

WYOMING EDUCATION FINANCE ISSUES REPORT

An Analysis of The Modified Census Based Special Education Program

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Executive Summary

In May 1997, MAP recommended to the State of Wyoming a "Cost-Based Block Grant" for school finance.¹ That recommendation has subsequently been adopted. As part of its proposal, MAP recommended that the State of Wyoming eventually move towards the adoption of a modified "census-based" funding mechanism for special education. This report attempts to initiate a discussion about how such a mechanism might be implemented.

The May 1997 report noted that a specific design of a modified census-based funding mechanism for special education could not be developed until the State "implement[s] procedures that allow tracking special education specific costs to each handicapping condition. When these data are available, MAP recommends adoption of a modified, census based formula."² These procedures are not yet in place, and data are not yet available by which specific historical special education costs in Wyoming can be determined. When these data are available, the Wyoming Department of Education will develop detailed proposals to implement the modified census-based recommendation. In the absence of these data, the present report makes a number of estimates and assumptions in order to illustrate what these detailed proposals might look like. The eventual proposals of the Department of Education, however, may look very different from the illustrations in this report, as they will be based on actual data.

A modified census-based special education finance system, integrated with regular education finance, should be designed to improve the outcomes of Wyoming's special education and regular education programs, and *may* result in reduced costs of special education as well. If realized, these reduced costs will not stem from reduced services provided to children with disabilities. Rather, they will result from the fact that the regular education program funded in the basic block grant is intended to deliver educational services in a seamless fashion, whereas some of these services were previously delivered in a separate special education program.

The elementary school prototypical model, adopted by the Wyoming Legislature and now signed into law by the Governor, included \$152,514 per prototypical elementary school (or \$530 per pupil in total enrollment), estimated to be the current (1995-96)³

¹ Guthrie et. al. (1997).

² Guthrie et. al. (1997), p. 53.

³ Throughout this report, cost data for resources is expressed in 1995-96 dollars, to be consistent with the data in the prototypes in the May 1997 report. If the recommendations of this report are adopted, the data must be updated to current year dollars.

average cost of special education in the state. The specific proposals to implement a special education finance system, when developed by the Wyoming Department of Education, will be *a substitute, not an addition to*, this current average expenditure. A modified census-based special education finance system will re-allocate this \$152,514. Data eventually collected may support later recommendations to vary this initial total somewhat, although we have no present reason to believe this will be the case. For purposes of illustration, this report assumes the total will be unchanged.

Available data in Wyoming on the cost of serving students with disabilities are presently inadequate to permit certainty about the specific re-allocations recommended here. Therefore, the specific dollar figures suggested in this report should be considered as points from which a discussion, and further data gathering, can begin. On the other hand, Wyoming legislators should not expect certainty about these numbers before having to enact special education finance legislation. Therefore, when actual dollar amounts are appropriated, they should be considered as approximations, subject to revision based upon actual experience and further data collection and analysis.

This report makes a number of estimates and assumptions about the specific resources required to accommodate specific disabilities in Wyoming. In developing a modified census based special education finance system for Wyoming, the Wyoming Department of Education will revise these estimates and assumptions, based on the actual incidence of specific disabilities in Wyoming and the costs historically associated with providing accommodations for these disabilities. As with the prior proposals made by MAP for regular education, the specification of these resources will also require consultation with Wyoming special educators and with special educators in comparable regions, to assure that the resources specified can, consistent with the experience of qualified personnel, deliver the potential for adequate outcomes to Wyoming's disabled children. For purposes of illustration only, this report postulates resources that may be required to accommodate the special needs of Wyoming's disabled children. We have postulated these resources based on national literature and some national expert opinion; however, because these resources are intended to be for purposes of illustration only, we have not attempted to confirm our estimates with exhaustive national research. The purpose of this exercise is to illustrate how combinations of resources can eventually translate into a prototypical model for special education in Wyoming, similar to the prototypical model adopted by the Legislature for regular education. This report then prices these combinations of resources to show how the present \$152,514 might be re-allocated in a modified census based system. Notwithstanding this illustration, the Wyoming Department of Education following further data collection and Wyoming-specific research must ultimately determine the specific re-allocation.

Using its preliminary assumptions about the accommodation of specific disabilities in Wyoming elementary schools, this report creates a tentative elementary school special education prototypical model having a total cost of \$81,719 (or \$284 per

pupil -- all enrolled pupils). This represents MAP's estimate of the following costs that could be included, given this report's assumptions (which vary somewhat from our May 1997 report), in a district's block grant:

- a) the cost of delivering the best education to disabled children whose disabilities can be appropriately accommodated at relatively low cost, and/or at relatively predictable cost because the incidence of their disabilities occurs with relatively predictable frequency in the general Wyoming school population. Often, but not necessarily always, these low cost disabilities are those considered relatively mild or sometimes moderate. However, on occasion a low cost disability can also be a severe disability, not a mild one. Given the resource assumptions and estimates made in this report, the costs of accommodating these disabilities, in the elementary school prototype, would be approximately \$73,263.
- b) 15 percent of the cost of delivering the best education to disabled children whose disabilities can be appropriately accommodated only at relatively high cost. For purposes of the estimates of this report, we assume such disabilities are those whose accommodation costs at least 3 times the basic regular education per pupil block grant (i.e., the existing per pupil elementary school block grant, less the ongoing special education amount included in that calculation). We estimate the costs to a district for the 15 percent share of accommodating these high cost disabilities, in the elementary school prototype, as approximately \$8,456.

When the Department of Education develops a specific proposal, it may choose a different split, or to assume 100 percent responsibility for high-cost disabilities (consistent with our original recommendations), and this report discusses some of the considerations the Department may wish to consider in making this choice. This 15 percent cost assumption by districts (and an 85 percent cost assumption by the State) is modeled in this report because this 15-85 split is the one historically utilized in Wyoming.

In addition to the above illustrative amounts, incorporated into the elementary school prototype and the resulting block grant, there are additional special education funds that a modified census-based special education finance system assumes should continue to be spent by the State. Using the resource assumptions for the block grant (as described above), and holding the \$152,514 total as a constant, the State of Wyoming would then spend on behalf of students in each prototypical elementary school an additional \$70,795 (or \$246 per pupil). This represents MAP's estimate of the following costs that would, under these assumptions, have to be spent directly by the State's Department of Education

- a) 85 percent of the cost of delivering the best education to disabled children whose disabilities can be appropriately accommodated only at relatively high cost. We estimate the costs to the state of reimbursing a district for the 85 percent share of accommodating these high cost disabilities, in the elementary school prototype, as approximately \$47,918.

- b) a catastrophic reserve fund of \$22,877, equal to 15 percent of the total special education appropriation of \$152,514. The Department of Education's proposal will probably entail using such a reserve fund to reimburse those districts that experience extraordinary special education costs that cannot reasonably be covered by the 15 percent district share of the cost of high-cost accommodations. This extraordinary experience can result either from a much greater frequency of disability or from the need to accommodate unusually expensive disabilities. In dispensing this reserve fund, the State should also expect that districts experiencing such extraordinary costs may, in the past, have experienced lower than expected costs and so should prudently have established their own reserve funds with the 15 percent share included in their block grants.

Because the State does not presently have data from which we can calculate an estimate of the cost of serving children with high-cost accommodations, a cost unaffected by the estimates contained in this report, we cannot say with full confidence whether the reserve fund described above will be sufficient to meet future special education needs. And because the data on required resources, developed for purposes of illustration in this report, for lower-cost disabilities depend, for their most effective implementation, on a thorough staff development program for regular and special education teachers, and on an aggressive early intervention program, we cannot say with full confidence whether it will be possible, in the near future, to accommodate lower-cost disabilities with fewer funds than those described in this report. We anticipate, however, that the net effect of policies like those illustrated in this report would be to reduce the total cost of special education in Wyoming. *Several of the policies described in this report, if implemented, should result in reduced costs and improved services*, but without data on the current cost of serving children with specific disabilities, we cannot say for certain what the net effect on costs might be.

While there is reason to believe that the policies illustrated in this report have the potential to reduce the cost of special education in Wyoming, *the primary purpose of these policies is not to reduce expenditures, but rather to assist the State of Wyoming to more effectively deliver its basket of educational goods and services to children with disabilities*. Because it reinforces the practice of serving children with low-cost disabilities in regular classes; provides incentives for early intervention (which may ultimately result in fewer referrals to special education, as well as fewer retentions of regular students); and funds the development of improved teacher capacity, the modified

census-based special education finance system that the Wyoming Department of Education plans to develop is a system primarily designed to improve Wyoming's educational outcomes.

Whatever recommendations are developed by the Department of Education for the specific resources to be funded in a prototype underlying a modified census based system cannot be finally adopted without extensive deliberation by Wyoming policymakers, including consultation with Wyoming regular and special educators. Input from Wyoming educators, regarding the feasibility of these census based policies, should be solicited as part of this deliberative process. Such input could result in substantial modification of the policies described in this report.

The policies described in this report assume that the state's educators, with leadership coming from the State itself, are participating in an ongoing professional development program for Wyoming teachers and school administrators, anticipated in the May 1997 proposal. An important purpose of this professional development program should be to ensure that Wyoming educators have the capacity to take advantage of the regular education small class sizes and other resources, described in the prototypical models of the May 1997 report, to improve regular education instruction so that it can successfully deliver the legislatively mandated basket of educational services.

This report suggests that a modified census based special education finance system will likely include an increase⁴ in the block grant for Wyoming school districts for the purpose of expanding this professional development program to cover the capacity to accommodate as many children with low-cost disabilities in regular classrooms as possible, and to deliver the basket to these children in as integrated a setting as may be appropriate.⁵ As a rough estimate, we assume that approximately 2/3 or more of the children presently identified as eligible for special education services in Wyoming can be primarily served in regular classrooms with a properly trained instructional staff and with the resources provided by the block grant. Many of these children may already be so served, in accordance with current Wyoming educational practice. However, an examination of regional data suggests that there is further room for improvement in the

⁴ As noted above, this, and subsequently described increases in the block grant, follow the subtraction of the existing special education line from the prototypes that underlie the block grant.

⁵ In making these recommendations, this report does not intend to suggest that children with severe, high-cost disabilities should or should not be included in regular classrooms. The most appropriate placement for such children is not related to the financial considerations discussed in this report. The point made in this report is only that many, if not most children with low-cost (usually mild) disabilities can be served in regular classrooms with the relatively rich resources provided in the basic block grant and in the special education block grant described below. Whether the higher-cost resources (for which we recommend the state pay 85 percent, or that the state pay out of its catastrophic reserve fund) should be delivered in separate settings or in regular classrooms is an entirely separate matter, and not a subject of this report.

placement of mildly disabled children in the more appropriate and less costly setting of regular classrooms.⁶

This report anticipates that, as part of a modified census-based special education finance system, the Department of Education will recommend an increase in the block grant for Wyoming school districts to support a regular education "pre-referral intervention" program. Such a program would be designed by school districts to remediate, where possible, learning difficulties prior to children being referred for special education. If intervention comes early in a child's school life, this program has the potential to reduce, over time, the number of children identified for special education.

This report also anticipates that the Department of Education's proposal will include an increase in the block grant for Wyoming school districts to support the assessment and evaluation of all children (mildly, moderately and severely disabled) who are referred for special education, whether or not their disabilities lend themselves to lower cost accommodations in regular classrooms.

To support the accommodation of 2/3 or more of the children presently identified as needing special education (i.e., the 2/3 or more whose disabilities are lower in cost), this report assumes that the Department of Education's eventual proposal will include an increase in the block grant for Wyoming school districts to provide additional resource specialist teachers to assist in the process of accommodating particular disabilities. These special education resource teachers would be in addition to the regular education resource teacher already funded in the regular education elementary block grant.

As noted, policies like those described in this report, incorporating the estimates and assumptions described below, would result in an increase in the block grant for a prototypical elementary school of \$81,719, or \$284 dollars per pupil (i.e., per each of the 288 total pupils in a prototypical elementary school). Because this report is intended only to begin a discussion with illustrative material, it does not attempt to illustrate how the prototype models for middle or high schools might be modified if a modified census-based special education block grant were added. These illustrated prototypical elementary school amounts are intended to substitute for part of the \$152,514 (or \$530 per pupil) which a prototypical elementary school presently spends for special education (the balance being made up of the state's presumed 85 percent share of providing accommodations for high-cost disabilities and its catastrophic reserve fund).

The illustration in this report of a modified census-based special education block grant does not include funds for district special education administration, because all

⁶ In this report, we define a region consisting of Wyoming and the 6 adjacent states: Colorado, Idaho, Montana, Nebraska, South Dakota, and Utah.

administrative costs, including special education administrative costs, were already funded in the basic block grant proposed in May 1997.⁷

This report describes a "modified" census-based special education program, "modified" because MAP did not, in May 1997, recommend that services for high-cost disabled children be funded exclusively from the block grant to districts. High cost (often seriously) disabled children are those who cannot be accommodated without specific additional resources provided (like attendant aides, for example). As noted, we assume, for purposes of this report, that the state will reimburse 85 percent of the cost of accommodating these children, and, if this causes unavoidable hardship, a greater than 85 percent share (to be paid out of the catastrophic reserve fund). While we do not necessarily anticipate this occurring, it is conceivable that cases could also arise where an unusual incidence of low-cost disabilities would be a basis for funding additional resources from the state's reserve fund.

When a fully specified modified census-based special education finance system is developed and implemented, there will be many borderline decisions about whether a particular child should receive services provided by a school district out of its block grant or whether the child should receive services for which the State partially reimburses the district. These borderline decisions will become more difficult if the State does not have very clear guidelines about which costs should be included in calculations to determine whether the total cost of accommodating a particular child's disability is equal to at least 3 times (or 4 times) the basic regular education per pupil block grant. Because the State will have to monitor these decisions, it may be advisable for the State to increase its capacity for special education administration at the state level. This increased capacity could include both accounting personnel, and specialists to advise district personnel in the conduct of conferences to design individualized education programs (IEPs). This report does not examine further specifically whether, or how, this capacity should be increased.

This report illustrates how the \$152,514 currently (i.e., 1995-96) allocated to a prototypical elementary school for elementary education might be reallocated under a modified census-based special education finance system. The illustration of this report is designed to show that, with such a re-allocation, the existing \$152,514 can reasonably purchase resources adequate to deliver the best education to Wyoming's children with disabilities. Indeed, when the resources purchased with the regular education and the special education block grants are blended, it is possible that Wyoming will find that the resources presently provided exceed those needed to provide the best education,

⁷ Because the delivery of special education services will change in Wyoming if the recommendations of this report are implemented, more or fewer special education administrative services may be required in the future. The report does not attempt to guess at whether this will be the case. The main MAP report (May, 1997) recommended that the State of Wyoming periodically review the modeled resources for all aspects of its education program in the future. Whether the special education central administrative ratio remains appropriate will, of course, be one of the issues subject to such review.

especially if aggressive early intervention reduces the number of children whose learning disabilities are permitted to grow into disabilities ever more expensive to remediate or accommodate.

Background

In May, 1997, Management Analysis and Planning, Inc. (MAP) submitted "A Proposed Cost-Based Block Grant Model for Wyoming School Finance" to the Joint Appropriations Committee of the Wyoming Legislature. This proposal has been substantially enacted by the Wyoming State Legislature and signed into law by the Governor.

