

Allocating the Resources

Developing a Vocational Cost Adjustment to the Wyoming Education Resource Block Grant Model

*A report prepared for the
Wyoming Department of Education*

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Steven Klein
Gary Hoachlander
Rosío Bugarín
Elliott Medrich

MPR Associates, Inc.
Berkeley, CA

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Background

State funding is delivered to Wyoming school districts through a cost-based block grant model that provides districts with sufficient resources to deliver a legislatively specified “basket” of education services. Although the model accounts for costs associated with various instructional strategies, it does not include a specific component for vocational education. Instead, costs for all programs are averaged statewide—including academic and vocational curricula—and incorporated into a base, per-ADM (average daily membership) student allocation that compensates districts for the cost of educating students, adjusted for student and district characteristics. Ruling that the block grant model could penalize schools with extensive vocational programs, in February 2001 the Wyoming Supreme Court, reversing earlier trial court rulings, directed the state to modify its school finance formula to account for the actual cost districts face in providing vocational teachers and equipment.

To comply with this ruling, in the spring of 2001 the state contracted with MPR Associates, Inc., an education research and policy firm based in Berkeley California, to collect and analyze statewide data on district expenditures for vocational education. Analysis revealed that, although vocational teachers are no more expensive to employ than other types of instructors, the smaller class sizes associated with vocational education and the costs of equipping and supplying vocational classrooms can drive up the price of vocational services.

Noting that tracking expenditures provides little assurance that district spending is either efficient or justifiable, MPR proposed that the state adopt a resource allocation strategy conditioned on actual student participation in vocational education. Under this approach, districts would be compensated based on the number of vocational ADM students enrolling in state-approved district programs, weighted to take into account the relatively higher cost of providing them with vocational instruction.

Acting on MPR’s recommendation, in March 2002 the Wyoming legislature commissioned a study to develop a mechanism for distributing vocational education resources based on the number of students participating in vocational programs. In June 2002, the Wyoming Department of Education again contracted with MPR to perform this work. Study parameters called for the development of minimum pro-

gram criteria and guidelines to identify vocational programs, review of program delivery and structure to support the most cost-effective use of resources within schools, and the collection of data on student participation in, and district expenditures for, vocational education.

To ensure that study recommendations were both accurate and representative, MPR structured its research approach to secure the involvement of stakeholders throughout the state. Study components included (1) establishing an advisory panel of school, district, state, and national experts, (2) collecting data on student participation in vocational courses and on district expenditures for vocational equipment and supplies, (3) conducting site visits to 16 representative school districts to document district fiscal records, and (4) reviewing national data on vocational education funding and delivery.

Integrating state- and district-reported data with feedback obtained from advisory panelists and district administrators, MPR modeled state options for allocating vocational resources through the existing education resource block grant model. In addition to compensating schools for the higher unit cost of staffing vocational classrooms, MPR structured the funding formula to accommodate a minimum program standard to ensure that all schools receive sufficient resources to offer quality programs. MPR also considered different approaches for allocating equipment and supply funding to support vocational instructors in providing quality instruction.

This paper presents our findings. It opens with a discussion of the state's obligation for funding vocational services and outlines the conceptual framework underlying model design. A description of the procedure used to weight student participation in vocational education is also provided. Section 2 summarizes the process used to build the funding model and arrays a set of recommendations governing model operation. Section 3 summarizes district data on vocational enrollment and equipment and supply expenditures for the 2001–02 school year. These data are used to model competing funding scenarios that the state may use to distribute vocational resources among populations, which are presented in section 4. The report closes with a summary of issues the legislature will need to address if the state is to successfully transition to the proposed funding mechanism.

Section 1: Building the Model

In February 2001, the Wyoming Supreme Court directed the state to modify its school finance formula to account for the cost of providing vocational education services to students. Asserting that the adoption of a new statewide funding system was not intended to reduce existing programs, the Court concluded that basing vocational funding on average statewide education expenditures would penalize schools with extensive vocational programs. To correct this deficiency, the state was ordered to develop a procedure for distributing resources that both accounts for the additional cost of providing vocational education and recognizes variation among schools in the intensity of services provided. This section reviews the state's obligation in funding vocational education and outlines a procedure for compensating districts based on the extent of vocational services offered within secondary schools.

Accounting for the Cost of Vocational Education

Findings from an earlier MPR study *What Does It Cost? An Analysis of Annual Statewide Expenditures for Vocational Education in Wyoming* (Klein, Bugarin, and Hoachlander 2001) suggest that the higher costs associated with vocational education are due to the smaller class sizes and more expensive equipment and supplies used to deliver instruction. Smaller class sizes can drive up costs, in part because students do not generate sufficient resources through the block grant model to offset the cost of employing their instructors.

Study results indicated that roughly 90 percent of vocational expenditures in the 2000–01 school year were tied to instructor salaries and benefits, meaning that class size likely accounts for a substantial proportion of the added cost of providing vocational services. The study also found that district expenditures for equipment and supplies comprised less than 10 percent of statewide vocational spending. While it is possible that expenditures documented in the MPR study underestimated districts' actual needs, because either local administrators underreported purchases or were unable to buy the materials they desired, it is unlikely that more accurate measurements would substantially change observed spending proportions.

To comply with the Court's directive to link funding to the extent of district program offerings, the Wyoming legislature called for development of a mechanism within the education resource block grant model to distribute vocational resources based upon the number of students participating in vocational education. To ensure that districts are fairly compensated for their cost in staffing vocational classrooms, the state will need to differentially fund students participating in vocational education. This can be accomplished by assigning a greater weight in the block grant formula for each full-time-equivalent (FTE) student participating in vocational coursework.

While there is a fixed cost to offering any vocational education, economies of scale could lead the state to over-compensate larger districts if equipment and supply funding were allocated on a weighted, per-student basis. This is because, once outfitted, a vocational classroom can be used for multiple class periods. Conversely, smaller districts may have difficulty generating sufficient student participation to outfit even a single classroom. A more cost-efficient approach would be to link funding to the number of FTE vocational instructors employed in a district: each full- or part-time instructor would generate a flat grant that could be applied to equipment and supply purchases. A funding floor, based on a state-established minimum number of vocational programs, would ensure that small districts and schools were equitably compensated.

