice in many states provides reasonable guidance (U.S. Commission on Civil Rights, 1997; Council of Chief State School Officers, 1992).

First, the state should require that a "home language survey" be used to identify all students who potentially have limited English proficiency. To ensure nondiscriminatory screening, the survey should be administered to all students, and should be available in a variety of languages in addition to English. The survey should ask at least three questions to determine the first language the student learned, the language most often spoken in the student's home, and the language most often spoken by the student.

Second, the English language skills of any student whose home language survey indicates a language other than English should be assessed. The speaking and listening skills of all such students should be assessed, as should the English reading and writing skills of students in the second grade and beyond. Standardized instruments for these assessments are widely available.

Third, to prevent misidentification, any student who appears to lack English proficiency should have his or her language skills in the non-English language assessed. Students with no proficiency in the non-English language should obviously not be identified as limited English proficient. Students with limited proficiency in both English and the home language should be identified as LEP students, but their instructional program should be designed with this assessment information in mind. For example, a student who has limited skills in both languages, but greater proficiency in English would probably receive initial reading instruction in English, even in a bilingual program.

Once standard identification procedures are in place, two facts will narrow the range of realistic instructional options for Wyoming schools enrolling LEP students. First, there are relatively few LEP students enrolled in the state's public schools. The best available figures (U.S. Commission on Civil Rights, 1997) indicate that approximately 2000 of Wyoming's students, about 2%, are identified as limited English proficient. Second, all the bilingual program models (Early/Late Exit Transitional, Developmental, and Dual/Double Immersion) are designed for classroom implementation and, thus, require a critical mass of students to be enrolled in programs over a period of

three to seven years. Because most districts enroll few LEP students and these may demonstrate high transiency rates, it seems likely that for most districts, compliance with federal requirements[11] will involve either ESL Programs (pullout or in class) or Structured Immersion.

Because the MAP model includes funding for resource teachers, small class sizes, and professional development it is clear that appropriate English language development instruction could be provided for small numbers of LEP students in any public school in the state. In those few instances where significant numbers of LEP students enroll in a districts, MAP's model proposes that the district's revenue be adjusted by a factor of 1.15 or approximately $900 per identified student at current funding levels. This amount would definitely be sufficient to support a Structured Immersion/Sheltered English program or any of the bilingual education models in that school.

[11] The question of legal compliance when only small numbers are enrolled in a district is somewhat murky. In a concurring opinion in the Lau case Justice Blackmun wrote, ". . .I stress the fact that the children with whom we are concerned here number about 1,800. This is a very substantial group that is being deprived of any meaningful schooling because they cannot understand the language of the classroom.

"I merely wish to make plain that when, in another case, we are concerned with a very few youngsters, or with just a single child who speaks only German or Polish or Spanish or any language other than English, I would not regard today's decision, or the separate concurrence, as conclusive upon the issue whether the statute and the guideline require the funded school district to provide special instruction. For me, numbers are at the heart of this case and my concurrence is to be understood accordingly." [U.S. Supreme Court Reports 39 L Ed. 2d p.8.

Special Support for Gifted and Talented Students

The idea that public schools should provide special programs for high ability students has a long history in the United States. The rationale for why such instruction should be provided, however, has changed over time. Gallagher (1997) points out that support for Gifted Education during the Cold War rested on the national defense argument of keeping up with the Soviets during the Cold War, whereas securing America's place in increasingly competitive world economy is now a more frequently heard argument. An additional justification for Gifted Education, that high-ability students are a special needs population similar to low income or LEP students, is also frequently offered (Feldhusen, 1995; Borland, 1997).

Social critics also chime in on the rationale question, albeit from a different prospective. In a review of teacher training texts for teachers of the gifted, Margolin (1996) found less than 11% of the texts dealt with teaching academic subjects, a finding supporting Margolin's view that gifted education is more about recreating a leadership class in America than it is about academic education. Similarly, Sapon-Shevin (1996) calls Gifted Education a form of triage in which the children of the upper and middle classes, for whom school failure would not be tolerated, are moved to a separate school, track, or program and provided special instruction to ensure their success.

What is Giftedness?

Much of the debate that Gifted Education frequently elicits can be traced to a definitional question: What is giftedness? James Borland (1996), an Associate Professor of Education at Teachers College at Columbia where he directs the graduate program in education of the gifted, writes that giftedness is:

> something that is created as much as, if not more than, it is discovered. We have so many radically different conceptions of the very nature and constituents of the central construct in our field that one must conclude

> that whatever giftedness is to each of us, it is shaped much more by our values, beliefs, politics, and experiences than by any existence it has separate from our conceiving of it. (p. 133-34)

In fact and as one might suspect from such a constructed conceptualization, definitions of giftedness have changed over time, from a unitary construct in which gifted students were believed simply to have more of what everyone else had, to more refined definitions growing out of the work of Havighurst, Stivers, and DeHann (1955), Guilford (1967), Marland (1972), Gardner (1983) and others, where giftedness is seen as multi-dimensional.