The "Cost-Based Block Grant Model" was built utilizing "prototypical models" of an elementary, middle and high school. All personnel and non-personnel resources in these models were specified and priced and, after overhead expenditures were added, the total cost of these resources became the basis for proposed per-pupil block grants to each school district in the state.⁸

The Model does not require districts to purchase either the quantity or quality of resources specified in the prototypes. MAP's report stated that the specified resources would be adequate to deliver the basket of education goods and services required by the legislature and the Wyoming Supreme Court. However, MAP did not claim that this particular arrangement of resources was the only arrangement that could deliver this basket. Districts are free to take their block grants and spend these funds differently from the patterns in the prototypical models, if they believe that a different strategy would be equally or more effective in delivering the basket.

For example, while the model specifies that the basket could be delivered in 1995-96 by first grade teachers whose compensation cost, on average, \$41,433,⁹ with a first grade class size of 15 pupils, a district could take its block grant funds and hire first grade teachers at an average compensation cost of \$44,195 with a first grade class size of 16. In each case, the total salary cost of this classroom would be \$2,762 per pupil.

As part of this May 1997 proposal, MAP recommended that the State of Wyoming eventually move towards the adoption of a modified "census-based" funding mechanism for special education. Under such a system, all Wyoming districts would be given an identical block grant per enrolled pupil for the purposes of providing special education services to children with disabilities that can be remediated or accommodated at low or moderate cost (most often, but not necessarily, these are disabilities that are

⁸ In some cases, a district's block grant could be more or less than the grant generated by the prototypical model, either because the district is located in a community where resources are higher- or lower-priced than is typical, or because the district has an atypical seniority distribution of teachers, or because the district has unusually heavy concentrations of students in poverty or with limited English proficiency. These adjustments, however, are not material to the subject of this report.

⁹ \$41,433 = Salary of \$31,758 + Salary-driven benefits of \$6,034 + Health and Welfare benefits of \$3,641.

considered mild or moderate in severity). This per pupil block grant, the allocation of which would be based on total pupil enrollment, would not vary based on the number of pupils identified by a district as needing special education. For higher-cost disabilities, MAP recommended that the State of Wyoming either reimburse the full cost (100 percent) of special education for children with severe or high-cost disabilities (defined in the May 1997 report as those whose accommodation cost more than 4 times the regular education foundation amount), or, in the alternative, the State institute an appeals procedure for districts where the incidence of special needs is demonstrably greater than that anticipated by the census funding formula.¹⁰ MAP recommended that these changes be implemented after the state had developed and implemented procedures that allow tracking special education costs in Wyoming to each handicapping condition.¹¹ (The gathering of these data is especially important because there are no reliable national data on the costs of accommodating each of the distinctly defined disabilities.¹²)

Because the transition will be complex from a reimbursement system in which 85 percent of all special education costs are borne by the state, to a census-based funding system for lower-cost disabilities (combined with a reimbursement/appeal system for higher-cost disabilities), MAP recommended that a longer transition be anticipated for the special education aspect of the Cost-Based Block Grant Model for Wyoming School Finance. For the first year or two of the Block Grant's implementation, it was assumed that the existing system of special education funding would continue. This was later revised to an interim system whereby the State reimbursed 100 percent of special education costs. MAP committed to assisting the Wyoming State Department of Education in developing a plan for this modified census-based system.

This report provides further background regarding the problems involved in funding special education costs, and illustrates these problems as a way of providing guidance to the Department of Education in solving them. Thus, this report is only a first step to assist the development of the Department of Education's more detailed plan for a modified (because it applies only to lower-cost disabilities) census-based system of special education finance for Wyoming.

¹⁰ In this report, we do not confirm the earlier recommendation of full cost reimbursement for high cost disabilities. Upon further consideration, we have concluded that a full cost reimbursement would inevitably lead to intrusive state monitoring of district decisions to claim full reimbursement, with a resultant loss of local district autonomy and control that are an important part of the block grant philosophy. Instead, this report recommends a 15-85 split in the responsibility for accommodating higher-cost disabilities. Such a split may provide a sufficient district fiscal incentive to control costs so that intrusive state monitoring will not be necessary. Of course, any time a direct state expenditure is obligated, even if only for 85 percent of the cost, some state administrative oversight will be required. This report's recommendation of a catastrophic reserve fund reflects the earlier recommendation of an "appeals procedure."

¹¹ Guthrie, et.al., p. 53.

¹² Chambers et. al. (1998). The most recent national data on these costs comes from a 1988 report (Moore, et. al.), utilizing data from earlier in that decade. While these data may still be valid, and continue to be cited in the special education research literature, we cannot make the presumption that they remain valid.

The transition was made more complex by the fact that, with the implementation of the Wyoming school finance reform in 1998, districts no longer had local revenues from which their 15 percent share of special education costs can be paid, so a precise continuation of the present system, while the new system was being developed, was not deemed possible. Therefore, at the present time, while the development of the new modified census-based system is being awaited, districts receive from the state 100 percent of their special education expenditures -- i.e., the state now reimburses not only the 85 percent of all special education costs of Wyoming school districts, as in the prior system, but the 15 percent of costs previously considered the district share. The state has implemented some provisions to lag these payments, as a way of discouraging temporary over-identification and over-service, but the current system inevitably includes what may appear to be fiscal incentives for over-identification and over-service, because the cost of accommodating students identified for special education, during this interim period, is entirely a state responsibility.

Upon further reflection, and following research into more recent developments in other states, this report amends MAP's earlier recommendations in that we now believe that longer than a one- or two-year transition period may be necessary to implement a modified census-based special education finance system. Other states that have adopted such systems have planned for transitions as long as 5 years, although Wyoming, with its relatively small population and relatively simple existing system, should not require so long. Something between the initial one- or two-year recommendation, and the 5 years found in some other states, is probably most reasonable. Another alternative is to implement a modified census-based special education finance system immediately, even if data relied upon cannot be assumed to be accurate, while anticipating a review that may lead to retroactive adjustments, perhaps after the first 3 years. A variant of this alternative is to implement a modified census-based system immediately, but retroactively hold districts harmless for good faith errors made in the implementation of these new procedures.

Definitions

In the following pages, we utilize several terms which may be unfamiliar to those not conversant with special education practice or finance. While the meaning of these terms may be apparent in context, we provide definitions here in an attempt to clarify the discussion. The definitions that follow describe how terms are used in this report. This use may differ from how these or similar terms have been used by other special education researchers or practitioners.

Census-Based Special Education Finance System: A census-based special education finance system (also sometimes called a "population based" system) is one where districts receive funds for special education as part of their per-pupil block grants. The grant does not vary based on the number of pupils identified as needing special education services, it being assumed that the block grant is sufficient to provide whatever special education services would normally be needed if an expected number of children are identified. If the number of children identified exceeds the expected number, a census-based system anticipates that appropriate services will be provided out of a district's regular funds. However, the federal government has recently adopted (and at least one state, New York, is considering) a census-based system where the block grant varies, not by the number of identified disabled children, but by the number of children in poverty, because of a finding that disabilities are more strongly associated with poverty and its related conditions (low-birthweight babies, drug and alcohol exposure, etc.).

Modified Census-Based Special Education Finance System: A "Modified Census-Based Finance System," as used in this report, refers to one in which districts receive funds for the appropriate accommodation of some disabilities (usually the lowest cost and/or highest incidence disabilities) as part of their per-pupil block grants, but receive only part of the funds for the appropriate accommodation of higher cost and lower incidence disabilities in the block grant and are, in addition, entitled to partial reimbursement from the state for the costs of appropriate accommodations in these cases. Another modification described in this report is the provision of state subsidies to districts whose identification of special education eligible children, or whose determination of needed services, substantially exceeds that anticipated in the census grant, for reasons beyond the district's control.

Pre-referral intervention: Pre-referral intervention is a policy by which a school's instructional leadership takes an aggressive and pro-active approach to the earliest possible identification of children likely to have difficulty in learning, and designs direct instructional programs, based on the specific needs and learning styles of these pupils, to prevent such difficulties from expanding and, if possible, to eliminate them.

The line between learning difficulty (slow learning) and learning disability can sometimes be difficult to establish. As a recent summary of special education policies by

the Center for the Future of Children concludes, "[a]lthough the existence of learning disabilities is beyond dispute, the process of identifying students with these disabilities is fraught with complications. Definitions of the disorder are vague and broad..."¹³ Therefore, a successful pre-referral intervention system holds the promise of reducing the number of children later found to be in need of special education services.¹⁴

Although all 50 states have some pre-referral intervention programs in place, in not all are these programs active in each district.¹⁵ By 1989, 23 states had *required* school districts to attempt pre-referral intervention before a formal special education evaluation, and 11 other states recommended this practice. Pre-referral interventions can include a range of diverse options from more direct instruction or behavior modification programs, to simply altering seating arrangements.¹⁶

Remediation: Strictly speaking, "remediation" is mostly irrelevant to a discussion of special education, because if a learning deficit can be remediated, it probably (in most cases) should not have been considered a disability in the first place. Not all learning *difficulties* are attributable to a learning *disability*. However, because it is impossible to define a clear line between children who are slow learners and children who are learning-disabled, children in the former category may be classified as requiring special education services to remediate their learning difficulties, and remedial instruction may be successful in these cases.

¹³ Terman, et. al. (1996). However, some experts contend that "learning disability" is an entirely false concept and that children typically considered to be learning disabled in fact only exhibit learning styles which differ from those of most other children. Gerald Coles, for example, a leading proponent of the view that "learning disability" is not properly understood as a disability, states,

a very small portion of the children identified as learning disabled do have some degree of neurological dysfunction that may interfere with learning and academic achievement. Research shows, however, that the actual extent of the problem is quite small compared to the millions of children who have been diagnosed as learning disabled... Most of the differences in brain activity found between normal and disabled learners are just that -- differences. They are not neurological abnormalities; they are simply biological distinctions that might be found between any two groups of people with different abilities (Coles 1987, p. xvii-xviii).

In a recent article in the education journal, Phi Delta Kappan, Spear-Swerling and Sternberg state: [c]urrent educational guidelines for identifying children with LDs, with an ability/achievement discrepancy at their core, not only lack scientific validity but also are poor education policy. All low achievers, not just those who meet some arbitrary and illogical discrepancy cutoff, need educational help. The precise nature of this help may certainly need to differ depending on the individual child, but the essential point for policy makers is that there is no scientific basis for singling out only one group of low achievers for educational services. Thus we would like to see low achievers identified for educational services based on low achievement rather than on an ability/achievement discrepancy (Spear-Swerling and Sternberg 1998, p. 400-401).

We do not take a position on this debate, as it is practically unnecessary, in the block-grant model, for the State of Wyoming to define whether its funds are being used for "remediation," "individualization" of instruction, or "accommodation."

¹⁴ There is some preliminary evidence that such programs have actually been successful (Parrish and Chambers, 1996, p. 131.) See, in particular, the discussions below of special education reform in Pennsylvania and in Vermont.

¹⁵ Parrish, et. al. (1997), Table 1-9.

¹⁶ Hocutt (1996), pp. 92-93.

Accommodation: When special services or pedagogies are provided to enable a child with disabilities to achieve his or her potential, the child's learning disability can be said to be "accommodated." For example, a child whose disability prevents him or her from learning to read in a typical way (with a mixture of phonetic and whole language approaches) may require intensive instruction in phoneme awareness to accommodate this disability. As in the case of remediation, there is no clear line to distinguish the accommodation appropriate for children with disabilities and the direct instructional approaches appropriate for all children with their range of learning styles.

Mild disability: There is no scientific basis for distinguishing "mild" from more "severe" disabilities, the distinction being a matter of judgment. Usually, though not always, "mild" disabilities are considered those that can be accommodated at low cost; i.e., where the primary accommodation (or remediation) can be in a regular classroom that has few enough pupils to permit properly trained regular classroom teachers to provide direct instruction to each pupil, with some support from resource teachers funded out of a regular or special education block grant. Most often, "mild disability" refers to mild *learning* disability, although it also applies to mild behavioral disorder or physical incapacity. Examples of mild disabilities include learning disabilities like processing deficit, perceptual deficit, or dyslexia; mild physical disabilities like asthma, cerebral palsy, cardiac problems, burns;¹⁷ mild hearing and visual impairments; mild language and speech disorders; mild autism like obsessive behavior or peculiar motoric mannerisms.

Moderate disability: A moderate disability is one which can usually be accommodated in a regular classroom with few enough pupils to permit properly trained regular classroom teachers to provide direct instruction to each pupil, with additional support from regular school resource teachers and from trained special education specialists. Examples of moderate disabilities are more severe cases of the mild disabilities identified above.

Severe disability: A severe disability is usually (but not always) one whose accommodation is costly; i.e., where the primary accommodation can usually not be provided primarily with the resources typically available in a regular classroom, although some mainstreaming of severely disabled children may be possible. It is often the case that severe disabilities require resources for their accommodation beyond the regular classroom teacher with limited support from resource teachers or specialists. (In some cases, districts may mainstream such children for all or most of the school day, by providing an aide or professional to assist the regular teacher in the classroom.) Severe disabilities may also be those whose accommodation is expensive because they require placements not only outside the regular classroom but in special schools or other institutions. Because of the expense usually involved, a greater incidence of severe

¹⁷ We consider these "mild" only in the sense that they do not significantly interfere with inclusion in regular classes except for the need for adaptive physical education.

disabilities in a school district may, if the district were required to accommodate these disabilities entirely out of its block grant funds, necessitate the encroachment by special education upon regular education program funds. Examples of severe disabilities include severe specific learning disabilities like pervasive developmental delays; severe autism reflected by gross deficits in language development or pervasive lack of responsiveness to other individuals; mild or moderate mental retardation where learning is typically at a rate less than 3/4 that of peers; severe (profound) mental retardation; deafness and blindness; or multihandicapped conditions.

Inclusion: Inclusion is the practice of accommodating (or remediating) disabled children in a regular classroom setting. When children with lower cost (usually mild) disabilities are included in a regular classroom, the primary deliverer of accommodation services can be a properly trained regular classroom teacher with additional support, as needed, from school resource teachers. Laypeople often assume that inclusion can harm regular students, because the pace of instruction may be slowed by the need to accommodate disabled children. However, the additional skills of appropriately trained teachers in inclusive classrooms may benefit regular children as well, and there are also academic benefits that accrue to regular children when they must learn skills more intensively so that they can coach their disabled peers.¹⁸ Federal law requires that disabled children be educated in the "least restrictive environment," a requirement consistent with inclusion where practical; however, nationwide enforcement of this requirement has not always been as vigorous as it has recently become.

Mainstreaming: Mainstreaming is the practice of having children with severe disabilities participate in the regular education program or in a regular education classroom for appropriate portions of the school day. Mainstreaming can be appropriate either because there are some curriculum subjects in which severely disabled children can participate in the regular classroom, or because the experience of participation by a severely disabled child in a regular classroom is deemed helpful for the social development both of the disabled child and of non-disabled children and this participation does not detract from the regular classroom program.

A modified census based special education finance system, a pre-referral intervention system, and a policy of inclusion (in regular classes) for children with lower cost (usually mild or moderate) disabilities are each separate and distinct policies. It is possible for any one of these policies to be implemented without the other two. However, each of these policies reinforces the others, and is most powerful when implemented in concert with the others. These policies are also more likely to succeed in

¹⁸ "In one study, where additional resources allowed the inclusive classroom to maintain a teacher-student ratio of 1 to 14, nondisabled students in the inclusive classroom showed greater academic gains than their peers in regular, noninclusive classes" (Terman, et. al., 1996, p. 17.; Hocutt, 1996, p. 91). This study did not investigate other teacher-student ratios, so it is possible that lower teacher-student ratios (i.e., more students per teacher) would generate similar benefits, although we have no basis for judging, from this study alone, at what point the benefits would diminish.

districts that maintain relatively small regular class sizes -- for example, class sizes not significantly greater than those modeled for Wyoming in the prototypical models of the principal MAP report.