Targeting Resources Based on Student Participation

On average, the education resource block grant model provides all school districts with adequate funding to provide an agreed-upon basket of education services, including vocational education. Since vocational funding is distributed on an average cost basis, some districts receive more resources than are necessary to satisfy student demand; conversely, districts with more extensive services do not receive sufficient funding to simultaneously satisfy student demand and maintain program quality. To rectify this problem, the Supreme Court directed the state to rebalance its resource allocation so that districts are compensated based on the extent of their program offerings.

Concentrating funding on districts with above-average resource needs can be accomplished by allocating resources based on the number of ADM students participating in vocational education. To ensure that districts are compensated for their

actual cost of providing services, the state should differentially fund vocational and nonvocational students, such that each ADM vocational student is weighted in the block grant formula to generate greater resources than ADM students participating in other types of instruction.

Weighted cost factors function by mathematically inflating the number of students participating in vocational coursework—calculated on a FTE basis—to increase an agency’s resource eligibility.¹ States employing weighted formulas typically specify an average vocational weight that is applied across all students participating in vocational education, irrespective of the program area or the level of coursework (i.e., introductory or advanced) in which a student participates.

Applying an average, weighted adjustment assumes that all districts will be able to generate sufficient resources to support vocational services. Very small, geographically isolated schools, however, may have difficulty enrolling large numbers of students in vocational coursework, meaning their resource eligibilities may fail to reach a threshold level for supporting programs. Consequently, an average weighted adjustment, uniformly applied, could penalize small districts and schools by restricting the type of programs or specificity of skill instruction that they can offer.

Applying a Minimum Program Standard

To avoid penalizing districts due to factors outside their control, the state could adopt a continuous weighting system that would provide all institutions, and particularly geographically isolated small schools, with sufficient resources to offer a minimal level of vocational services. Under this approach, the magnitude of the weighted adjustment would be inversely related to institutional enrollment: smaller agencies would qualify for a larger per-FTE vocational student weight, assuring that even a small number of students would generate a relatively large resource eligibility.

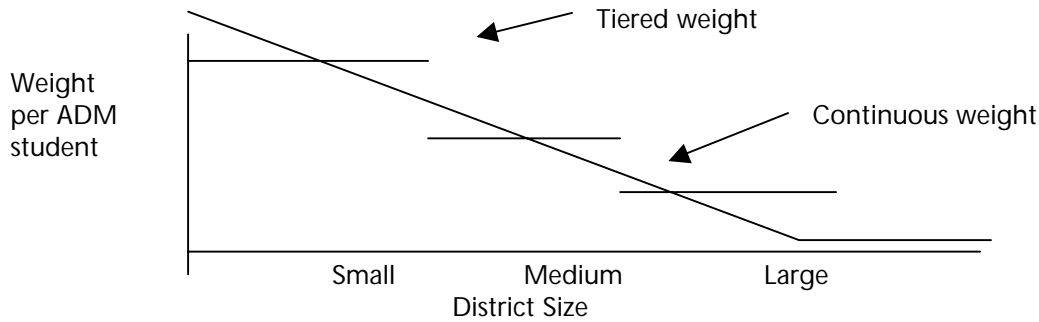
Due to their economies of scale, larger districts would qualify for a smaller per-FTE vocational student weight, although this weight would never fall below 1.29 per ADM vocational student—the state ratio of average academic to vocational class size.

¹Wyoming school districts do not currently collect data on the number of FTE students participating in vocational coursework. For study purposes, MPR researchers calculated districts’ FTE vocational student populations using district-reported enrollment data; accordingly, an FTE vocational student is analogous to an ADM student who took all of his or her coursework in the vocational curriculum. In reality, these students are composites.

While use of such a differentiated weighting system appears to favor smaller schools, since their per-FTE student allocation would be greater than other agencies, in practice the system equitably compensates these schools for the greater costs they face in staffing classrooms.

There are various strategies for differentiating funding among districts. One approach would be to adopt a tiered weighting system, with discrete weights applied to schools of differing student enrollments (see figure 1). For example, small schools might receive the greatest weight, medium-sized schools a slightly lower weight, and large schools the lowest weight. The magnitude of these weights could be calculated based on average expenditures within each grouping.

Figure 1: Approaches for weighting students participating in vocational education



One drawback with this approach is that it can lead to what are known as “funding cliffs” within the formula. In the extreme, a change in only one ADM student could result in a gain or loss of thousands of dollars to an individual school. Moreover, since such a model does not take into account differences among districts within an individual tier, districts providing services above or below the averaged tier weight would not be fairly compensated for their program offerings.

A preferred strategy for recognizing differences across schools would be to apply a continuous weight to students participating in vocational education. Ideally, the weight used in the formula would reimburse districts for the average cost of providing an agreed-upon, minimum level of vocational instruction, taking into account factors that affect the cost districts and schools face in delivering services.

To assess how such a continuous weighting system might operate, MPR mathematically modeled the effects of school size and program offerings on the magnitude of

the per-FTE vocational student weight. Model operation is premised on a number of assumptions, including that

- all seniors complete an average of 25.1 credits during high school, of which 4.0 are vocational,²
- class sizes average 16.7 students in academic and 13.0 in vocational classes,
- teachers are in classrooms an average of 5 classes per day and have 1 planning period, and
- each vocational program area requires a minimum of a 1.0 FTE vocational instructor.³

Based on these criteria, all schools with 66 or more students would, on average, be able to provide instruction in a minimum of one vocational program area, and do so with a weight of 1.29 per-FTE vocational student (see table 1). Schools with less than 66 ADM students would receive additional weighting to compensate for the smaller class sizes they would offer, with the size of the adjustment rising as school ADM declined.