The Fossilization Problem

The operational definition of giftedness used in identifying students for special services, however, has not kept pace with the evolving theoretical definition, causing serious problems. As John F. Feldhusen, the Director of the Purdue Gifted Education Resource Institute, writes:

> Unfortunately, early in this growing movement [toward an expanded view of talent and ability], most efforts in the identification process crystallized on methods to find general all-purpose gifted children, and a majority of the educational programs offered general enrichment experiences designed for the all-purpose gifted child. Thus, the direction of the gifted education movement seemed to be counter to that suggested by the best evidence about human abilities and talent development. (p. 348)

The unitary view of intelligence, where a student is viewed as either gifted or not gifted, is at the root of most of the controversy around gifted education today. Since being identified as "gifted" is the only way to access instructional programs usually viewed as most desirable by parents and students, much time and effort is spent on the identification process rather than on programs, a shortcoming common to many categorical programs. Callahan (1996) sums up the issue, writing:

> While identifying talent is critical in being able to nurture talent, we must ask ourselves whether we have expended a disproportionate amount of time, energy, and resources on the task of "finding the really gifted student" rather than on matching student needs to services. (p. 154)

Callahan goes on to point out that many gifted programs often latch on to fads and untried curricula, a not surprising finding where the goal is to get into the program, regardless of the program content. Such "innovative" programs may actually do a disservice to participants as Howley (1986) points out:

> By systematically diminishing the importance of relevant academic instruction, schools are able to cultivate a class of students who feel privileged but who are denied the privilege of fulfilling their academic potential. (p. 122)

The most frequent charge leveled by critics of gifted education, that programs promote social inequality, can also be linked to an identification system which serves as gatekeeper to a socially desirable alternative to the regular classroom. That the children of upper and middle class families are over represented in existing programs is clear. Borland (1996) reports that students whose families' socioeconomic status places them in the top quartile of the population are about five times more likely to be in programs for gifted students than are students from families in the bottom quartile.

From Gifted Education to Talent Development

If, as Borland (1997) writes, ". . .our traditional construction of giftedness in a manner that dichotomizes school-age children into two distinct castes is simplistic, educationally indefensible, and offensive" (p. 17), what should replace it? There is an emerging consensus in the field that efforts should move from a focus on nurturing the talents of a few identified students to programs that aid to seek out and develop talents in

as many students as possible. Treffinger and Feldhusen (1996) call for talent development programs where,

> . . .a broad, rich array of services that might be provided: by different instructors or leaders (from within or without the school); in varying ways, places, and times; and for varying individuals or groups of students." p.187

Although clearly not the norm, examples of such programs are not hard to find. One model for gifted and talented education that emphasizes program over identification is the Schoolwide Enrichment Triad Model (SEM) developed by noted gifted educator Joseph Renzulli and his colleagues (Renzulli and Reis, 1994; see also Tomlinson, 1996). SEM combines a more flexible approach to identification with a variety of individual assessments, curricular modifications, and enrichment activities.

In SEM a "talent pool" of 15 to 20% of a school's population is identified through such traditional measures as achievement test and teacher nominations coupled with alternative approaches such as student or parent nomination. Once in the talent pool, students are assessed to determine learning styles and interest, and they are eligible for classes in which curriculum compacting, or the elimination of previously learned material, is provided. In addition, three tiers of enrichment activities are provided. Type I Enrichment consists of general exploratory experiences in topics not generally taught in the regular curriculum. Type II Enrichment includes instructional activities designed to promote thinking, research, communication and methodological processes. In Type III activities, students are encouraged to participate in first-hand learning activities, as close to those of a professional as possible in a specific field.

Can students in this expanded “talent pool” really compete with traditional gifted students? Sally Reis, a colleague of Renzulli's looked at the quality of products created by students in the SEM program. She compared the quality of products created by

students traditionally identified for gifted programs (those scoring in the top 5% of a standardized test) with the products developed by students with above average ability but below the top 5% and who would not have been identified for a traditional gifted program. She found that:

> the quality of products completed by students in the two groups was indistinguishable on every individual key concept and on the total of all items. In fact, the mean score of the total of all of the key concepts was slightly higher for students who would not have been identified by test scores alone and, therefore, would not have participated in the gifted program in the district. (Renzulli and Reis, 1994, p.10)

Serving Gifted and Talented Students in Wyoming

The resources needed to provided enriched and varied curricular offerings to high ability and high achieving students are built into the system enhancements proposed by MAP. MAP proposed a modest increase in statewide funding for special services for gifted and talented students from $350,000 to $450,000, and the Legislature provided nearly double that amount. One thing seems clear, however. Wyoming has the opportunity to revise its program and ameliorate many of the inadequacies of previous efforts by broadening the eligible pool of students who can benefit from enrichment activities and a more challenging curriculum without isolating or segregating them from their peers. Whatever funding is dedicated to this effort should be allocated on a census basis.

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