This report anticipates that Wyoming will adopt a modified census based funding system together with the recommended regular class sizes of the elementary school prototypical model. An expected effect of this combination of policies will likely be to facilitate the adoption and intensification of pre-referral intervention programs and the practice of accommodating children with lower-cost disabilities in regular classrooms. However, adoption of the modified census based special education finance system by the State does not necessarily require districts to implement the other two policies. While implementation of a modified census-based special education finance system requires only bookkeeping changes, the coordinated implementation of pre-referral intervention and regular classroom accommodation for children with lower cost disabilities requires extensive professional development for teachers and administrators. It is this requirement for extensive professional development that makes advisable the gradual implementation of these policies, if pre-referral intervention, regular class accommodation where appropriate, and census-based funding are to proceed as a unified policy approach.

If policies like these are implemented in a coordinated fashion, and with the necessary accompanying professional development, Wyoming can expect to see a growing number of its disabled children educated by regular classroom teachers without significant additional resources (beyond those provided in the small classes with additional resources in the basic model and the prototypical special education resources modeled in this report), and can expect to see fewer children identified for special education as well. As a highly regarded report by the Center for the Future of Children recently reported,

[A] larger proportion of students can be served in regular education if increased resources are provided, substantial changes are made in typical instructional practices, and local school districts are committed to greater inclusion... [C]lassroom teachers are the primary source of referrals to special education, and the decision to refer may be largely shaped by factors such as class size, increasing pressure to raise classroom test scores, teacher tolerance for diversity in ability or learning styles, and teacher tolerance for impulsive or inattentive behavior.¹⁹

This report does not investigate whether the Department of Education should propose that Wyoming's modified census-based special education finance system should vary the portion of a district's block grant attributable to special education based on the percentage of children in poverty in that district. Wyoming has relatively few children in poverty (13 percent in 1994, the fourth lowest percentage in the nation²⁰) and therefore

¹⁹ Terman, et. al. (1996), p. 16

²⁰ Annie E. Casey Foundation (1997), p. 135.

any such adjustment would be relatively minor for almost all districts. However, whether any adjustment is appropriate should be investigated further.²¹

This report also does not include an analysis of special education transportation costs, to the extent some of these costs might appropriately be included in a modified census-based block grant. This issue requires further investigation.

This report is considered only a first step to assist the Department of Education in the development of recommendations for such a system. As such, it focuses, for illustrative purposes, on elementary schools only, and for purposes of illustration, describes a set of specific additional resources that might be incorporated into the elementary school prototype for special education, and resulting increases in the per pupil block grant for elementary schools. In particular, it is in elementary schools, and even more particularly in the lower grades, that a pre-referral intervention system is most likely to have beneficial effects. If Wyoming adopts these policies, and begins to implement a modified census-based finance system along with them, it will later be necessary to specifically address changes in the prototypes for middle and high schools that are appropriate for block grants at those levels that include special education funding.

²¹ The MAP Block Grant model proposes additional resources for districts where educationally disadvantaged youth are present at a rate more than 150 percent of the state average (i.e., if the state average is 13 percent, then 150 percent of that rate would be about 20 percent of enrollment from families in poverty). Because additional special education resources for reasons of student poverty, and additional regular compensatory resources for reasons of student poverty would have some common purposes, this investigation should take account of the additional resources for Educationally Disadvantaged Youth (EDY) as well as the regular resources modeled in the prototypes.

The National Context for Census-Based Special Education Finance

Interest in census-based funding mechanisms has been growing nationwide, and several states (including Alabama, California, Massachusetts, Montana, North Dakota, Pennsylvania, and Vermont) have adopted census-based systems in some form for distributing special education funds to school districts. In addition, New York State is currently considering such a system.²² The Federal Government's reauthorized I.D.E.A. (Individuals With Disabilities Education Act) provides a transition period to a system in which federal special education dollars will be distributed to states on a census basis (i.e., with each state receiving federal special education aid in proportion to its total enrollment of all pupils), with variations in state entitlements based only on the intensity of poverty in the state, not on the number of identified special education pupils.²³ Previously, federal special education aid to a state was based on the number of identified special education students in that state (up to a maximum of 12 percent of total enrollment). One effect of the new federal formula will be to encourage states to adopt census-based special education funding systems of their own because the prior formula was a disincentive to do so. If the federal formula had not been converted to a census-based one, states could lose federal funds if they adopted a census-based system that results in a reduction of the identified special education population because more potentially learning-disabled children have their deficits addressed exclusively in regular education settings.

Alabama: Alabama initially adopted a census-based special education finance system in 1972. However, in 1993 the Alabama Supreme Court found that the state's census-based system was "irrational and arbitrary" and violated the equal protection clause of the state's constitution: Because special education aid was distributed without regard to a district's need, children with disabilities who resided in a district with a relatively high number of such children would have a lower entitlement to state special education aid than would children with disabilities who resided in districts with relatively few such children. However, the Court also noted that the State Board of Education was moving toward an alternative system, in which districts would be given state aid in proportion to the cost of actual placements (districts get more state aid for students in more restrictive settings than for included students), and this system, the Court stated,

²² In Illinois, a 1994 state finance reform committee recommended transition to a census-based system, but the proposal failed to gain majority support in the legislature, and the proposal has been dropped (Kaleba and Parrish, 1998).

²³ The 1997 Amendments to the I.D.E.A. provide that, following a seven year transition period (to 2005), 85 percent of federal special education funds will be distributed to states in proportion to their total enrollment, and 15 percent in proportion to their percentage of children in poverty (Verstegen, et. al., Winter 1997-98).

was also inadequate because it contained the opposite incentive, to place children in more restrictive (and more highly reimbursed) settings, not in the least restrictive environment.²⁴ Therefore, the decision gave no guidance about how the defects the Court found in the census-based system might be remedied.

As we explain below, we believe that the system the Department of Education will develop for Wyoming can be immune from the deficiencies the Alabama Supreme Court found in that state's plan, because a modified census-based special education funding formula in Wyoming will, we expect, be inextricably bound with recommendations for class sizes, resources, and professional development that are adequate fully to accommodate the special needs intended to be funded by the census-based block grant.

California: Inspired, in part, by the success of some of its districts in reducing special education placements while, at the same time, improving outcomes for learning disabled and slow-learning students,²⁵ California adopted a census-based special education funding system in 1997, to begin in the 1998-99 school year. Therefore, no evaluation of the system is yet possible. The California proposal is a modified census-based system, in that special education grants to districts will vary based on the actual incidence of high cost disabilities, but will not vary based on the actual incidence of lower cost disabilities. The precise method for implementing this formula has not yet been determined, and the state has commissioned a study to be conducted by the American Institutes for Research on the actual variation of severe or high cost disabilities across districts in the state.²⁶

Pennsylvania: Pennsylvania's special education reform of 1990 created a census-based system for special education funding for all types of disabilities. Based on estimated percentages of disability (and gifted) incidence, each district was given (for 1996-97) an annual per pupil special education allotment of \$299. This allotment assumes that 15 percent of the student population is normally expected to be mildly disabled and gifted, at an additional cost of \$1,115 for each such student, and one percent is normally expected to be severely disabled, at an additional cost of \$13,125 for each such student.²⁷

The Pennsylvania reform also provided additional funds (\$30,000) for each district to hire an Instructional Support Team (IST) leader, a teacher whose responsibility is to lead the regular school staff to design early interventions to prevent children who fall behind from becoming in need of more expensive special education services. Although parents can still, on their own initiative, request evaluation of their children for

²⁴ Harper v. Hunt, 1993. Described in Parrish (1996), Verstegen (1998a) and Verstegen (1998b).

²⁵ Management Analysis and Planning, Inc. (MAP) is presently engaged in an analysis of one such district, Elk Grove.

²⁶ Verstegen, et. al. (Winter 1997-98); Kaleba and Parrish (1998).

²⁷ Montgomery and DeSera (1996). The reform was implemented gradually with initial census-based grants of \$159 (for 17 percent at \$525 and one percent at \$7000) in 1990-91. Feir (1995). In 1993-94, the census based grant was \$274, (for 15 percent at \$1,025 and one percent at \$12,000). Hartman (1995)

special education services, the 1990 reform provides that no teacher or school administrator can make a referral for special education without a prior evaluation and, where appropriate, attempted remedial intervention by an IST. The IST process must be completed in 60 days, during which a specific instructional plan is developed and the IST teacher provides ongoing support to the regular classroom teacher in the implementation of this plan. During the final 10 days of this 60-day process, the IST must evaluate whether the plan has been successful and whether the regular teacher is likely to be able to continue the appropriate instructional approaches without ongoing support from the IST teacher. If not, the child is then referred for a formal special education evaluation and probable placement.²⁸

In addition, the reform included funds for a state-run two-year training program in which all school staff were to participate. The additional \$30,000 in funds for the IST teacher was intended to be renewed each year for the first five years of the reform, with an expectation that a reduced number of special education identifications would eventually pay for the IST teacher and schools could then continue to employ these teachers out of saved special education funds.²⁹

By the fourth year of this new program, only about 15 percent of students for whom the IST took responsibility were later referred for special education evaluation. Total special education placements declined by 12.5 percent, and placements of students with mild learning problems declined by 25 percent. In addition, because the reform was implemented gradually, it was possible to compare the results in schools with and without ISTs. Schools with ISTs had one percent fewer retentions than traditional schools. While not specifically a special education outcome, these reduced retentions, presumably from the instructional interventions of the ISTs, resulted in substantial financial savings to Pennsylvania schools.³⁰

Massachusetts: Massachusetts adopted a census-based special education funding system in 1993 but, unlike Pennsylvania, it does not seem to have helped the state to rein in special education costs and placements, the highest in the nation.³¹ It is apparent that fiscal incentives alone are not sufficient, and rigorous implementation of pre-referral intervention as well as systematic professional development for all teachers, like that which has been part of the Pennsylvania reform, may be essential ingredients of a successful plan. While Massachusetts has a pre-referral system, it is too easy, according to one analysis, for parents "to by-pass the prereferral process and make direct special education referrals for their child. In addition, the current eligibility standard also allows parents to request an evaluation based on minimal evidence that the child needs special education services."³²

²⁸ Hartman and Fay (1996); Feir (1998).

²⁹ Fruchter, Parrish and Berne (1998).

³⁰ Hartman and Fay (1996).

³¹ Verstegen, et. al. (Winter 1997-98). In 1993-94, 17 percent of the enrolled student population in Massachusetts was enrolled in special education; Parrish, et. al. (1997) and NCES (1998), Table 40.

³² Chambers, et. al. (1996), p. 28.

In Massachusetts, the state initiated its program to include disabled children in regular classrooms, eventually leading to a census-based finance system, with a 5-year competitive grants program in 1990. Seven representative school districts were initially awarded grants of from \$25,000 to \$125,000 to initiate the program; *most of these initial funds were used for staff development.*³³

At the present time, Massachusetts' special education finance system is being reconsidered once again. We believe that, if Wyoming adopts the recommendations of this report, with an emphasis on a careful transition period, extensive professional development and pre-referral intervention in combination with modified census-based funding, Wyoming can avoid the problems being faced in Massachusetts.

New York: In New York State, in December 1997 the Board of Regents initially proposed a census-based special education finance system. Like the new federal I.D.E.A., the Regents also proposed to adjust census-based funding based on district poverty, with high poverty districts receiving a greater allotment. (Like the federal law, the Regents proposed to distribute 15 percent of the state's special education funds on the basis of district poverty, and 85 percent on the basis of district enrollment.) The Regents initially proposed a seven-year transition period, ending in 2005 when all special education funding is to be census-based. The Governor, however, has recommended a shorter transition period in his 1998 budget. The Regents also proposed doubling the state's aid to school districts for regular education prevention and support services, in an effort to remediate learning difficulties before they are considered for special education eligibility. And the Regents also proposed that the State Department of Education implement training for both special and regular education personnel to enable them to accommodate as many children as possible in regular education classrooms.³⁴

Vermont: Vermont's adoption of a census-based funding mechanism in 1990 was also accompanied by adoption of a pre-referral intervention program, with instructional support teams in every school.³⁵ The census-based funding formula is calculated on a resource cost principle, much as this report illustrates for Wyoming (see below).³⁶ Vermont grants school districts 60 percent of the average salary for 3.5 resource specialist FTEs per 1,000 enrolled students; for 1.75 speech and language pathologist FTEs per 1,000 enrolled students; and for 1 administrator FTE per 1,500 enrolled students. Districts that demonstrate unusually high incidence of children with disabilities can receive additional funds. For children with high cost disabilities, the state also reimburses 90 percent of spending in excess of 3 times the state's foundation grant for regular elementary education. In addition, the state provides additional funds to districts for special education costs, based on districts' ability to pay.³⁷

³³ Rossman (1992), p. 224-5.

³⁴ Kaleba and Parrish (1998); Fruchter, Parrish and Berne (1998); Versteegen, et. al. (Winter 1997-98)

³⁵ Parrish (1994).

³⁶ The "resource cost model" approach for establishing the level of necessary resources for special education was first used by Chambers and Parrish (1994).

³⁷ O'Reilly (1993), p. 69.

Today, however, Vermont's system can no longer be considered census-based, in one very important respect. In addition to the block grant to all districts to cover some costs of special education, most districts (high wealth districts excepted) receive additional state funds for each disabled child identified as eligible for special education, even if the identifications are of children with lower-cost disabilities. As a result, the Vermont system now includes a fiscal incentive for districts to identify children as needing special education services. (The existence of this fiscal incentive does not mean that Vermont districts in fact over-identify children as eligible for special education services.)

Vermont's program to move the state towards accommodation of as many disabled children as appropriate in regular classes included as a major component the funding of additional staff development for teachers and administrators.³⁸

In 1993, a state evaluation of the first three years of the census-based funding system (combined with the instructional support teams) found that the number of students classified as requiring special education had declined by 17 percent. Most students who were removed from IEPs had mild learning disabilities, and their academic performance was at least as good, if not better, than under the pre-census system. One of Vermont's strengths, making the success of the census-based system more likely, was the fact that even prior to the adoption of the census-based formula, Vermont placed more of its special education children in regular classrooms (83 percent) than any other state.³⁹ Vermont also has the lowest pupil-teacher ratios in the nation. Illustrative of the success of the pre-referral intervention program, for every student classified as eligible for special education in Vermont in 1994, there were more than 2 students who were not eligible for special education but were nonetheless receiving some form of support from instructional staff funded by the census-based special education block grant.⁴⁰

In the last few years, the number of children identified for special education in Vermont has again begun to rise. One Vermont authority concludes that this may result from recent fiscal stress, where districts faced with borderline classification choices have increasingly moved towards choices of more severe classifications, eligible for state reimbursement outside the census-based allocation. There is considerable concern among Vermont education officials that accounting practices may be insufficiently standardized or monitored, resulting in some district claims that a special education accommodation costs more than three times the foundation grant, when a review of this accounting may come to a different conclusion. These developments and problems, however, have not yet been fully analyzed. They do seem to suggest the ongoing importance of professional training, pre-referral intervention, and state monitoring if a census-based block grant system is to work as intended.⁴¹

³⁸ Rossman (1992), p. 224-5.

³⁹ Parrish and Montgomery (1995), p. 20.

⁴⁰ Parrish and Montgomery (1995), p. 21.

⁴¹ This paragraph is based on a discussion between the author and Professor William J. Mathis of the University of Vermont, May 11, 1998.