Increasing the minimum number of vocational programs within schools will necessarily increase state investment in vocational education. This will occur because, in addition to increasing staffing needs, the average class size of vocational instructors falls with the addition of each new program area. For example, if the minimum number of programs offered within schools were increased from one to two, then vocational students in schools with fewer than 131 students would be assigned a proportionally larger weight to ensure that they would generate sufficient resources to offset their instructional cost. Thresholds for supplemental weighting would rise to 196 students if the minimum program standard were set at three programs, and 261 students if set for four vocational programs.

²Estimates of the number of vocational courses completed by high school seniors are based on national transcript data compiled by the U.S. Department of Education (Snyder and Hoffman 2001, table 138). Data on course completion by Wyoming high school seniors are not routinely collected by the state. Collecting this data would impose a substantial data burden on school districts and require a significant investment of state resources. Since the purpose of estimating course completion is to establish thresholds for applying the minimum program standard criteria, national data should provide a reasonably good approximation for this purpose.

³While districts should be encouraged to undertake cost-saving strategies, labor market constraints and scheduling conflicts may make it difficult for all districts to employ such approaches. For example, while it would be beneficial to have a full-time vocational instructor who could teach in two or more program areas or a half-time instructor who could teach a full program of courses, a dearth of qualified instructors statewide often makes it difficult to find any teacher, much less one with such specialized characteristics.

Table 1: Size of the weighted vocational adjustment and average vocational class size, by school or district ADM and minimum number of vocational programs

School or District ADM	Number of Programs							
	1 program		2 programs		3 programs		4 programs	
	Weight	Class Size	Weight	Class Size	Weight	Class Size	Weight	Class Size
66	1.29	13.0	2.54	6.6	3.80	4.4	5.07	3.3
131	1.29	13.0	1.29	13.0	1.92	8.7	2.56	6.5
196	1.29	13.0	1.29	13.0	1.29	13.0	1.71	9.8
261	1.29	13.0	1.29	13.0	1.29	13.0	1.29	13.0

The minimum program standard adjustment is only intended to compensate small schools that would otherwise be unable to support vocational services using a 1.29 FTE vocational student weight. Accordingly, schools with ADM levels above that predicted in the minimum funding model would not qualify for continuous weighting, since they would be able to maintain average class sizes at 13.0 students, based on the 1.29 vocational student weight.

One consequence of increasing the minimum number of vocational programs offered within schools is that average vocational class sizes will fall below 13.0 students for all schools beneath the threshold student level. Under a four-course minimum program, for instance, vocational class sizes in schools with less than 261 ADM will fall below 13.0 students, below 6.5 students in schools with less than 131 ADM, and below 3.3 students in schools with less than 66 ADM students (see table 1). The challenge, then, lies in balancing equity against cost considerations.

To assess how this weighting system would be incorporated into the funding model, as well as how the model itself might operate, the following section arrays a set of criteria and guidelines that the legislature should consider adopting to structure resource allocations.

Section 2: Recommendations Governing Model Operation

Resource allocation models contained in this report will offer the Joint Education Interim Committee of the Wyoming legislature a rationale for establishing a vocational adjustment to the education resource block grant model. Finalizing a distribution mechanism will require that the legislature institutionalize a set of criteria and guidelines governing model operation. This section summarizes the process used to build the funding model and arrays a set of recommendations for structuring resource allocation within the block grant model.

Building the Funding Model

The vocational education cost adjustment compensates districts for the marginal cost of educating students participating in vocational education. Recognizing that districts' resource eligibilities will be a function of how vocational education is defined and delivered, the Wyoming legislature charged MPR with formulating a set of criteria and guidelines governing model operation. What follows is a description of the process MPR used to formulate the vocational adjustment and the assumptions the firm adopted to focus model development.

Questions for Consideration

STEP 1
Calculate Student
Participation in
Vocational Education



STEP 2
Apply the Weighting
Criteria



STEP 3
Clarify Assumptions
Underlying Formula
Operation

- *What coursework qualifies for vocational funding?*
- *Should middle/junior high school students be included in the adjustment?*

- *How should vocational education participants be counted?*
- *What is the minimum number of vocational programs that should be offered within schools?*

- *How can cost effectiveness be ensured?*

STEP 1A: COURSEWORK QUALIFYING FOR VOCATIONAL FUNDING

► RECOMMENDATIONS

Base funding on vocational coursework taught by vocationally endorsed instructors.

Adopt a waiver process to accommodate districts offering career development coursework that is

1. recognized as vocational in content, but taught by a non-vocationally endorsed instructor;
2. recognized as vocational in content and is taught by a vocationally endorsed instructor, but consists of less than three sequential courses or cluster of courses in a program area; or
3. recognized as vocational in content, but is taught by a vocational endorsed instructor in an area out of his or her endorsement area.

► BACKGROUND

Since district administrators have considerable flexibility in defining what constitutes vocational education, MPR has classified vocational coursework based on the assignment area of the primary course instructor. Only career development coursework taught by a vocationally endorsed instructor—one classified with a state-recognized vocational education assignment code—is eligible for supplemental state funding under the resource block grant model. Qualifying assignments are shown in the following list.

VOCATIONAL EDUCATION ASSIGNMENT CODES

<u>Code</u>	<u>Meaning</u>	<u>Code</u>	<u>Meaning</u>
ABO	Auto Body	INA	Industrial Arts/Technology Education
AGR	Agriculture	MKT	Marketing
AUT	Auto Mechanics	RUM	Radio/TV/Media Tech
AVE	Aviation	TAM	Trade-Auto Mechanics
BES	Business Ed (ex: Shorthand)	TBT	Trade-Building Trade
BET	Business Ed (ex: Typing)	TDR	Trade-Drafting
BLD	Building Trades	TEE	Technical Education
BTS	Business Ed (ex: Typing & Shorthand)	TEL	Trade-Electronics
BUS	Business Education	TET	Trade-Electrical
CVE	Cooperative Education	TGR	Trade-Graphics
DRF	Drafting	TMA	Trade-Machine Shop
DST	Distributive Education	TME	Trade-Mechanics
ELC	Electronics	TRI	Trade and Industrial Education
HEO	Health Occupations	TWE	Trade-Welding
HME	Home Economics	TWW	Trade-Woodworking
		WEL	Welding

NOTE: Vocational Education Assignment Codes are drawn from the WDE-602 Staff Assignment Report. In practice, the Wyoming Department of Education will need to develop criteria and guidelines for determining whether vocational coursework taught by a vocational educator falls within a specified endorsement area.