Preparing for the Difficulties of Transition

Notwithstanding the Alabama Court decision, other states have continued to implement census-based plans, and additional states are likely considering such plans at the present time. While the arguments in favor of census-based special education funding are persuasive to those concerned with the incentives in other financing systems to over-identify and over-serve children with disabilities, the transition to a census plan is complex. In each state where such a system has been adopted, a multi-year transition plan has been part of it (or part of the associated plans for more intensive staff development and pre-referral intervention). Likewise, the success of the plan MAP anticipates the Department of Education will develop for Wyoming will depend upon thorough education and training of the state's school teachers and administrators, as well as upon the development of a more sophisticated special education monitoring, data collection, and administrative organization at the state level. (As noted above, MAP originally recommended that the implementation of the modified census-based plan in Wyoming be deferred until such an organization was functioning at the state level.) Wyoming has some advantages over other states that will likely make the implementation of such a system less onerous. These mostly consist of the unusual rationality and simplicity of the block grant school finance system that the state has already adopted and the funding of adequate resources for regular education as part of that system. The state's prior special education practices seem to have avoided extremes of over-identification and runaway costs that have characterized some states' special education systems (although, as will be seen below, based on comparative regional data, there seems to be real room for improvement, especially in the placement of mildly disabled children in regular classrooms).

While these considerations suggest a cautious and deliberate approach to implementing a modified census-based system, there is one danger to lack of speed. As is described in greater detail below, the single factor contributing most to the likely success of a modified census-based system in Wyoming is the rich resources provided to regular education in the prototypical school models underlying the Cost-Based Block Grant Model. Small class sizes, particularly at the elementary level, additional school-wide resource teachers, and funds for professional development can, if used appropriately, reduce the number of children requiring additional special education services because many lower cost disabilities can, with such resources, either be remediated or accommodated in the regular classroom with few additional resources. To the extent Wyoming educators do this, fewer additional special education funds will be required, on top of the adequate regular education resources now funded in recent legislation. Thus, by anticipating that, during the transition, Wyoming districts will continue to receive prior levels of special education aid in addition to the rich resource package of the Cost-Based Block Grant Model for regular education, the Cost-Based Block Grant Model actually prescribes more resources than may be required to deliver the basket of

educational goods and services. As the modified census-based system is implemented, it may be the case that fewer supplementary special education resources are required than were previously provided by the State to Wyoming districts under the 85 percent reimbursement formula, while services to children with disabilities improve.

The danger here is that school districts may come to feel entitled to this surplus of resources, and will resist reductions of special education aid that will be called for as more disabilities are successfully handled with the resources already provided for regular education. The danger will be especially great in those districts that utilize their discretion to spend block grant resources for somewhat larger class sizes combined with somewhat higher salaries than called for by the prototypes. For these districts, the later necessity of reducing class sizes in order to accommodate children with disabilities out of their census-based block grants may also put pressure on these districts to retract salary increases in excess of those modeled. The fact that it may have been imprudent to grant the excess salaries in the first place will not make it politically or administratively easier to explain why it is now necessary to retract them.

There is no easy solution to this problem. Ideally, the cost-based block grant funding for regular education should have been implemented as gradually as the modified census-based special education funding mechanism. Then, as the modified census-based special education system was implemented, the resources provided to regular education could have increased at precisely the rate that the resources provided for designated special education decreased, as children with disabilities were increasingly integrated into regular programs and their disabilities remediated pre-referral. However, it is not practical to expect such precise correspondence in a period of transition. The transition cannot succeed if the state errs in the direction of providing fewer total resources than are necessary. The only alternative, therefore, is as is currently planned, for the state to provide to districts under the Cost-Based Block Grant Model the full resources specified for regular education, while implementing the modified census-based special education funding system as rapidly as possible.

The present interim system in which the State reimburses 100 percent of special education costs, was unavoidable because the new regular education funding is, in effect, entirely distributed as a block grant to districts, and districts no longer can supplement the amount of this block grant with locally raised funds. But while this 100 percent reimbursement system may have been necessary as a transition measure, it also entails great danger if the modified census-based system is not developed with dispatch. This danger stems from the fact that a 100 percent reimbursement system, no matter how well intentioned or how temporary, creates fiscal incentives to over-identify, mislabel, and over-serve children with disabilities. While this report does not claim that these possible perverse incentives have, this year, actually engendered these inappropriate policies, they have the potential to do so. The perverse incentives of a 100 percent reimbursement system can offset whatever improved policies are stimulated by a sophisticated

professional development program. Thus, it is urgent that the present interim 100 percent reimbursement system be replaced as quickly as possible, even if the new system is itself implemented gradually.

Reasons for a Census-Based System

There are several reasons why a growing number of states and the Federal Government are considering the adoption, or have adopted a census-based system. They include reducing incentives for over-identification, creating incentives for accommodating children with lower cost disabilities in regular classroom settings, and restraining rising expenditures for special education that exceed what are needed to provide free appropriate public educations in the least restricted environments for disabled children.

When Federal protections for disabled students began with the passage of the E.H.A. (Education for All Handicapped Children Act, now called the I.D.E.A.) in 1975, the nation's primary concern was the fact that many children with disabilities were not provided by school districts with educational resources appropriate to their disabilities. Indeed, it has been estimated that in the 1960s and early 1970s, nearly 2 million children with disabilities were not even enrolled in schools, and nearly another 2 million were "sitting idly in regular classrooms awaiting the time when they were old enough to drop out," according to a Congressional committee report.⁴² The I.D.E.A. was an effective remedy for this failure; it required that each disabled child receive a free appropriate public education ("FAPE") in the least restrictive environment ("LRE").

There is less concern today that all children are not being served (although the wide variation in identification rates among states may suggest that the problem has not totally been solved), but there is still considerable controversy about the extent to which the intent and meaning of the LRE provisions are being implemented. Ironically, there is some concern that two initial purposes of the I.D.E.A. (the primary purpose of providing a free appropriate public education, and the secondary purpose of doing so in the least restrictive environment) may sometimes appear to be in conflict when implemented. By requiring the identification of each special education child to earn eligibility for federal (and state) categorical funds, an incentive exists to distinguish special education children from regular children to a greater extent than may be necessary or desirable, thus impeding the placement of these children in the least restrictive environment. The incentive is greatest in states where district reimbursement is based on resources provided (encouraging accommodation with specially designated resources rather than with regular classroom resources) or where, as in Wyoming, reimbursement has been a high percentage of actual spending. Further, in cases where a Wyoming district's 15 percent share of special education spending is less than the per pupil expenditure in that district for regular education, a fiscal incentive exists to classify borderline cases as needing special, rather than regular education.

⁴² Versteegen and Cox (1992), p. 137. Congressional committee report cited in Versteegen (1994).

To describe the existence of this incentive is not to suggest that Wyoming districts misclassify students in order to reduce their expenditures. In 1995-96, Wyoming classified 10,993 of its students as eligible for special education, a number equal to 11 percent of its total enrollment.⁴³ As **Table 1** shows, this percentage was nearly identical to the national average of 11.2 percent, and ranked Wyoming almost in the middle (24th lowest) of the 51 states (including the District of Columbia) in percentage of students identified as special education eligible.

However, as noted above, we would expect Wyoming to have fewer children requiring special education than the national average, because disabilities are often associated with other at-risk factors less often present in Wyoming than in many other states. Table 1 also shows that, except for Nebraska (which identified 12.4 percent of its student population as special education eligible, for a rank of 39), Wyoming identified a larger proportion of children for special education than surrounding states. Colorado only identified 9.6 percent of its students as special education eligible (ranked 11); Idaho, 8.5 percent (ranked 3); Montana, 10 percent (ranked 14); South Dakota, 9.2 percent (ranked 5); Utah, 10 percent (ranked 13). In the region (Wyoming and its surrounding states) as a whole, 10 percent of all children were identified as special education eligible. If Wyoming identified for special education the same percentage of children as were identified in the region as a whole, nearly 1,000 (992) fewer children would have been identified as special education eligible.

This does not indicate that Wyoming was over-identifying children for special education in 1995-96. All data of this kind can do is point us in a direction where further investigation is warranted. One possible explanation is that Wyoming over-identified children for special education who might have been more appropriately educated in regular education. Another possible explanation is that other states in the region were under-identifying such children. And another possible explanation is that there were more disabled children in Wyoming than in surrounding states in 1995-96, and all were properly identified.

In any event, even if there is no evidence of abuse (i.e., over-identification) in Wyoming, the very existence of a possible perverse incentive may tend to reduce public confidence in the special education funding system, a confidence that will become ever more important as education funding is centralized at the state level.

Table 2 examines one disability classification, specific learning disabilities. This is the classification where special education experts believe there is the most subjectivity and discretion involved in identification. Here, based on Wyoming's relatively more favorable demographic circumstances than the nation as a whole, we should expect to find relatively fewer learning disabled children than in the nation as a whole. However,

⁴³ These data, and the data in the accompanying tables are all drawn from U.S.D.O.E. (1997), Tables AA2, AB2; and from NCES (1998), Table 40.

because of all disabilities, learning disabilities are often the mildest, we should also expect to find that, in Wyoming, relatively more special education children are classified as learning disabled than elsewhere.

In fact, we do find that a slightly greater percentage of Wyoming's special education children are classified as having a specific learning disability than on average, nationwide (51.7 percent in Wyoming, vs. 51.3 percent nationwide). Yet the gap between Wyoming and the nation in this regard is not as great as the gap between Wyoming's 7-state region and the nation (52.3 percent in the region, vs. 51.3 percent nationwide).

Wyoming's learning-disabled population is a larger percentage of all enrolled students than is the case in the region. In Wyoming, 5.7 percent of all students were classified as learning disabled in 1995-96, compared to 5.3 percent in the region. Wyoming ranked 28th lowest in the nation in the percent of enrolled students classified as learning disabled. This percentage was nearly identical to that in Montana, but was higher than other states in the region: Colorado, 5.1 percent, ranked 19; Idaho, 5.0 percent, ranked 17; Nebraska, 5.3 percent, ranked 22; South Dakota, 4.6 percent, ranked 9; Utah, 5.6 percent, ranked 27.

Again this does not indicate that Wyoming was over-identifying children as learning disabled in 1995-96. Data of this kind can do nothing more than point us in a direction where further investigation is warranted.

Focusing specifically on the Wyoming region, **Table 3a** examines the percent of learning disabled children who were placed in regular classrooms in 1994-95 (the most recent year for which these data are available). **Table 3b** examines the percent of children with speech and language disabilities who were placed in regular classrooms. And **Table 3c** examines the percent of mentally retarded children who were placed in regular classrooms.

Wyoming (Table 3a) places 52.8 percent of its learning disabled children in regular classrooms, less than the regional average of 59.9 percent, and considerably less than some states in the region (Colorado, 74.1 percent; Idaho, 72.5 percent; Nebraska, 63.3 percent; South Dakota, 67.1 percent). If Wyoming had accommodated learning disabled children in regular classrooms in 1994-95 at the same rate as the regional average, 404 additional learning disabled students, statewide, would have had their primary accommodations provided in regular classrooms than was in fact the case.

Wyoming (Table 3b) places 83.3 percent of its speech and language impaired children in regular classrooms, less than the national average of 87.6 percent and less than the regional average of 89.2 percent. Wyoming also places a smaller percentage of speech and language impaired children in regular classrooms than all states in the region except Utah, and in several cases the differences are quite substantial (Colorado, 91.1

percent; Idaho, 93.9 percent; Montana, 95.4 percent; Nebraska, 88.8 percent; South Dakota, 93.8 percent). If Wyoming had accommodated speech and language impaired children in regular classrooms in 1994-95 at the same rate as the regional average, 164 additional speech and language impaired students, statewide, would have had their primary accommodations provided in regular classrooms than was in fact the case.

Wyoming (Table 3c) places 7.2 percent of its children with mental retardation in regular classrooms, less than the national average of 9.9 percent and less than the regional average of 21.1 percent. Wyoming also places a smaller percentage of children with mental retardation in regular classrooms than all states in the region except Utah, and in several cases the differences are quite substantial (Colorado, 40.4 percent; Idaho, 31.8 percent; Montana, 18.0 percent; Nebraska, 19.8 percent; South Dakota, 17.3 percent). If Wyoming had accommodated children with mental retardation in regular classrooms in 1994-95 at the same rate as the regional average, 90 additional mentally retarded students, statewide, would have had their primary accommodations provided in regular classrooms than was in fact the case.

Again, these data are only suggestive of possible areas of investigation: we have no evidence that any of the placement practices in other states are more appropriate than Wyoming's. But the data suggest possible areas of improvement and suggest the possibility that intensive staff development of regular and special teachers, an aggressive pre-referral program, and a greater commitment to accommodation of low cost disabilities primarily with regular classroom resources, supplemented where necessary with additional special education resources, could possibly generate both improved educational outcomes and reduced cost.

One additional set of facts lends support to the supposition that the recommendations of this report might, if implemented, have beneficial results. While Wyoming may not compare favorably with surrounding states in its regular education placements of children with lower-cost disabilities that are often mild and easier to accommodate, **Table 4** shows that Wyoming had fewer children (8.3 percent) in separate class placements, usually designed for children with the most severe disabilities, than the regional average (11.6 percent). With smaller percentages of special education children in both regular and special classes, Wyoming's placements were more heavily in resource rooms (33.1 percent) than the region that includes surrounding states (25.5 percent). Resource rooms are settings where children who are in regular classes for part of the school day are pulled out to receive special instruction. It remains possible that some of the special instruction now delivered to Wyoming children in resource rooms can instead be delivered by regular teachers who have been adequately trained to accommodate small numbers of children with mild disabilities in small regular classes.

One important caution should be kept in mind: while a reimbursement system may include incentives to over-classify or over-serve students with disabilities, a

modified census-based system such as that MAP has recommended (and that the State Department of Education will develop) may include financial incentives to under-identify or under-serve special education children requiring additional services (beyond those provided in the regular classroom) because district revenue does not grow as additional services are provided or required. To the extent a district can remediate or accommodate children with disabilities in a regular classroom without limited additional services (beyond those provided by the regular program), it avoids additional expense. Again, to describe the existence of this incentive is not to suggest that districts in states with census-based systems will under-identify children and that children in these states will lack special services that might be advisable or necessary. Because census-based systems are new, there is insufficient experience to judge whether this fiscal incentive will promote under-identification. And a related incentive, if operable, will benefit disabled children: a census-based system creates a fiscal incentive to identify potential learning problems or disabilities as early as possible, because such problems are much easier (and thus less expensive) to address early in a child's school life. To the extent this incentive operates, there is a good chance that census-based special education programs will not only save money, but also do a better job of serving children with mild and moderate disabilities. Indeed, the importance of this incentive for early intervention and remediation is one of the most powerful arguments in favor of a census-based special education funding system.⁴⁴

Thus, the growing popularity of census-based systems is not only, and perhaps not even primarily the result of concerns about runaway costs and over-identification. Equally, if not more important, is the growing awareness of the pedagogical and psychological disadvantages of categorical programs, and a desire to blend services for children in a "seamless web". In another report to the State of Wyoming, MAP has discussed this growing awareness, with particular respect to programs for children at risk of failure because of poverty or limited English proficiency.⁴⁵ The Federal Government has encouraged this blending of programs, not only in the census funding provisions of the newly revised I.D.E.A., but in revisions to Title I of the Elementary and Secondary Education Act which permit schools, in circumstances where there is a high percentage of children in poverty, to utilize categorical funds for school-wide programs that benefit all children, and do not require districts to administratively track categorical dollars to ensure that they are used exclusively for the benefit of eligible children. Similar

⁴⁴ In these respects, consideration of alternative funding mechanisms for special education are analogous to national debates about health care finance. Traditional fee-for-service health care insurance plans may include incentives to over-treat health problems, to emphasize disease cure rather than prevention, and to do so without regard to reasonable cost considerations. Managed care, in particular health maintenance organization plans, include incentives both to under-treat problems to control costs and to engage in aggressive preventive medicine. Neither system is without its dangers, and some blending of the incentives in each system may be necessary. Whether it is possible to design a health care finance and delivery system that includes incentives for prevention without also including incentives to under-treat disease is still open to question. Special education finance debates can learn something from this national debate about health care finance.