Since vocationally endorsed instructors may teach a variety of coursework, not all of which is vocational in content, the state will need to specify guidelines that limit the scope of coursework to subjects traditionally recognized as vocational. Current practice excludes certain elective courses, such as art or photography that, even if taught in smaller class sizes or using capital intensive materials, are not intended to prepare students to follow a career pathway. One approach would be to define vocational coursework as:

Vocational Course—career development instruction that aligns with the *Wyoming Career/Vocational Education Content and Performance Standards* and is taught by a teacher holding an endorsement in a vocational assignment area associated with the subject.

Given that not all districts rely on vocationally endorsed instructors to teach courses with vocational content, the legislature could choose to accommodate districts offering vocational coursework taught by non-vocationally endorsed teachers.⁴ To do so,

⁴Statewide data indicate that only 5 percent of secondary vocational instructors for whom assignment codes were available did not have a vocational endorsement (22 of 447), suggesting that a waiver will have relatively little effect on state spending. See appendix A for the number of instruc-

the legislature should direct the Wyoming Department of Education to develop criteria for issuing vocational waivers so that districts may petition to include courses that might not otherwise qualify for state funding.

Waiver criteria should take into account how proposed courses align with the state's *Career/Vocational Content and Performance Standards*, document how class sizes and specialized equipment needs contribute to making these elective courses more expensive than other forms of instruction, and detail the experiences of non-endorsed staff that qualify them to teach classes. To encourage staff to pursue endorsement, districts should be allowed a grace period of up to two years for an instructor to obtain a recognized vocational endorsement; after this time, districts would need to re-apply for waiver approval.

What Constitutes a Vocational Program?

The weighted, per student adjustment to the funding formula is designed to compensate districts for the average cost of providing a comprehensive program of vocational services; one that includes both introductory as well as advanced skill instruction. Since class size tends to fall as the specificity of skill instruction rises, the state will need to develop criteria to ensure that districts do not profit by offering only low cost, high enrollment courses.

To address federal accountability provisions contained in the Carl D. Perkins Vocational and Applied Technology Education Amendments of 1998, the state has identified a vocational concentrator as a student who has taken three or more semester courses in a vocational program, including those who may be currently enrolled in their third course. This existing state definition can serve as a basis for establishing guidelines detailing eligible coursework for reimbursement through the state funding formula. One possible definition could be:

Vocational Program—a sequence of three or more vocational courses in a vocational program or career cluster area that provides an individual with the technical knowledge/skills/proficiencies to obtain paid or unpaid employment in current or emerging occupations and/or to pursue advanced skill training.

tors reported by districts as teaching vocational coursework, by district and teacher endorsement area.

Again, the Wyoming Department of Education could consider instituting a waiver process to permit districts to receive credit for programs of less than three courses in a sequence or career cluster area, or for articulated coursework offered at the postsecondary level. Criteria used for program approval should take into account how the indicated course sequence or cluster prepares students for employment or further education, and, where appropriate, document how class sizes and specialized equipment needs make these courses more expensive to provide than other forms of instruction.

STEP 1B: MIDDLE AND JUNIOR HIGH SCHOOL VOCATIONAL INSTRUCTION

► RECOMMENDATION

Provide supplemental compensation only for vocational instruction offered in grades 9–12.

► BACKGROUND

Vocational education offered at the middle and junior high school levels can help students understand the career opportunities that await them, as well as the knowledge, skills, and abilities required to succeed in the world of work. Middle grades instruction—typically offered in grades 6–8—can also play an important role in reducing dropout rates by providing students with a context in which they may ground their academic instruction, while introducing them to coursework that they can pursue upon entering a secondary institution.

Should Vocational Coursework Count at the Middle and Junior High Levels?

Although vocational instruction offered in the middle grades can contribute to students' educational success, class size data collected by MPR indicate that the cost of staffing junior high school classrooms is not significantly greater than in other instructional areas.⁵ Class sizes of junior high school students enrolled in academic coursework—including mathematics, English, science, and social studies—averaged 16.4 students in the 2001–02 school year, compared to 16.3 students in vocational coursework—less than a 1.0 percent difference.⁶ *Since districts do not incur substantially*

⁵While junior high school teachers are required to hold a vocational endorsement, middle school teachers typically hold a general education certification, meaning that it was not possible to quantify students participating in middle school coursework that is vocational in content.

⁶These average class size estimates are based on actual scheduling data collected from 22 school districts. While a statewide estimate of the academic to vocational student-instructor ratio for junior

greater costs to provide vocational education, there is no justification for providing schools or districts with supplemental funding to provide vocational education.

The Wyoming education resource block grant model currently compensates districts for the cost of providing a range of education services at the middle and junior high school levels, including academic as well as vocational instruction. As such, it is likely that, on average, the existing formula appropriately compensates districts for the cost of staffing vocational classrooms. This is because savings associated with lower cost instruction, such as physical education, offsets the expense of providing slightly higher cost programs, such as vocational education.

While students of all ages can benefit from applied learning opportunities offered in a career context, the literature on vocational education in the middle grades indicates that specific occupational training—typically associated with high cost vocational programs—is not appropriate for students at this level (Kerka 2000). Instead, most researchers favor keeping instruction broadly defined to encourage students to explore their career choices and question how school relates to their future life plans.

Focusing instruction around broad, career exploratory curricula has implications for the cost of equipping and staffing vocational classrooms. Based on district-reported data, spending for vocational equipment and supplies averaged \$3,325 per FTE vocational instructor in the junior and middle school grades. In comparison, the prototypical model allocates \$3,518 per personnel unit for grade 6–8 instruction, suggesting that, on average, spending for vocational equipment and supplies does not exceed the average amount budgeted per instructor.⁷

high schools is somewhat higher—17.5 students compared to 16.3 students, respectively—the academic class size calculation cited above provides a fairly accurate representation of average academic and vocational class sizes, and if data existed for all schools, would be the preferred way of quantifying average vocational and academic class sizes.