⁴⁵ Guthrie and Smith (1998).

developments at the state level in many states have also encouraged districts to blend categorical programs and, in some cases, to merge them with the regular program. While only a few states have gone so far as to adopt census-based funding systems, about half the states do not require that state special education funds be spent by districts only on special education students. (Wyoming, however, is not one of these.⁴⁶) Several states have granted this increased flexibility for the purpose of encouraging districts to adopt pre-referral assessment and intervention programs that are difficult to categorize clearly as either regular or special education, designed to remediate learning difficulties before more expensive special education services become necessary.⁴⁷

Separation of categorical programs from regular education has great administrative cost and the blending of these programs holds the promise of administrative savings. Separation also makes little pedagogical sense, as the services needed by particular children may not fall neatly into the categories by which they are considered at-risk or disabled. And finally, separation of children into groups receiving designated categorical services tends to stigmatize the children, a stigmatization that hinders the very learning that the services are designed to enhance.

⁴⁶ Parrish (1994), Table 1.

⁴⁷ Parrish (1996), p. 4.

An Unmodified Census-Based System Not Proposed for Financing Special Education for Children with Very High Cost Disabilities

The illustrative example developed in this report differs from some (but not all) other state census-based finance systems presently being implemented in that it does not include high cost disabilities in the special education program to be fully financed out of a district's block grant. Rather, like, for example, the Vermont system, this report assumes that district-provided services for disabled children whose accommodations are higher in cost (i.e., accommodations costing more than 3 times the regular education per pupil block grant⁴⁸) be partially reimbursed by the State of Wyoming. The model estimated below assumes an 85 percent reimbursement rate because that is a rate with which Wyoming educators have experience. Thus, in the illustrative prototype sketched below, an estimate of the total cost of the remaining 15 percent is included in the block grant. However, the plan ultimately adopted by the Department of Education may utilize a split other than 15-85, (20-80, 25-75, or 30-70 might be considered and then validated in discussions with special educators) or it may continue the present interim system of 100 percent reimbursement. If the 100 percent system is continued, however, the Department of Education's plan must consider how to avoid the incentives to over-identify and over-serve that may flow as a consequence of such a proposal.

The primary reason for not including the entire cost of even high-cost special education accommodations in a census-based block grant is that the recommendation for a census-based special education finance system is integrally related to the recommendations for small regular class sizes, the funding of school-wide regular education resource teachers, and the expectation of greater professional development for teachers. Thus, the census-based system, as initially proposed by MAP in May, 1997, is designed primarily for those lower-cost disabilities (usually, but not always the milder and moderate disabilities) for which the primary locus of service can be the regular classroom and the regular classroom teacher and resource teacher, with some support from school-wide special education resources. Another reason for excluding, in part, high cost disabilities from the census-based system is that disabilities requiring more expensive accommodation (which are often more severe disabilities than those that schools can accommodate at lower cost) occur with less predictable frequency in small populations than do disabilities requiring lower cost accommodations. Unlike in the case of most mild or moderate disabilities, the accommodation of many severe disabilities often requires expensive additional resources that a school or district would not ordinarily

⁴⁸ As noted, Vermont makes the cut-off 3 times. The May 1997 MAP report suggested that 4 times the foundation grant might be an appropriate cut-off. What the cut-off should be is one of the issues with which the Department of Education's ultimate proposal must deal.

be expected to purchase out of its regular education block grant funds and would find it difficult to purchase out of its census based special education block grant funds as well. Because the block grant is designed to provide the level of resources necessary to meet Wyoming's legal requirement to provide the best education to regular students (and, to the extent substantial additional resources are not required, to lower cost disabled students), requiring districts to dip into this block grant to provide extraordinary services for disabilities requiring higher cost accommodations would interfere with the state's obligation.

This is especially the case because Wyoming is a state with relatively small school districts where the unanticipated enrollment of a child with disabilities requiring very expensive accommodation could compel the provision of services whose cost could seriously encroach upon the district's block grant, making the provision of regular education services at the level necessary to provide the basket impossible. (Even states with larger districts that consider a census-based special education finance system may find it necessary to amend or modify the system to accommodate high cost disabilities. In California, for example, a state with small districts as well as large ones, a census-based special education finance system was adopted in 1997, but the legislature also commissioned a study to determine if the incidence of "severe and/or significantly above average" in cost disabilities was unevenly distributed across the state. If the study finds that these disabilities are not evenly distributed among school districts, the California legislature intends to modify the funding formula so that the census-based funding system is not applied without qualification to severe and high-cost disabilities.)

Nonetheless, for purposes of illustration, this report assumes that the Department of Education's eventual proposal will include the provision that a district's census-based block grant be increased for the expectation that the district will bear 15 percent of the cost even of high cost accommodations. This contradicts the suggestion in the May 1997 MAP report that the state should reimburse districts for the full cost of these accommodations, based on actual expenditures. The reason for this change in our thinking is that, in preparing the present report, it became apparent that, in order to monitor and avoid the possible perverse incentives described above, a 100 percent reimbursement system would require the development of an extensive state special education bureaucracy to monitor and review district decisions to claim full reimbursement. A system in which districts have no fiscal incentive to provide appropriate, but lower cost services, is not one in which it will be possible, in the long run, to preserve the local autonomy that is an essential feature of the Wyoming education system. If, on the other hand, districts must bear some percentage of the cost of higher cost special education accommodations, then the fiscal incentive for inappropriate and more costly placements is reduced. In determining whether that percentage should be 15 percent or some other figure, the Department of Education will have to weigh these considerations.

Because a district that has one or more disabled children requiring very expensive accommodations may still be unable to supply 15 percent of the cost of these accommodations, this report also anticipates that, as part of the Department of Education's proposal, the State will establish a contingency fund from which it can subsidize districts facing fiscal crisis because of these unusual circumstances. We assume that this contingency fund will initially be equal to 15 percent of the total State special education program, including both census-based block grants and the 85 percent reimbursements of high cost accommodations.⁴⁹

In assuming such a contingency fund, this report does not anticipate that districts suddenly experiencing very high cost accommodations would necessarily be entitled to subsidy from the fund. To understand why this is the case, it is important to distinguish between two portions of the special education census-based block grant. One portion is the block grant designed to pay for low cost accommodations, most of which can be accommodated by the regular classroom teacher and resource teacher, with some additional special education resources. (In the pages that follow, this portion is referred to as Part I of the Wyoming special education block grant.) The amount of these additional special education resources will eventually be calculated by the Department of Education by specifying the precise resources (i.e., number of resource specialists, aides, etc.) that schools following the prototypical model would be expected to hire to provide services to a normal incidence of children with disabilities that can be accommodated at low cost. Below, this report estimates these resources, but a final determination will have to await the Department's more informed calculations, based on analysis of actual resources presently utilized in Wyoming to accommodate specific disability conditions.

The second portion is the block grant designed to pay for 15 percent of the cost of accommodating higher cost disabilities. (In the pages that follow, this portion is referred to as Part II of the Wyoming special education block grant.) However, unlike Part I of the block grant, prudent districts may not hire resources with their Part II (15 percent) funding, unless they have children with (usually severe) disabilities requiring very expensive services. If a district does not have such children, its prudent course of action would be to establish its own special education reserve fund in the event such a child or children should enroll. Districts that have followed a prudent course in this regard should, if additional funds are still required in unusual cases, expect subsidies from the State's catastrophic aid fund.

(Note that this report does not necessarily assume that the State's catastrophic contingency fund will be segregated as a formal reserve fund that can be used only for

⁴⁹ The use of a 15 percent figure here is purely coincidental. There is no relationship between having a contingency fund of 15 percent of total state special education funds, and that the district share of high cost special education is also 15 percent. Whether the contingency fund should be 15 percent or some other figure is a matter that can be more easily decided later, when better data about the cost of extraordinarily expensive accommodations are available.

such district subsidies. The State may, for example, find it appropriate to use such funds, when they are available, to fund its special education professional development program or for other purposes. If a consequence of State procedures (designed to determine whether a particular district is in need of a subsidy in order to provide 15 percent of the costs of accommodating a particular disabled child) is to determine that a district has legitimate need for subsidy in any particular case, the State may have ample resources upon which to draw without requiring a separate fund. Districts, on the other hand, may be prudent to establish a separate fund to save unused portions of the block grant designed to cover their 15 percent shares of high cost accommodations.)

Accommodating children with mild or moderate disabilities primarily with regular classroom resources

Most census-based special education finance systems now being developed in other states are in states where regular education classes are much larger than those provided for in the prototypes underlying Wyoming's Cost Based Block Grant Model. (Vermont is an exception here, where class sizes are, on average, as small as those in Wyoming's prototypical models.) Thus, system designs in some other states anticipate that the census-based funding distributed to school districts will be used primarily to supplement regular resources with special resources specifically designed to deliver special education services. This includes professionals like resource specialists in learning handicaps, speech and language therapists, adaptive physical education teachers, and paraprofessionals to assist in special education. In the case of Wyoming's system, where regular class sizes are unusually small, regular teachers can be trained to deliver some, but not all of these specialized services typically delivered by resource specialists. In some cases, regular teachers can be trained to deliver these services under the ongoing supervision of a resource specialist.

The larger the class sizes in regular education, the more such additional resources are required to deliver services to children who, because of disabilities that are usually mild or moderate in severity, cannot function unassisted in regular classes. However, the smaller the class sizes, the more easily the regular staff and resources of a school can deliver services to many students (usually those with relatively mild disabilities) without large quantities of additional designated special education resources. To a lesser extent, this is the case for some children with disabilities that are moderate in severity as well.

The Cost-Based Block Grant (as modified in the 1998 legislation) for Wyoming elementary schools funds a prototype in which class sizes are 15 in grades K-3 and 18 in grades 4-5 (an average class size of 16). If school districts in Wyoming utilize their block grants as proposed in the prototypes, elementary school class sizes, especially in the primary grades, will be among the smallest in the nation, and pupil-teacher ratios will be lower still (15.2 to 1), because of the prototype's provision of resource teachers for the regular education program. **(The school finance system adopted by the Wyoming state legislature, and signed by the Governor, in 1998, is based on prototypical models which tie Wyoming with Vermont for the lowest pupil-teacher ratios in the nation.)** These small class sizes are intended to permit properly trained regular teachers to accommodate a small number of disabled children whose accommodations are not very expensive, without a great deal of additional resources being required. Nationwide, it is estimated that approximately 7 percent of schoolchildren are mildly or moderately

disabled and are therefore eligible for special education services.⁵⁰ An additional 15 percent of children are slow learners or have unusual difficulty in learning and may in some states be classified as special education eligible.⁵¹ If these percentages were reproduced in the typical Wyoming elementary classroom, a teacher would have to accommodate or remediate about 3 such children in a class of 15. This is not an unreasonable expectation for a properly trained teacher, supplemented by the school-wide regular resource teacher provided in the regular education legislation, and by the special education resource specialists provided in the recommendations of this report.

⁵⁰ There are no data available that precisely distinguish between mildly, moderately or severely (profoundly) disabled children. We derive this estimate of seven percent as follows. We estimate that falling into the mild or moderate categories where inclusion is possible and desirable without resources beyond those provided by the proposed modified census based block grant, are the following: 80 percent of learning disabled (this is equivalent to the national average of learning disabled children currently with regular class or resource room placements); 90 percent of speech and language disabled (currently, 88 percent of speech/language impaired children nationwide have regular class placement and an additional 8 percent have resource room placements); 35 percent of mentally retarded (currently, 10 percent of mentally retarded children nationwide are placed in regular classrooms, and an additional 27 percent have resource room placements); 40 percent of severely emotionally disordered (currently 22 percent of children with serious emotional disturbance are placed in regular classrooms nationwide, and another 24 percent have resource room placements); and 20 percent of other categories. For all disabilities combined, nationwide, 45 percent of disabled children are currently placed in regular classrooms, and another 29 percent have resource room placements (U.S.D.O.E. 1997, Table AB2). Thus, we conclude that approximately 2/3 of all special education children are mildly or moderately disabled, and suitable for inclusion in regular classes and for funding under the block grant, with the additional resources provided by the modified census-based funding finance system for special education. This estimate is consistent with those in Terman, et. al. (1996).

⁵¹ According to Lyon (1996), p. 57, "virtually all children scoring below the 25th percentile on standardized reading tests can meet the criteria for having a reading disorder," (p. 57), and approximately 17 percent have a deficit in phonological awareness that affects reading ability (p. 71; also Lewitt and Baker, 1996, p. 143). "Approximately 6% of the school population have difficulties in mathematics that cannot be attributed to low intelligence, sensory deficits, or economic deprivation" (p. 68). Of course there is some overlap between the 17 percent with a possible reading disability and the 6 percent with a possible mathematics disability. Our estimate of an additional 15 percent (with learning difficulties, in excess of the number classified as learning disabled and thus special education eligible) is based simply on Lyon's 25th percentile-and-below estimate. Included in this bottom quartile are about 10 percent who are special education eligible, and another 15 percent of regular education slow learners.

The need for professional development

Few teachers, in Wyoming or elsewhere, are presently trained to take advantage of small class sizes to implement direct instructional strategies, varied based on the needs and learning styles of each pupil, for regular or for special students. Indeed, one reason why research sometimes finds minimal effects from smaller classes is that most teachers do not adopt different instructional strategies when classes shrink. Utilizing the same techniques to teach a class of 15 as a teacher uses to teach a class of 30 may provide some additional benefits, but most of the potential benefits are lost.

Even without a modified census-based special education funding system, Wyoming educators will not be able to reap maximum benefit in student achievement from the block grant based on prototypical models for regular education, unless they participate in an extensive professional development program. This program should include training in the principles of learning, mastery learning and multistyle intelligences, to develop capacities for pedagogical approaches like direct instruction, cooperative learning, peer tutoring, behavioral modification, ongoing assessment and feedback (monitoring), among others.

Therefore, a modified census-based special education finance system should be implemented accompanied by a professional development program for the state's regular teaching force that focuses on the accommodations appropriate for children with lower cost (usually mild, often learning) disabilities. But this professional development program should not focus exclusively, or even primarily, on special education problems. Teachers also need additional training to take advantage of the small class sizes funded in the regular education block grant model.

MAP believes that the legally required basket of education services can most effectively be delivered to regular children if teachers use, for class sizes of 15, different instructional methods than they would use for class sizes of 25. The expense of such a professional development program, to assist teachers to take best advantage of the small classes in the model, was partially funded in the Cost-Based Block Grant Model. However, many Wyoming districts are too small to design an effective professional development program on their own, even if the per-teacher funding for such a program has been provided. Therefore, the state must play a leading role in the design and provision of this program, if the modified census-based special education system or the regular education block grant are to succeed. The Cost-Based Block Grant prototypical model, therefore, assumed that most of the cost of designing and delivering the professional development program would be borne by the state, and not by school districts. Most of the funds in the block grant designed for professional development are intended for released time for teachers (i.e., for substitutes or for summer stipends), not for the curricular costs of the programs themselves.