⁷MPR was unable to calculate expenditures for non-vocational instruction offered in the middle and junior high school grades, in part because of the difficulty of identifying middle school vocational instructors, and in part because complete expenditure data were not reported by all districts. In comparing spending for equipment and supplies at the secondary level, MPR calculated that, on average, districts spent \$6,130 per FTE vocational instructor; in comparison, the prototypical model for grades 9–12 allocates \$4,532 per personnel unit, suggesting that vocational equipment and supply expenditures are greater at the secondary level.

STEP 2A: COUNTING FTE VOCATIONAL STUDENTS

► RECOMMENDATION

The Wyoming Department of Education should collect annual data on the number of grade 9–12 students participating in vocational education, issue guidelines to assist districts in calculating student participation on an FTE basis in schools, and develop audit procedures to verify district reports.

► BACKGROUND

The existing education block grant resource model is based on ADM student enrollment, meaning that the state does not have data on student participation in vocational education on an FTE basis. To generate these data, the Wyoming Department of Education will need to develop an annual data collection instrument and instructions to assist schools and districts in reporting student participation in vocational education on an FTE basis. The state will also need to develop an audit process to ensure that district counts of student participants are valid and reliable, and that the conversion of these counts into an FTE student basis is performed correctly.

How Should FTE Counts Be Generated?

The process used by MPR to quantify FTE vocational students can serve as a model for instrument development. This process entailed:

1. Multiplying course enrollments by the number of times the course met each week
2. Multiplying this total by the number of minutes within a class period
3. Dividing the result by 60 to convert student participation into an hourly basis
4. Summing across courses to estimate the total number of vocational contact hours within a school
5. Multiplying this sum by 35, the number of weeks in the school year

6. Dividing the total by 1,100, the number of contact hours in a school year
7. Dividing the result by 2, to adjust for fall and spring semesters, to obtain FTE vocational students.⁸

To ensure that 9th-grade students attending a junior high school are included in districts' secondary allocation formula, the state will also need to collect data on FTE students in 9th grade participating in qualifying vocational coursework. Since these students may choose to enroll in any high school within a district, counts of 9th-grade FTE vocational students should be estimated districtwide and funded at 1.29 per-FTE student weight, with resources provided to the district for use at local discretion.

While it would be possible to adopt a three-year rolling vocational FTE count to insulate schools and districts from sudden declines in student participation in vocational education, in the interests of reducing data burden, MPR confined its data request to students participating in vocational education during the 2001–02 school year. Since there are valid arguments for basing funding on either a three-year rolling average or prior year funding, MPR recommends that the legislature employ a similar procedure for quantifying student participation as is used in its revised block grant model.

⁸MPR adapted this methodology to take into account differences in school schedules and unique local conditions. To ensure FTE vocational student counts were accurate, MPR shared its estimates with district administrators prior to calculating school and district resource eligibilities.

STEP 2B: ESTABLISHING A MINIMUM VOCATIONAL PROGRAM STANDARD

► RECOMMENDATION

To ensure that small schools and districts are able to provide quality services, secondary schools should be funded to offer a minimum of two vocational programs, using a continuous weighting formula.

► BACKGROUND

Not all districts can or choose to offer students access to a wide range of vocational program services. Variation in services may be due to a number of factors, including differences in local preference for vocational education or student demand for vocational coursework. Determining whether all students should have access to vocational instruction and the level of this exposure will require balancing student equity against state cost concerns.

Insuring Access to Vocational Education

In a recent analysis of vocational program offerings in American schools, the National Center for Education Statistics (Hudson and Shafer 2002) found that just over two-thirds of public high schools (67 percent) offered some form of vocational program in the 1998–99 school year.⁹ Among rural schools—those located in small towns or communities with populations of less than 25,000—roughly two-thirds (67 percent) offered at least one vocational program, roughly the same proportion as schools located in suburban and urban areas (table 2).

⁹A vocational program was defined as a sequence of courses within an occupational preparation area that prepared students for employment in one of 28 selected occupations. Based on NCES analysis of the 1998 High School Transcript Study, these selected occupations accounted for over 90 percent of students' occupational coursetaking.

Although methodological issues complicate interpretation, it appears that half of our nation’s rural schools offered students access to two or more vocational programs during the 1998–99 school year.¹⁰ Generally, small rural schools—those with enrollments of less than 150 students—were more likely to restrict program offerings to less than two programs than schools with enrollments of more than 150 students (see table 2).

Table 2: Percentage of vocational programs offered in rural schools, by size: 1998–99

	Percent (Number) of Programs				
	None	One	Two	Three	Four or more
Rural Schools	33.5	6.8	10.1	7.9	41.7
ADM ≤ 150	70.1	4.3	0.0	13.3	12.3
ADM > 150	26.2	7.3	12.1	6.9	47.5

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, “Survey on Vocational Programs in Secondary Schools,” 1999.

Small student populations can make it difficult for small, geographically isolated, rural schools to offer a large range of vocational programs. Given that there are recognized benefits to student participation in vocational education and that vocational instruction is included in the state basket of education services, the question is not whether, but how much vocational education should students have the option of taking while enrolled? While equity concerns would suggest that all students should have the ability to participate in vocational coursework, there are practical limits on school capacity to offer a broad range of program options.

To ensure that all students have access to a minimum program of vocational studies, MPR has structured the funding formula to provide additional resources to small schools. If the state were to adopt a one-program minimum, schools with up to 66 ADM students would receive supplemental weighting in the funding formula. This would affect 15 secondary schools in Wyoming, enrolling 628 ADM students, roughly 3 percent of total state secondary ADM students (table 3).

¹⁰The NCES study design is based on a sample of 1,078 urban, suburban, and rural schools. Data for rural schools are based on data collected from 38 small and 342 large rural districts. While some rural high schools may offer students access to vocational education programs offered at area or regional high schools—similar to the BOCES in Wyoming—these NCES estimates do not account for such shared service arrangements; consequently NCES estimates may understate student access to vocational programs.