Resources Required for Categories of Disabilities

The I.D.E.A. specifies that children are eligible for special services if they have one of twelve specifically named disabilities: specific learning disabilities; speech or language impairments; mental retardation; serious emotional disturbance; multiple disabilities; hearing impairments; orthopedic impairments; other health impairments; visual impairments; autism; deaf-blindness; and traumatic brain injury. In each case, once a child has been identified as eligible for services, an individualized education program (IEP) must be designed to specify the services from which the child can derive educational benefit, as well as the related services that are necessary to assist the child in benefiting from the educational services. The IEP must be developed in a meeting at which the parent, the child's regular and special education resource teachers, the assessing psychologist, and an administrator are present.

These categories of disability are described in Appendix I, along with the services and resources typically associated with the particular disability, and with the percentage of children in the national population who are classified as having that disability.⁵² (The figures in parentheses refer to the percentage of children in Wyoming school districts who were classified with the particular disability in 1995.) The extent to which the Wyoming percentages, in almost every case, parallel national percentages is remarkable.⁵³ A caution, however, is in order here. For some categories, as noted above, we should expect the incidence of children with that disability to be lower in Wyoming than in the nation as a whole, because many disabilities are associated with other at-risk factors like poverty, and Wyoming's student population is relatively more advantaged than the average student population nationwide. It is not possible at this time, based on present knowledge, to say with any precision how much lower the expected incidence in Wyoming might be, or whether, on the contrary, the relationship between disability and other at-risk factors suggests that Wyoming's rate is appropriate but the national rate should be higher (or lower).

It is also not possible to clearly assign each disability either to a lower cost classification, suitable for funding under Part I of the modified census-based block grant, or to the higher cost and usually more severe classification, for which districts should bear 15 percent of the cost of accommodation out of Part II of the modified census-based

⁵² The following section is based in part on Anthony (1992); and on CDOE (1997). Data on classifications is from USDOE (1997), Table AA2. The Wyoming data from this USDOE source are consistent with data from Wyoming Department of Education (1996), p. 103.

⁵³ We do not make too much, however, of either these similarities or of the cases where identified percentages of students in Wyoming differ from national data. There is no requirement that states utilize the same categories for identification, or that they define these categories in similar ways, so differing Wyoming and national specific classification rates could be attributable either to different classification protocols or to different incidence of actual disability.

block grant (and then eligible for 85 percent reimbursement from the State) under the system described for purposes of illustration in this report. This is because disabilities that are mild or moderate for most children can, for some children, be severe enough to make lower cost accommodations inappropriate;⁵⁴ and some usually severe disabilities may, in some cases, be mild enough to make accommodation primarily with regular education resources, supported by some special education resources, appropriate. Nonetheless, it is possible to describe whether, in most cases, children with a particular disability are more likely to have service provided primarily by a regular teacher, with supplementary special education resources funded through Part I of the census-based special education block grant; or whether the supplementary special education resources are likely to be sufficiently high in cost to make the district eligible for 85 percent reimbursement of this cost, with the expectation that the district would utilize Part II of its census-based special education block grant to provide 15 percent of this cost. Appendix I of this report lists each I.D.E.A. special education disability classification, along with an estimate of whether, in typical cases, children with this disability are likely to have services provided by Part I or by Part II of the block grant. In the case of accommodations typically expected to be funded out of Part I of the census-based block grant, Appendix I also provides estimates of the level of resources typically required. It is by use of these estimates that this report calculates the prototypical resources funded in Part I. However, the Department of Education should revise these estimates when it develops its specific proposals, and these revisions should be based on the actual experience of Wyoming special education programs.⁵⁵

We emphasize that the typical service settings described in Appendix I will not apply in every case. In every case where a child is classified as entitled to special education services, only an I.E.P. can determine the mix of services required to accommodate that disability. A child with any category of disability may be entitled to a level of resources more typically associated with other disabilities in order to provide the most appropriate education in the least restricted environment for that child.

⁵⁴ "Of utmost concern is the future placement of mildly disabled and behavior-disordered students... [A]lthough the regular classroom is appropriate for *many* of these students, it is by no means appropriate for all" (Rossman 1992, p. 213).

⁵⁵ We believe, however, that our estimates are within reasonable ranges, and consistent with thinking in other states where census based systems are being developed or are in place. For example, we noted above that in Vermont's program that is comparable to the one to be developed for Wyoming, Vermont's block grant is calculated based on the assumption that there will be a total of 5.25 resource specialists per 1000 enrollment. The resources specified in the illustrative prototype of this report are equal to 4.95 professional staff per 1000 enrollment, and there are additional resources added for professional development and supplies.

The Cost of IEP Conferences and Assessments

In addition to the resource specialists paid for in Part I of a modified census-based block grant (and estimated and modeled in Appendix I of this report), schools and districts will also require a psychologist whose role is primarily to assess students referred for evaluation and, if appropriate, recommend students for special education. We assume that Department of Education's proposal will provide that the costs of assessment of students for all special education placements (whether the accommodations are low or high in cost) be included in Part I of the block grant of the modified census-based special education funding system.

Typically, a full conference to develop an Individualized Education Plan (I.E.P.) must be conducted every three years, following testing and evaluation by a psychologist or similar specialist. We estimate that a full day will be devoted by a psychologist and/or special education resource specialist for this process once every three years for each referred student.

In the intervening years, conferences must be held to review the appropriateness of the I.E.P. We estimate that these review conferences will require approximately one half day of a psychologist's (and/or special education resource specialist's) time for each student with an I.E.P.

Thus, each special education student in Wyoming will probably require approximately 2/3 of a day per year in the time of a psychologist and/or special education resource specialist for assessment and placement. Assuming that 11 percent of the student population must be assessed and placed, this workload equates to a psychologist and or resource specialist handling this assignment for nine prototypical elementary schools in a school district, or .11 FTE for a prototypical elementary school.

Resource teachers (in addition to the resource specialist, described above, who shares with the psychologist primary responsibility for writing the I.E.P.), along with regular teachers, may also participate in the I.E.P. conferences, although they will have less responsibility for assessment. Therefore, we have estimated that an additional .08 FTE of resource teacher time might be required for this purpose in each prototypical elementary school.

Early Intervention

The modified census-based special education funding system described in this report can work best for students and for Wyoming taxpayers if it is integrated with an early intervention instructional approach, designed to provide in-class remediation to students who appear to have difficulty keeping up in academic work. Most school districts nationwide do not identify children with learning disabilities until they are reading below grade level, a determination that cannot be made until the third or fourth grade when the child has already experienced sufficient failure to affect motivation. Remediation of reading difficulties is most likely to be successful when intervention comes earlier in a child's school life.⁵⁶

The early intervention model we have in mind is similar to that which has been implemented in Pennsylvania, and in other states and districts around the country. Its success rests both in the improved outcomes it assures in the regular education program, and in the opportunity to remediate learning problems of children who may otherwise later be deemed to have a learning disability. If the early intervention program is well designed and implemented, few children who are not disabled will be referred to a psychologist for assessment and evaluation for special education. It is because we assume the existence of such a program that we have allocated time for psychologists and resource teachers in I.E.P. conferences, preparation, and follow-up only for students who are likely to be referred to special education for services. Further, this time allocation may be generous, if the early intervention program succeeds in reducing the number of children referred for special education.

An important administrative advantage of this approach is that if early intervention succeeds in providing the necessary services to low achieving students, there may be less demand for referral of those children, who are already receiving direct remedial instructional help, to the expensive and administratively burdensome special education identification process. If children receive remedial services, which may look the same as accommodation, prior to the formal dictates of an IEP, IEPs may be less necessary for such children. About 13 percent of all special education funds are now spent on eligibility assessment, before any services are actually delivered⁵⁷ (for students with mild disabilities, the percent spent on assessment rises to 22 percent⁵⁸) and so if early intervention results in fewer referrals, while at the same time causes no reduction in the direct remedial instructional services delivered, the cost savings could be substantial.

Nonetheless, to avoid any possibility of inadequate resources for this purpose, we estimate that the Department of Education may add to the prototype funding .2 FTE of a

⁵⁶ Lyon (1996), p. 59.

⁵⁷ Parrish (1996), p. 28.

⁵⁸ Parrish and Verstegen (1994), p. 25.

special education resource teacher (i.e., one day per week per school) for purposes of coordinating and leading the early intervention instructional team. Strictly speaking, this is a function that should be provided by the regular education program (the 1998 enacted prototype for regular education funds a regular education resource teacher in each prototypical elementary school, in addition to the special education resource specialists funded here), and so, alternatively, the Department of Education may decide not to include this additional resource in the modified census-based block grant.

Census-Based Special Education Funds

As noted above, during the transition period to a modified census-based special education funding system, districts receive from the State full (100 percent) reimbursement of special education costs, including both funds equivalent to 15 percent of the cost of special education that was previously a local responsibility, and funds equivalent to 85 percent of the cost of special education that was previously a state responsibility. Based on past special education cost experience, it was estimated that, in addition to the block grant, a prototypical elementary school with 288 students would have received \$152,514 for 100 percent of special education costs in 1995-6.

In addition to the funding for regular education, a modified census-based block grant for special education might include the resources described in the following prototype. We emphasize that the specific resources and their costs that appear in this prototype are based on estimates for the purpose of illustration only. Precise specification of the appropriate resource levels must await the collection of better data by the Department of Education, and an analysis of those data.

Part I:

a) Additional professional development funds: The Cost-Based Block Grant Model of May 1997, as modified and adopted by the Legislature in 1998, proposed approximately \$100 per pupil for professional development.⁵⁹ At an elementary school, this is equivalent to about \$893 per staff member, although school districts will assuredly use their block grants to devote more than \$893 to teachers, and less to non-professional staff. If, for example, districts spend four times as much on professional development for teachers, counselors, librarians and school administrators than they spend on professional development for non-teaching personnel, then the block grant would provide about \$1,070 per teacher per year for professional development. We assume that, with the adoption of a modified census based special education finance system, this professional development program will be expanded. We illustrate this assumption by supplementing the existing professional development allocation (in the regular block grant) with an additional \$500 per regular professional staff member per year, to cover the costs of

⁵⁹ The specific figures are \$92 for elementary personnel, \$96 for middle school personnel, and \$102 for high school personnel. Guthrie, et. al., p. 49. The 1998 legislation made no significant changes to the total amount allocated for regular education professional development per each elementary school. However, because there is one fewer teacher in the legislatively adopted model than in the MAP May 1997 model (i.e., the MAP model proposed 2 school-wide regular education resource teachers and the legislation funds one), as well as one fewer aide and 0.5 FTE fewer pupil support personnel, the legislation effectively increases the amount of money per staff member allocated for professional development. To avoid complicating this report, we have not attempted to make an adjustment for this relatively small difference, and assume that the legislature intended to increase the funding per staff member for professional development, a consequence of leaving the per pupil professional development amounts unchanged.

professional development specifically focused on the opportunities for the accommodation and inclusion of children with disabilities. The Department of Education's proposal may, of course, determine that an amount less than or more than \$500 is appropriate.

Total cost per prototypical elementary school: \$13,237.⁶⁰

b) Psychologists @ .11 FTE

c) Special Education Resource specialists (For the basis of these estimates, see Appendix I):

1. Speech and Language Teacher @ .25 FTE

2. Special Education Resource Specialist Teacher @ .5 FTE (for work with the learning disabled) + .12 FTE (for work with the mildly mentally retarded) + .07 FTE (for work with the seriously emotionally disturbed) + .025 FTE (for adaptive physical education for the orthopedically handicapped) + .06 FTE (for work with the health impaired, including adaptive physical education) + .08 FTE for participation in I.E.P. conferences.

3. Audiologist @ .01 FTE

d) Early Intervention Instructional Team Leader/Resource Teacher (Regular Education): .2 FTE

e) Supplies and equipment: National data suggest that the special education program consumes one dollar in supplies and equipment for each 60 dollars of professional personnel salaries.⁶¹ We have no basis at this time, without further study, to vary this ratio. Therefore, we assume a supply and equipment budget of \$984 as part of the modified census-based block grant.

f) Special Education district administration: Prior costs of special education administration at the district level were included in the "administration and miscellaneous expenditures" line of the regular education prototypical model. There is no reason to believe that administrative costs for special education will be higher with a modified census-based model than they were previously. If the early intervention strategies described in this report are successful in reducing the categorization of children as requiring special education services, then the administrative costs could be reduced

⁶⁰ This figure assumes that the additional resource teachers and other professionals funded in the modified census-based block grant would also receive professional development costing \$1,570 per year.

⁶¹ Rothstein (1997), Table 8.

significantly. Therefore, no additional funds are assumed in this illustrative census-based model for special education district administration.

Part II:

The State currently spends about \$152,514 on all special education costs for children enrolled in a prototypical elementary school. Part I of this illustration shows how \$73,263 of this total might be replaced by specifically funded resources. If the State creates a catastrophic reserve fund for subsidies to districts that experience fiscal crisis because of unusual special education costs, this could replace \$22,877 of this total (assuming a reserve fund established to be 15 percent of \$152,514). The remaining balance is \$56,374, to be devoted to the accommodation of students with high cost disabilities. If districts assume 15 percent of these costs, their block grants would be increased by \$8,456 to fund these expenditures presently experienced, and to establish a reserve for funding such expenditures in the future.

Summary: The modified census-based block grant to districts, therefore, in the illustration estimated here, includes the following items, *replacing that portion of the estimated (for 1995-96) special education funding of \$152,514 that is currently provided districts for the special education accommodations that are lower in cost, and 15 percent of the expense of accommodations that are higher in cost (more than 3 times the regular education per pupil block grant)*. Salary and benefits are set forth at the 1995-96 teacher level (\$41,433) found in the regular education prototypes of the "Proposed Cost-Based Block Grant Model for Wyoming School Finance (May, 1997)."

Professional Development:	\$13,237.
Psychologists and Assessment:	4,558
Resource Specialists:	
Speech and Language:	10,358
Resource Specialist:	35,425
Audiologist:	414
(Regular Education) Instructional	
Team Leader:	8,287
Supplies and Equipment:	984
 Subtotal, Part I:	 \$73,263
 Part II:	 \$8,456
 Total, Special Education Block Grant:	 \$81,719
 Total, Per pupil (all pupils):	 \$284

Small (or Sparsely Populated) District Adjustment

The prototypical special education resources illustrated above for purposes of a modified census-based system assume (except in a few cases like, for example, specialists like audiologists) that there is sufficient workload for special education personnel within any district to support at least one full FTE for that category of personnel. In some districts where schools are unusually distant from each other, however, it may be necessary to model travel time in excess of that specified here. For example, this model assumes that a prototypical elementary school will require funding for .25 FTE of a speech and language teacher. Implicit is the assumption that in the typical Wyoming school district, a speech and language teacher can be assigned to a circuit of four schools (or the equivalent of four elementary schools, if middle schools or high schools are included in the circuit). In cases where a district is comprised of schools spaced too distant from each other to make this model realistic, a small-district adjustment to the modified census-based special education finance formula should be considered. Similar considerations apply in the case of psychologists who, the model assumes will have a caseload equivalent to 9 prototypical elementary schools. Each resource modeled here may require adjustment for districts where full special education FTEs cannot be supported by the enrollment and/or the geography of the district.

Funding for Pre-School and Infant Special Services

The I.D.E.A. provides that children with disabilities from ages 3 to 21 are eligible for educational services. This report does not focus on children in this full age span, however. In principle, once a modified census-based funding system is in place at the elementary school level, census-based funding could be designed for pre-school services (for ages 3-5) for children with low cost disabilities, with reimbursement for services for pre-school children with severe disabilities. Such funding would differ from the modified census-based funding provided for elementary special education, in that there are no regular classes for children aged 3-5 in which children with lower cost disabilities can be included. Because we recommend that this new modified census-based system be implemented on a gradual basis, it is not necessary to explore the details of a pre-school modified census-based system at this time.