Table 3: Effect of adopting minimum program standards for vocational education

Number of programs	Threshold ADM Below which Schools Obtain Increased Funding	Number of:		Percent of Secondary ADM	Average Class Sizes in School of 66 ADM
		Schools	Students		
1 program	66	13	628	2.6	13.0
2 programs	131	26	1,896	7.7	6.6
3 programs	196	38	3,813	15.5	4.4
4 programs	261	44	5,232	21.3	3.3

If the state were to instead adopt a two-program minimum standard, then all schools of less than 131 ADM students would qualify for supplemental funding, meaning that 26 schools accounting for approximately 8 percent of state ADM would be affected.

Logically, small schools and districts will have trouble offering more than two vocational programs, in part because there is simply insufficient student demand to offer multiple vocational programs of study while maintaining reasonable class sizes. For example, average class sizes in a school of 66 ADM students would average 6.6 students for a two-program minimum, and fall below 5 students with the addition of a third program standard. Class sizes would be even smaller in schools smaller than 66 ADM students.

Perhaps more importantly, there is nothing to stop larger districts from offering more than a two-program minimum; in fact, on average, schools with 261 ADM students or more—which enroll more than 75 percent of Wyoming students—should be able to offer a minimum of four programs using the 1.29 vocational weighting. As a consequence, adopting a two-program minimum will enable the state to ensure that students in smaller schools are provided with access to quality programs that are both cost effective and adequately funded, while compensating all schools for the added cost of providing vocational services.

STEP 3: COST EFFECTIVENESS STRATEGIES

► RECOMMENDATION

Small schools within five miles of a large district school should be treated as a single entity in the allocation formula; combined resources should then be distributed to the district for local allocation.

► BACKGROUND

To promote intra-district cost effectiveness, the funding model is designed to encourage small schools located within five miles of one another to collaborate in offering vocational services. This is accomplished by adding ADM students across neighboring schools within a district prior to estimating school eligibility for supplemental weighting. Since combined enrollments will usually exceed the minimum program funding standard, neighboring schools would be encouraged to collaborate in offering vocational services, either by sharing vocational instructors or by transporting students across sites to participate in vocational services not offered at the sending school.

The selection of five miles was arrived at by estimating the reasonable distance a school might be able to transport a student during a 50-minute class period, allowing for student travel to and from buses and time spent on the road. Schools beyond a five-mile radius, with ADM student enrollment above 131 students, and within single high school districts would be treated as discrete funding entities. As illustrated in table 4, the adoption of the cost efficiency criteria would affect 11 schools enrolling a total of 476 students in the 2001–02 school year.

Table 4: High schools located within five miles of a neighboring school and the number of ADM students and FTE vocational instructors employed: 2001–02

District	High School	ADM Students	Vocational Instructor FTE	Miles to Neighboring High School
Total		475.5	4.84	
Albany 1	Whiting	43.1	0.50	1.2
Campbell County 1	Westwood	117.2	2.00	1.6
Carbon County 1	Rawlins Cooperative	18.1	0.00	0.7
Crook County 1	Bear Lodge	22.3	1.00	0.6
Lincoln County 2	Swift Creek Learning Ctr.	25.1	0.00	0.0
Park County 1	Shoshone Learning Ctr.	7.6	0.00	0.2
Johnson County 1	The Learning Ctr.	—	0.00	1.0
Sheridan County 2	Fort Mackenzie	54.7	0.00	3.3
Sweetwater County 1	Rock Springs Alternative	109.1	1.34	0.5
Sweetwater County 2	Expedition	40.6	0.00	0.8
Teton County 1	Western	37.7	0.00	3.4

NOTE: Douglas Alternative High School did not have ADM students in 2001–02 and was excluded. It would otherwise be included above.

The state may also wish to consider the possibility of instituting inter-district cost-efficiency measures. Under this approach, schools in neighboring districts would be treated as a single funding entity, with total ADM across sites used to determine the size of the FTE vocational student weight. While this approach could offer the state some potential for additional savings, adopting this approach would likely require expanding the size of the neighboring school radius, as well as formulating guidelines for distributing resources across districts.

Advisory panel members cautioned against the use of inter-district cost efficiency strategies, in part because of the perception that combining resources across districts could be interpreted as encouraging district consolidation. Members also pointed out that scheduling conflicts across districts (e.g., if one school is on a block schedule or both sites are on different timetables) could inhibit collaboration. It is likely, however, that these conflicts could be worked out at the local level.

Accordingly, the legislature will need to determine whether the benefits of adopting an inter-district cost effectiveness strategy will outweigh its potential drawbacks. Given that a number of school districts have recently begun collaborating to offer vocational services, the legislature could choose to wait and observe whether there is a need to require such collaboration through the block grant model.

Section 3: Collecting the Data

To assess the scope of student participation and districts' investment in vocational education services, MPR requested vocational enrollment and expenditure data for the 2001–02 school year from all secondary, middle, and junior high schools throughout the state. Complete responses were obtained from all of the 46 school districts offering secondary education programs. The following section arrays district enrollment and expenditure data that form the basis of the funding model and documents how district resource eligibilities are affected by the assumptions governing formula operation.

About the Data

To document the extent of district vocational programs, in June 2002 MPR asked district superintendents to voluntarily report data on vocational student enrollments and vocational equipment and supply expenditures for the 2001–02 school year. Specifically, district administrators were asked to provide detailed information on course enrollments—controlling for school, teacher assignment, course level (i.e., introductory versus advanced), and semester—for all vocational classes offered in the district. Staff were also requested to provide detailed information on district expenditures for vocational equipment and supplies, disaggregated by school and vocational program area.¹¹

To complement district data, case study site visits were conducted in 16 districts, selected based on their relative size, intensity of student participation in vocational education, geographic location, and past participation in study activities.¹² During the course of a one-day visit, conducted at the end of the 2001–02 school year, MPR researchers met with district administrators and fiscal staff to verify district ADM enrollments, quantify the cost of equipping vocational classrooms, and obtain local perspective on the redesign of the state funding formula.

¹¹A copy of the district data collection instrument can be found in appendix G.

¹²A list of participating sites, summary of case study methodology, and site write-up can be found in the companion report “Wyoming Case Study Site Visit Report: 2002.”

District-reported data were supplemented by state data from the WDE-600 and WDE-602, which provide annual snapshots of student enrollment and district staff assignments, respectively. These data, in conjunction with district-reported and case study data, were used to specify minimum program criteria and guidelines for identifying vocational programs, for developing mechanisms to promote cost-effective use of state resources, and to design a mechanism for allocating vocational education resources within the existing block grant model. The following section outlines how state and district data were used to calculate student participation levels, school and district weights, and expenditures for equipment and supplies.

Identifying Vocational Coursework

Since the weighted funding formula is based on the number of full-time-equivalent (FTE) students participating in vocational education, it was first necessary to identify which courses offered within districts qualify as vocational in content. To identify coursework, MPR requested districts to submit data on courses taught by middle, junior high, and secondary teachers holding a vocational endorsement, and other courses identified by districts as vocational in content, irrespective of teacher endorsement area.¹³

To assist local administrators, MPR provided each district office with a list of instructors identified by the state as holding a vocational endorsement at the start of the 2001–02 school year.¹⁴ A review of the data indicates that instructors holding vocational endorsements teach a large proportion of the coursework districts classify as vocational in content. Specifically, of the 447 secondary instructors reported by districts as teaching a vocational course, 425 instructors (95 percent) held some form of vocational endorsement (see appendix A).

To accommodate schools offering vocational coursework taught by non-vocationally endorsed instructors, MPR recommended that the state consider adopting a vocational waiver, which would allow districts to petition to reclassify courses for state

¹³Teachers in grades 5–8 either obtain generalized endorsements to teach in an interdisciplinary teaming organizational structure (i.e., middle school) or subject area endorsements to teach in a departmentalized organizational structure (junior high school). Since districts were asked to report on specific teachers holding vocational endorsements or on coursework considered vocational in content, enrollment data should be inclusive of all vocational education offered within the state.

¹⁴Data on teacher endorsements were obtained from the WDE-602: Professional Education Staff List Report, collected on October 7th of each school year. The WDE-602 contains an individual listing of all professional staff in a school district along with each of their assignments and certification status.

funding purposes. *For modeling purposes, MPR has assumed that all coursework identified as vocational would qualify for state funding, even if taught by non-qualifying instructors.* In practice, actual state funding obligations will decline if the state does not approve all district waiver requests.

Quantifying Student Participation in Vocational Education

The vocational funding adjustment is designed to compensate districts for the marginal cost of educating an FTE student participating in vocational education. Since few students take more than one or two vocational courses in a given semester, there is a need to aggregate individual vocational coursetakers to create a composite FTE vocational student for formula purposes.

To calculate the number of FTE students participating in vocational coursework, MPR assessed fall and spring course enrollment data for vocational education. Participation counts were converted into hourly equivalents and adjusted to take into account differences in school schedules. School ADM, expressed in student contact hours, was converted into an FTE basis by dividing by 1,100 hours, the state minimum number of hours in a school year. In practice, this means that schools with programs that exceed the state hourly minimum may benefit from offering additional vocational instruction.

Based on available data, MPR identified a total of 3,855 FTE students participating in vocational coursework during the 2001–02 school year, roughly 14 percent of total state ADM students. The percentage of ADM students participating in vocational education on an FTE basis varied widely around this statewide mean. Kaycee High School recorded the greatest percentage of students participating in vocational education, with 46 percent of total ADM students identified as FTE vocational students; in contrast, Jackson High School recorded the lowest participation rate, with less than 6 percent of students identified as FTE vocational (see table 5).

Table 5: School ADM, number of vocational FTE and non-FTE students, and percent vocational: 2001–02

School	ADM Students	Number Vocational FTE Students	Number Non-Vocational FTE Students	Percent Vocational
Wyoming	27,813	3,991	23,822	14.3
Campbell County High School* ^a	1,642	294.636	1,347	17.9
East High School	1,520	149.652	1,370	9.8
Natrona County High School*	1,429	176.225	1,252	12.3
Central High School*	1,191	151.391	1,040	12.7
Kelly Walsh High School*	1,010	137.753	872	13.6
Evanston High School	984	151.176	833	15.4
Green River High School ^d	981	138.866	842	14.2
Rock Springs High School* ^c	942	109.441	833	11.6
Laramie High School* ^d	860	105.705	755	12.3
Sheridan High School* ^e	813	78.551	735	9.7
Riverton High School	813	215.847	597	26.5
Cody High School	803	120.731	682	15.0
Lander Valley High School	698	78.094	620	11.2
Star Valley High School ^f	714	129.334	584	18.1
Jackson Hole High School ^g	657	36.153	621	5.5
Douglas High School ^h	539	78.816	461	14.6
Rawlins High School ⁱ	533	63.265	470	11.9
Powell High School ⁱ	530	75.038	455	14.1
Worland High School	468	44.678	—	—
Torrington High School	430	85.611	344	19.9
Buffalo High School ^k	352	49.935	302	14.2
Wheatland High School	324	49.408	275	15.2
Newcastle High School	320	47.303	—	—
Triumph High School	277	24.177	253	8.7
Lyman High School	276	38.845	237	14.1
Hot Springs County High School	271	58.108	213	21.5
Glenrock High School	255	44.804	211	17.5
Roosevelt High School	255	35.080	220	13.8
Mountain View High School	252	42.477	210	16.9
Kemmerer High School	239	43.655	196	18.2
Lovell High School	222	40.628	181	18.3
Wright Jr./Sr. High School	196	54.528	142	27.8
Pinedale High School	190	28.159	162	14.8
Big Piney High School	179	27.622	151	15.5
Moorcroft High School	171	10.818	161	6.3
Rocky Mountain High School	162	32.491	129	20.1
Greybull High School	161	26.560	135	16.5
Wyoming Indian High School	158	23.598	134	14.9
Tongue River High School	158	10.500	147	6.7
Sundance High School ^l	151	10.290	141	6.8
Big Horn High School	149	8.896	140	6.0
Burns Sr High School	148	29.167	119	19.7
Niobrara County High School	147	27.085	120	18.5