Similarly the I.D.E.A. (Part H) now also provides for educational services for infants (birth to age 2) with disabilities, but this program is not yet mandatory and the federal government is presently funding the development of state plans to provide these services. This report does not deal with special education services for infants and toddlers.

Reimbursed Funding of Services for Severely Disabled Children

In addition to the census-based funding system to provide services for mild and moderately disabled children, the illustration developed in this report assumes that the State will reimburse 85 percent of the full cost of providing services to disabled children requiring high cost accommodations, similar to the 85 percent share previously assumed by the State for all children with disabilities. This 85 percent reimbursement for actual costs incurred will usually include the cost of special classes for children for whom a primary accommodation in regular classes is not determined in their IEPs and for professional special educators or health professionals whose skills are required to supplement those of a special class teacher. (Some mainstreaming of such children, to the extent desirable, will certainly continue in many cases, for appropriate portions of the school day, notwithstanding a special class placement.) It also includes the cost of placements outside a regular school, either in public or private facilities.

Because some costs traditionally associated with special education in Wyoming (especially some costs associated with lower cost accommodations, as well as district-wide special education administrative costs) have now been assumed as part of the small classes, school-wide resource teacher, and professional development of the regular education block grant system, it is our expectation that this proposed modified census-based funding system for special education could reduce the costs currently attributable to special education in Wyoming. Until, however, the state develops the recommended system for tracking existing special education costs to each handicapping condition, it is impossible to state with certainty how much of a saving this system could induce.

The Block Grant Approach

This report explains the reasoning behind MAP's earlier proposal for a modified census-based funding system for special education, and like MAP's other proposals for funding Wyoming education, we propose that the census-based portion of these funds be distributed to districts as part of their block grant. This means that districts are not required or necessarily expected to purchase precisely those resources that are modeled in the illustrations of this report, or that will be determined in the eventual recommendations of the Department of Education.

Federal law does not require that federal special education funds distributed to districts be specifically spent on special education students, as long as the accommodations called for in students' IEPs are provided (and, as noted above, about half the states now permit similar latitude). Thus, Federal law permits the blending of special education funds with regular funds and, in some circumstances, other categorical funds to provide schoolwide services that benefit all students.⁶² Federal special education funds, for example, can now be used to hire a reading specialist to conduct tutorial sessions in which both identified special education students and non-identified slow learners participate.⁶³

This new approach to the use of categorical funds is consistent with the block grant approach of this and previous MAP memoranda, and we recommend that, to the extent permitted by law, Wyoming districts utilize their block grants with maximum discretion and creativity. For example, to the extent the professional development program for Wyoming teachers builds the capacity of all teachers to accommodate the needs of learning disabled children, and/or remediate the deficits of slow learners, the line between regular and resource teachers may begin to blur. This would permit districts to further experiment with configurations of class sizes and teachers that may be different from those modeled in these memoranda.

⁶² Title I of the Elementary and Secondary Education Act permits compensatory education funds to be used in schoolwide programs, not tracked to individual eligible students, only in schools where at least 50 percent of the students come from families whose incomes are below the federal poverty line. Wyoming has few, if any, such schools.

⁶³ For a discussion of how this flexibility might be used in New York City, see Fruchter, Parrish and Berne (1998).

In Conclusion

This report illustrates how the \$152,514 currently (i.e., 1995-96) allocated to a prototypical elementary school for elementary education might be reallocated under a modified census-based special education finance system. The illustration of this report is designed to show that, with such a re-allocation, the existing \$152,514 can reasonably purchase resources adequate to deliver the best education to Wyoming's children with disabilities. Indeed, when the resources purchased with the regular education and the special education block grants are blended, it is possible that Wyoming will find that the resources presently provided exceed those needed to provide the best education, especially if aggressive early intervention reduces the number of children whose learning disabilities are permitted to grow into disabilities ever more expensive to remediate or accommodate.

However, the ultimate determination of whether the current special education appropriation is adequate awaits further data collection and analysis by the Wyoming Department of Education. This analysis will, we expect, be a highly participative process, involving regular and special educators throughout the state, as well as, possibly, outside educators asked to validate the process. We hope this report can assist the Department to begin this undertaking.

Appendix I.

Disability Categories, and Typical Levels of Resources for Their Accommodation

Federally approved disability classifications are listed below. In the case of disabilities where the accommodation is typically lower cost, and therefore suitable for funding out of Part I of the census-based special education block grant, the descriptions that follow attempt to estimate the resources required for these accommodations.

a) *mental retardation*. A child with mental retardation is one whose intellectual functioning is significantly below average, resulting in deficits in adaptive behavior. Mild mental retardation is generally defined as an IQ of from 55 to 70 (although in some states, the ceiling is as high as 85⁶⁴), and moderate mental retardation as an IQ of from 40 to 55. (Mental retardation is distinct from learning disability in that children with mental retardation are below average in intelligence while children with learning disability are below average in academic achievement, or have achievement below that to be expected for their intelligence level.) Most mildly and some moderately retarded children can be accommodated primarily with the resources available in regular classrooms. Severely or profoundly mentally retarded children, along with most moderately mentally retarded children may more appropriately be accommodated in a separate class or school, and these accommodations are not covered by Part I of the modified census-based special education funding system. Approximately 11.3 percent of the national special education population falls into the mental retardation category of disability⁶⁵ (Wyoming, 5.9 percent) and over 3/4 of these are only mildly retarded.⁶⁶ We estimate that 1/2 of these could be accommodated primarily with the resources available in a regular class. In the Wyoming system, a properly trained regular teacher in a class of about 15 students should be able to accommodate the special needs of 1 mildly retarded student in the classroom, supplemented by the coaching of a trained resource specialist or school-wide resource teacher. If we assume that a resource specialist observes a teacher's interaction with each mildly retarded student and/or works with the student for two hours per week, and if there are approximately 2 such mildly retarded children in each elementary school, then each prototypical elementary school should require .12 FTE special education resource specialist teachers to work with mildly mentally retarded children.

b) *hearing impairment, not including deafness*. Many children with hearing impairment can be accommodated in regular classes with properly trained teachers. In most cases, the accommodation consists primarily of ensuring that the child is seated in a

⁶⁴ Reschly (1996), p. 42-43.

⁶⁵ As with other data in this report, these percentages include only children aged 6-21. The preschool, infant, and toddler special education population are not included.

⁶⁶ Terman, et. al. (1996), p. 9. Reschly (1996), p. 43, estimates that half of mentally retarded children have only mild mental retardation.

location that maximizes his or her ability to hear, and with such accommodation, most children with hearing impairment have impairments mild enough to permit primary placement in regular classrooms. In addition, an audiologist may work with these children on phonology, auditory training, and language development, either within the regular classroom setting or for brief pullout periods. In a typical case, an audiologist should work with a child with hearing impairment for approximately 1 hour per week, and a typical audiologist can carry a case load of approximately 30 students. In 1993-94, there were 880 audiologist positions nationwide, and about 65,000 hearing-impaired children. About 1.3 percent of the national special education population falls into this category of disability (Wyoming, 1.5 percent). Thus, the expected incidence of hearing impaired children in a prototypical Wyoming elementary school should be about .4 (about one hearing impaired child for every two to three schools). Thus, the prototypical elementary school in Wyoming might expect to require the services of .005 FTE audiologist, or a district should require the services of a full time audiologist for every 200 prototypical elementary schools, based on national averages. Because Wyoming districts are relatively small and dispersed, we assume that half an audiologist's assignment in Wyoming will consist of travel time, and so we assume that a prototypical school, in a modified census-based special education program, might be funded in Part I for .01 FTE audiologists.

c) *speech or language impairment.* Most children with speech or language impairment can primarily be accommodated with the resources provided in regular classes with properly trained teachers. In addition, a speech pathologist may work with these children, either within the regular classroom setting or for brief pullout periods. In a typical case, a speech pathologist should work with a child with speech or language impairment for approximately 1 hour per week (for example, in three sessions of 20 minutes each), and a typical speech pathologist can carry a case load of approximately 25 students. This caseload permits time for the speech and language teacher to consult and advise the regular classroom teacher, where appropriate. Approximately 20.3 percent of the national special education population falls into this category of disability (Wyoming, 25.4 percent). Thus, the prototypical elementary school in Wyoming might expect to have approximately 6 children with speech or language disabilities, and might require the services of .25 FTE speech pathologists, or a district might require the services of one or more full time speech pathologists. Most districts in Wyoming are sufficiently large to spread the caseload of a speech pathologist across district schools, without requiring extensive travel time in addition.

d) *visual impairment, not including blindness.* Approximately half of one percent of the national special education population falls into this category of disability (Wyoming, half of one percent). Those not blind can usually be accommodated with the resources provided in a regular small class by appropriate seating arrangements and by the provision of aids like large-print books. A regular teacher can be trained to accommodate such children, with minimal coaching by a special education resource

specialist. Such children are present in a school so infrequently, and their accommodation so simple to effect, that we have not modeled additional resources for this accommodation in Part I, assuming it can be taken care of through the extensive professional development for regular teachers already provided for in this model, and through the coaching of regular teachers by specialists already provided for.

e) *serious emotional disturbance*. A child with serious emotional disturbance generally has an inability to learn that cannot be explained by intellectual, sensory or health factors, cannot maintain satisfactory interpersonal relationships with peers or teachers, has inappropriate behavioral reactions to normal situations and may suffer from pervasive unhappiness or depression. Approximately 8.7 percent of the national special education population falls into this category of disability (Wyoming, 8.2 percent). Some children with serious emotional disturbance may be suitable for accommodation in a regular classroom. If 1/3 of seriously emotionally disturbed children can be included in a regular classroom, a Wyoming prototypical elementary school might expect to accommodate, at most, one such child with its Part I resources. The regular teacher's accommodation of this child might be supplemented by the coaching of a trained resource specialist or school-wide resource teacher. If we assume that a resource specialist observes a teacher's interaction with each seriously emotionally disturbed child who is accommodated in this fashion, and/or if the specialist works with the student for two hours per week, and if there is approximately one seriously emotionally disturbed child accommodated in the regular classrooms of each prototypical elementary school, then each prototypical elementary school might require, at most, .07 FTE special education resource specialist teachers to work with seriously emotionally disturbed children.

f) *orthopedic impairment*. Almost all children with orthopedic impairment (from a congenital anomaly, from disease, or from other causes) can be accommodated in regular classes for instruction. If the orthopedic impairment does not interfere with participation in normal learning activities, then the primary accommodation such a child requires is adaptive physical education, aided by an adaptive physical education teacher. Such a specialist typically instructs children in adaptive physical education. For up to 1/2 hour per day, in groups of up to 5 students. Approximately 1.2 percent of the national special education population falls into this category of disability (Wyoming, 1.4 percent). If we assume that 3/4 of these children can be accommodated for most of the day in a regular classroom; this suggests an incidence of 1 such student in every 4 prototypical elementary schools in Wyoming. Thus, it is not practical to fund specific adaptive physical education teachers in the modified census-based special education funding system. A more practical approach is to train an existing resource teacher to impart adaptive physical education to children in need of it. Thus, we estimate that an adaptive physical education program for orthopedically impaired children might add less than 0.025 FTE to the prototypical elementary school special education resource teacher allocation. This allocation assumes that the resource teacher would have to work

individually with orthopedically impaired children, not in groups of 5 as would be the case in larger schools than those modeled in the prototype. (Of course some districts, especially larger ones, may find it advisable to hire a full-time adaptive physical education teacher out of its Part I and Part II funds, combined.)

g) *autism*. Autistic children may have an inability to use oral language for appropriate communication or to relate appropriately to other individuals; they may have obsession to maintain sameness, a preoccupation with objects or resistance to controls, may display peculiar motoric mannerisms and/or engage in self-stimulating or ritualistic behavior. Approximately six tenths of one percent of the national special education population falls into this category of disability (Wyoming, three tenths of one percent), and some have autism mild enough to make the accommodation of their disability in regular education an appropriate placement, without significant additional resources. In Wyoming's small classes, regular teachers can be trained to accommodate the needs of mildly autistic children, combined with coaching by a resource teacher. Because the numbers of such mildly autistic children are very small, we have not modeled additional resources in Part I for this accommodation, assuming it can be taken care of through the extensive professional development for regular teachers already provided for in this model, and through the coaching of regular teachers by specialists already provided for. Many children with moderate autism can also be accommodated with the resources provided in regular classes, but with significant additional resources, like an assigned aide. In general, aides and other resources in these cases could be paid for under Part II of the census-based block grant.

h) *traumatic brain injury*. Approximately two tenths of one percent of the national special education population falls into this category of disability (Wyoming, six tenths of one percent). In almost all cases, this disability is severe enough that children can be accommodated only with significant additional resources (such as an assigned aide). Therefore, we assume that the accommodation for such children will be paid for under Part II of the census-based block grant, and that schools will not provide resources for these accommodations out of Part I.

i) *other health impairment*. Children eligible for special education because of other health impairment are those whose health problems are severe enough to limit their strength, vitality or alertness and thus their ability to participate in regular education. Approximately 2.6 percent of the national special education population falls into this category of disability (Wyoming, 4.8 percent), and perhaps half of these have health problems severe enough to prevent their primary accommodation in a regular classroom. For those who can be so accommodated, a regular teacher in a small class, coached by a resource specialist, can provide most accommodations, with adaptive physical education also being required. We estimate that, for Part I, an additional .01 FTE of a resource specialist might be required for this coaching, and an additional .05 FTE of a resource specialist for adaptive physical education.

j) *specific learning disability*. As indicated earlier in this report (see note 13), there is considerable controversy regarding whether most cases of learning disability should properly be considered disability. The controversy is especially difficult to resolve because the identification of a learning disability often depends upon the subjective judgment of the psychologist who makes the assessment or the teacher who makes a referral. The National Institute of Child Health and Human Development found in a recent study, for example, that it is impossible to distinguish clearly between dyslexia and low reading achievement. "Dyslexia occurs along a continuum that blends imperceptibly with normal reading ability... [N]o distinct cutoff point exists."⁶⁷ One group of researchers found that, when the federally recommended definition of learning disability is applied (one standard deviation discrepancy between achievement and I.Q.), 40 percent of children are misclassified -- including learning disabled children who are not identified as eligible for special education, and non-disabled children who are classified as learning disabled.⁶⁸

One consequence of this variance in identification patterns is that, nationwide, wealthier districts are more likely to identify high percentages of learning disabled children, while poorer districts are more likely to have higher percentages of special education placements overall. This disparity may occur because programs for the learning disabled are more elastic (i.e., dependent on the availability of local revenue) than programs for children with other disabilities.⁶⁹

The conventional indication of a learning disability is a discrepancy between intellectual ability (i.e., I.Q.) and academic achievement.⁷⁰ However, a child with a learning *disability* should not be one who is a slow learner but one whose discrepant achievement is attributable to a processing disorder that manifests itself in an impaired ability to listen, think, speak, read, write, spell, or do mathematical calculations. Approximately half (51.3 percent) of the national special education population falls into this category of disability (Wyoming, 51.5 percent). Most, but not all learning disabled children can and should be accommodated primarily by regular education teachers in regular classrooms. In the Wyoming system, a properly trained regular teacher in a class of about 15 students should be able to accommodate the special needs of 2 learning disabled students in the classroom, supplemented by the coaching of a trained resource specialist or school-wide resource teacher. If we assume that a resource specialist observes a teacher's interaction with each learning disabled student for one hour per week, and if there are approximately 14 learning disabled children in each elementary school, then each prototypical elementary school might require .5 FTE special education resource specialist teachers for this purpose. Such an allotment would permit additional time for specialist-regular teacher conferences, and would also be also loose to the extent

⁶⁷ Cited in Reschly (1996), p. 45.

⁶⁸ Ysseldyke, et. al. (1982).

⁶⁹ Parrish (1996), p. 11.

⁷⁰ American Psychiatric Association guidelines suggest that a discrepancy should be at least one standard deviation to be considered indicative of a learning disability (Terman, et. al. 1996, p. 8).

that some learning disabled children cannot appropriately be accommodated primarily in regular classrooms, and would therefore most likely require accommodations sufficiently expensive to be funded in Part II of the census-based funding proposal.

k) *multiple disabilities*. Children who are categorized in more than one of the other special education categories are likely to be seriously enough disabled that accommodation of these children's disabilities in a small regular class of 15 students is not a probable placement. Therefore, assuming that children with multiple disabilities are more likely to have a special placement other than a regular class, for which full reimbursement will be provided to the district, we have not included any resources for accommodation of this condition in the illustration of Part I of the modified census-based funding system. Approximately 1.8 percent of the national special education population falls into this category of disability (Wyoming did not utilize this classification in 1995-96). Even if as many as 1/3 of these children could be accommodated with a placement that was primarily in a regular class, the incidence of such children with multiple disabilities would be no more than 1 child for every 5 prototypical elementary schools. There is enough flexibility in the modeled caseloads for other special education specialists to accommodate these children.

l) *deaf-blindness*. Children who are deaf or blind (as distinct from those who are hearing or visually impaired) are a tiny percentage of the total -- three hundredths of one percent of special education children nationally (and no classifications in Wyoming in 1995-96). They usually require placement in separate institutions. Therefore, their accommodation is not funded in the modified census-based special education block grant. To the extent any of these children can be accommodated in regular schools, their accommodation will almost certainly be sufficiently expensive to be funded under Part II.

Another category of disability, attention deficit hyperactivity disorder (ADHD) has been considered by Congress for inclusion as an eligible disability, but has not yet been included. In many cases, however, children with ADHD are also categorized with one of the twelve eligible disabilities, and so practically speaking receive services for ADHD.

Bibliography:

- Annie E. Casey Foundation, 1997. *Kids Count Data Book. State Profiles of Child Well-Being*. Baltimore, MD: The Annie E. Casey Foundation.
- Anthony, Patricia, 1992. "Individuals With Disabilities Education Act. The Legacy Continues." In Patricia Anthony and Stephen L. Jacobson, eds., *Helping At Risk Students. What Are the Educational and Financial Costs?* Newbury Park, CA: Corwin Press.
- CDOE (California Department of Education), 1997. *California Special Education Programs. A Composite of Laws. Nineteenth Edition*. Sacramento, CA: California Department of Education.
- Chambers, Jay and Thomas Parrish, 1994. "State Level Education Finance." In W. Steven Barnett, ed., *Cost Analysis for Education Decisions: Methods and Examples. Advances in Educational Productivity, Volume 4*. Greenwich, CT: JAI Press Inc.
- Chambers, Jay G., Thomas B. Parrish, Christine Hikido, 1996. *Special Education Expenditures and Revenues in a Census-Based Funding System: A Case Study in the Commonwealth of Massachusetts*. Palo Alto: CA: Center for Special Education Finance, American Institutes for Research
- Chambers, Jay G., Thomas B. Parrish, Joanne C. Lieberman, and Jean M. Wolman, 1998. *What Are We Spending on Special Education in the U.S.?* CSEF Brief No. 8. Palo Alto: CA: Center for Special Education Finance, American Institutes for Research
- Coles, Gerald, 1987. *The Learning Mystique*. New York: Pantheon.
- Feir, R. E., 1995. "Pennsylvania's Special Education Formula: Early Results." Paper prepared for presentation at the annual meeting of the American Education Finance Association meeting, Savannah, Georgia, March.
- Feir, Robert E., 1998. "Special Education Finance in Pennsylvania." In Chambers and Parrish, eds., *Funding Special Education*, 1998 AEFA Yearbook. Thousand Oaks, CA: Corwin Press (forthcoming).
- Fruchter, N, T. Parrish, and R. Berne, 1998. "Financing Special Education: Proposed Reforms in New York City." In Chambers and Parrish, eds., *Funding Special Education*, 1998 AEFA Yearbook. Thousand Oaks, CA: Corwin Press (forthcoming).

- Guthrie, James W. et. al., 1997. *A Proposed Cost Based Block Grant Model for Wyoming School Finance*, May; Sacramento, CA: Management Analysis and Planning Associates, L.L.C.
- Guthrie, James W. and James R. Smith, 1998. *Proposals for Funding the Education of Children with Special Needs in Wyoming*. April. Sacramento, CA: Management Analysis and Planning Associates, L.L.C.
- Hartman, W.T., 1995. "A Continued Analysis of Pennsylvania's New Funding System for Special Education." Harrisburg, PA: Pennsylvania Department of Education.
- Hartman, W.T., and T.A. Fay, 1996. *Cost Effectiveness of Instructional Support Teams in Pennsylvania*. Policy Paper Number 9. Palo Alto: CA: Center for Special Education Finance, American Institutes for Research
- Hocutt, Anne M., 1996. "Effectiveness of Special Education: Is Placement the Critical Factor?" In Richard E. Behrman, ed., *The Future of Children. Special Education for Students With Disabilities*. Los Altos, CA: Center for the Future of Children.
- Kaleba, Daniel R. and Thomas B. Parrish, 1998. "Movement Toward Census-Based Funding Continues Amidst Questions." *CSEF Newsletter*, DRAFT, January 26. Palo Alto: CA: Center for Special Education Finance, American Institutes for Research
- Lewitt, Eugene M. and Linda Schuurmann Baker, 1996. "Children in Special Education" In Richard E. Behrman, ed., *The Future of Children. Special Education for Students With Disabilities*. Los Altos, CA: Center for the Future of Children.
- Lyon, G. Reid, 1996. "Learning Disabilities." In Richard E. Behrman, ed., *The Future of Children. Special Education for Students With Disabilities*. Los Altos, CA: Center for the Future of Children.
- Montgomery, Deborah L. and Michele De Sera, 1996. *A Profile of Special Education Finance Reform in Pennsylvania*. Palo Alto: CA: Center for Special Education Finance, American Institutes for Research, State Analysis Series, August.
- Moore, M.T., E.W. Strang, M. Schwartz, and M. Braddock, 1988. *Patterns in Special Education Service Delivery and Cost*. Washington, D.C.: Decision Resources Corporation.
- NCES (National Center for Education Statistics), 1998. *Digest of Education Statistics 1997*. Washington, D.C.: U.S. Department of Education.

- O'Reilly, Fran, 1993. *State Special Education Finance Systems, 1992-93*. Palo Alto: CA: Center for Special Education Finance, American Institutes for Research.
- Parrish, T., 1994. *Fiscal Policies in Special Education: Removing Incentives for Restrictive Placements*. Policy Paper No. 4., October. Palo Alto: CA: Center for Special Education Finance, American Institutes for Research
- Parrish, T., 1996. *Special Education Finance: Past, Present and Future*. Policy Paper No. 8. Palo Alto: CA: Center for Special Education Finance, American Institutes for Research
- Parrish, Thomas B., and Jay G. Chambers, 1996. "Financing Special Education." In Richard E. Behrman, ed., *The Future of Children. Special Education for Students With Disabilities*. Los Altos, CA: Center for the Future of Children.
- Parrish, T.B., and D.L. Montgomery, 1995. *The Politics of Special Education Finance Reform in Three States*. Palo Alto: CA: Center for Special Education Finance, American Institutes for Research [Cited in Montgomery and DeSera 1996]
- Parrish, Thomas B., Fran O'Reilly, Ixtlac E. Duenas, and Jean Wolman, 1997. *State Special Education Finance Systems, 1994-95*. Palo Alto: CA: Center for Special Education Finance, American Institutes for Research, June.
- Parrish, Thomas B. and Deborah A. Verstegen, 1994. *Fiscal Provisions of the Individuals with Disabilities Education Act: Policy Issues and Alternatives*. Palo Alto: CA: Center for Special Education Finance, American Institutes for Research, Policy Paper Number 3, June.
- Reschly, Daniel J., 1996. "Identification and Assessment of Students with Disabilities." In Richard E. Behrman, ed., *The Future of Children. Special Education for Students With Disabilities*. Los Altos, CA: Center for the Future of Children.
- Rossmann, Gretchen B., 1992. "State Policy for Integrating All Students." In Patricia Anthony and Stephen L. Jacobson, eds., *Helping At Risk Students. What Are the Educational and Financial Costs?* Newbury Park, CA: Corwin Press.
- Rothstein, Richard, 1997. *Where's the Money Going? Changes in the Level and Composition of Education Spending, 1991-96*. Washington, D.C.: Economic Policy Institute
- Spear-Swerling, Louise, and Robert J. Sternberg, 1998. "Curing Our 'Epidemic' of Learning Disabilities." *Phi Delta Kappan*, January, 397-401.

- Terman, Donna L., Mary B. Lerner, Carol S. Stevenson, and Richard E. Behrman, 1996. "Special Education for Students With Disabilities: Analysis and Recommendations." In Richard E. Behrman, ed., *The Future of Children. Special Education for Students With Disabilities*. Los Altos, CA: Center for the Future of Children.
- U.S.D.O.E. (U.S. Department of Education), 1997. *To Assure the Free Appropriate Public Education of All Children with Disabilities. Nineteenth Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act*. Washington, D.C.
- Verstegen, Deborah, 1994. *Fiscal Provisions of the Individuals with Disabilities Education Act: Historical Overview*. Palo Alto: CA: Center for Special Education Finance, American Institutes for Research, Policy Paper Number 2, June.
- Verstegen, Deborah, 1998a. "New Directions in Special Education Finance Litigation." DRAFT.
- Verstegen, Deborah, 1998b. "Landmark Court Decisions Challenge State Special Education Funding." *CSEF Brief No. 9*, February. Palo Alto: CA: Center for Special Education Finance, American Institutes for Research
- Verstegen, Deborah A. and Cynthia L. Cox, 1992. "State Models for Financing Special Education." In Patricia Anthony and Stephen L. Jacobson, eds., *Helping At Risk Students. What Are the Educational and Financial Costs?* Newbury Park, CA: Corwin Press.
- Verstegen, Deborah, Thomas B. Parrish, and Jean M. Wolman, 1997-98. *A Look at Changes in the Finance Provisions for Grants to States Under the I.D.E.A. Amendments of 1997*. The CSEF Resource, Winter. Palo Alto: CA: Center for Special Education Finance, American Institutes for Research
- Wyoming Department of Education, 1996. *Statistical Report Series No. 2. 1995 School Districts Fall Report of Staff, Teachers/Pupils/Schools, and Enrollments*. Cheyenne, WY: Wyoming Department of Education.
- Ysseldyke, J., B. Algozzine, M. Shinn, and M. McGue, 1982. "Similarities and Differences Between Low Achievers and Students Classified Learning Disabled." *The Journal of Special Education*, 16 (1), 73-85.

Table 1.

**Children (Ages 6-21) In Special Education Placements,
As % of All Enrolled Students
1995-96**

	Percent	Rank
U.S. (50 States + D.C.)	11.2%	
Wyoming Region (7 states)	10.0%	
Alaska	7.9%	1
Arizona	8.4%	2
Idaho	8.5%	3
California	9.2%	4
South Dakota	9.2%	5
Colorado	9.2%	6
Montana	9.3%	7
Utah	9.4%	8
Wyoming	9.4%	9
North Dakota	9.5%	10
Colorado	9.6%	11
Nebraska	9.9%	12
Utah	10.0%	13
Montana	10.0%	14
North Carolina	10.2%	15
Arkansas	10.2%	16
Mississippi	10.3%	17
Alabama	10.3%	18
West Virginia	10.4%	19
Florida	10.5%	20
Georgia	10.6%	21
South Carolina	10.8%	22
Louisiana	10.9%	23
Wyoming	11.0%	24
Illinois	11.0%	25
Minnesota	11.0%	26
Wisconsin	11.2%	27
Michigan	11.3%	28
Indiana	11.4%	29
Ohio	11.8%	30
Missouri	11.8%	31
Kentucky	11.9%	32
West Virginia	11.9%	33
Virginia	11.9%	34
North Carolina	12.0%	35
Alabama	12.0%	36
Georgia	12.2%	37
South Carolina	12.3%	38
Nebraska	12.4%	39
Arkansas	12.5%	40
Alabama	12.6%	41
Mississippi	12.7%	42
Florida	13.0%	43
Alabama	13.0% ¹	44

Table 2.

**Children (Ages 6-21) Classified as Having Specific Learning Disabilities, 1995-96
(Ranked as % of All Enrolled Students)**

	As % of All Enrolled Students	Rank	As % of All Special Ed Students
U.S. (50 States + D.C.)	5.8%		51.3%
Wyoming Region (7 states)	5.3%		52.8%
VT	3.0	1	32.1
ME	3.3	2	32.0
NH	4.0	3	51.1
MA	4.3	4	44.8
RI	4.3	5	37.9
CT	4.5	6	43.4
NY	4.5	7	43.2
PA	4.6	8	46.4
South Dakota	4.6%	9	50.2%
ND	4.6	10	49.5
WY	4.7	11	45.5
MT	4.7	12	43.0
WV	4.8	13	57.4
OH	4.9	14	47.7
IN	4.9	15	44.7
IL	5.0	16	48.2
Idaho	5.0%	17	58.9%
OR	5.1	18	42.9
Colorado	5.1%	19	53.6%
UT	5.1	20	42.7
WZ	5.3	21	42.4
Nebraska	5.3%	22	42.9%
KS	5.4	23	50.4
MO	5.4	24	47.5
IA	5.4	25	59.2
OK	5.6	26	60.8
Utah	5.6%	27	56.2%
Wyoming	5.7%	28	51.5%
AK	5.7	29	47.2
Montana	5.7%	30	57.1%
SD	5.8	31	53.7
ND	5.8	32	52.1
WY	5.9	33	44.7
MT	6.0	34	50.5
WV	6.1	35	64.2
OH	6.1	36	51.1
IN	6.1	37	51.3
PA	6.1	38	47.1
NY	6.2	39	45.7
MA	6.3	40	52.9
VT	6.6	41	50.4

Table 3a.
Learning Disabled (LD) Children (Ages 6 - 21),
Placed in Regular Classrooms
Wyoming Region

	1995-96 Wyoming Region Total	1995-96 Wyoming Region Total	1994-95 Wyoming Region Total
Wyoming	508	5103	4103
Albany	53	528	599
Big Horn	51	536	741
Cheyenne	50	589	725
Converse	57	571	518
Devil	53	429	633
East	46	502	671
North	56	562	370
South	57	515	528

Table 4.
Special Education Placements
Regular Class, Resource Room, Special Class
Wyoming Region
Children Ages 6 - 21
1994-95

	Percent of Children Eligible for Special Education Who Were:		
	In Regular Classes	In Resource Rooms	In Special Classes
0 0 0050 0 0 0 0 0 0 0 0	44 ⁸	28 ⁵	22 ⁴
0 0 0 0 0 0 0 0 0 0	59 ³	25 ⁵	11 ⁶
0 0 0 0 0 0	71 ⁰	16 ⁶	8 ⁵
0 0 0 0	68 ⁰	23 ⁴	7 ⁶
0 0 0 0 0 0	56 ¹	31 ¹	10 ³
0 0 0 0 0 0 0	60 ²	24 ⁸	11 ⁶
0 0 0 0 0 0 0 0 0	64 ⁴	25 ¹	6 ³
0 0 0	40 ²	35 ⁰	20 ⁰
0 0 0 0 0	56 ²	33 ¹	8 ³