Table 5: School ADM, number of vocational FTE and non-FTE students, and percent vocational: 2001-02—Continued

School	ADM Students	Number Vocational FTE Students	Number Non-Vocational FTE Students	Percent Vocational
Wind River Secondary School (9-12)	143	26.945	116	18.8
Saratoga High School	124	22.792	101	18.3
Riverside High School	114	24.320	90	21.4
Shoshoni High School	111	17.169	94	15.5
Pine Bluffs Sr High School	111	36.434	74	32.9
Dubois High School	107	28.398	78	26.6
Upton High School	104	15.955	88	15.3
Southeast High School	100	23.148	77	23.0
Lingle-Ft Laramie High School	95	11.335	84	11.9
Hulett High School	92	9.722	82	10.6
Guernsey-Sunrise High School	86	16.752	69	19.6
H.E.M. Senior High	84	15.545	68	18.5
Cokeville High School	73	14.208	59	19.5
Burlington High School	68	3.907	64	5.8
Little Snake River Valley School 9-12	63	12.515	51	19.8
Rock River High School	59	7.166	52	12.2
Kaycee High School	59	27.105	32	46.0
Midwest School 9-12	56	11.341	45	20.3
Chugwater High School	55	7.268	48	13.3
Farson-Eden High School	49	6.205	42	12.8
Meeteetse School 9-12	45	9.917	35	22.1
Encampment High School	45	12.104	33	27.1
Ten Sleep High School	43	11.335	32	26.1
Arvada-Clearmont High School	43	5.905	37	13.8
Pathfinder Learning Center	41	-	41	0.0
Albin Sr High School	40	7.365	33	18.3
Glendo High School	30	3.099	27	10.2
Districts with 9th Graders Attending Junior High School**				
Natrona County #1	903	118.452	785	13.1
Laramie County #1	889	96.710	792	10.9
Campbell County #1	559	106.265	453	19.0
Sweetwater County #1	356	41.559	314	11.7
Albany County #1	270	33.178	237	12.3
Sheridan County #2	225	21.737	203	9.7

*High school grade span 10-12 (does not include 9th graders attending junior high school)

**9th grade FTE vocational students calculated by averaging high school participation rates

^a Cost effectiveness includes Westwood HS

^b Cost effectiveness includes Expedition

^c Cost effectiveness includes Rock Springs Alternative

^d Cost effectiveness includes Whiting Alternative HS

^e Cost effectiveness includes Fort Mackenzie

^f Cost effectiveness includes Swift Creek

^g Cost effectiveness includes Western Wyoming HS

^h Cost effectiveness includes Douglas Alternative HS

ⁱ Cost effectiveness includes Rawlins Cooperative

^j Cost effectiveness includes Shoshone Learning Center

^k Cost effectiveness includes The Learning Center

^l Cost effectiveness includes Bear Lodge

Computing the Vocational Weighting Factor

For a variety of reasons, vocational classes are on average smaller than other courses, meaning that all students participating in vocational coursework must be given additional weight in the school finance formula. To calculate the size of this adjustment, MPR collected data on student enrollment in vocational coursework for every vocational course offered in the state. On average, class sizes for vocational instructors were 13.0 students. Since the state does not currently collect data on average class sizes in non-vocational courses, MPR estimated non-vocational average class sizes using state data.

Based on WDE-600 data, MPR calculated a statewide ADM of 24,611 secondary students for the 2001–02 school year.¹⁵ Subtracting from this total the number of FTE vocational students enrolled in high schools provided the number of non-vocational ADM attending secondary schools (see table 6). Data from the WDE-602 were then used to identify teachers with non-vocational assignments: non-vocational instructor FTE counts were multiplied by 5/6ths, to account for non-classroom related assignments, such as planning periods, in which teachers are not scheduled with students.¹⁶ Dividing the adjusted number of instructors into the number of non-vocational ADM provided the statewide student-instructional staff ratio for non-vocational instructors, which averaged 16.7 students.¹⁷

¹⁵Based on students attending high schools with a grade 9–12 span. Ninth graders attending junior highs were excluded from this analysis.

¹⁶Excluded from the analysis were guidance counselors, teachers of special education, and other instructors not meeting with regularly scheduled classes.

¹⁷To verify this estimate, MPR quantified academic and vocational class sizes for a subset of 22 schools for which master schedules were available. Analyzing data on actual classroom sizes for English, math, science, and social studies instructors, as well as for vocational teachers, MPR estimated average class sizes at 17.2 students for non-vocational, and 14.0 students for vocational instructors. This estimate suggests that academic classes are approximately 23 percent larger than vocational courses, a figure quite close to that calculated using the derived student-instructional staff ratio. See appendix B for analysis data using district master schedule information.

Table 6—Derived student/teacher ratio for secondary schools: 2001–02

	Numerator			Denominator		Student-Instructional Staff Ratio
	ADM	Number of FTE Vocational Students	Total Non Voc enrollment	Number of Non-Vocational FTE Teachers	Adjusted Number of Non-Vocational FTE Teachers	
High school	24,611	3,561	21,050	1,513	1,261	16.7

NOTE: Estimates of average non-vocational class sizes are based on student participation and ADM counts of high schools with 9–12 grade spans. As such, student totals used to estimate average class sizes of non-vocational instructors will differ slightly from those used to calculate district eligibilities in the funding model.

SOURCE: MPR 2002 State Survey and WDE-600 and WDE-602 state reports

Based on this district-reported data, the average class size of an academic instructor is approximately 29 percent larger than a vocational instructor; accordingly to compensate for the smaller class sizes that characterize vocational education, all FTE students participating in vocational education must be assigned, at minimum, a 1.29 weight in the vocational funding formula.

To ensure that all students have access to a minimum of two vocational programs, MPR designed the vocational weighting formula to provide supplemental resources to students participating in vocational education offered in small schools—those with a total ADM less than 131 students.¹⁸ Based on a two-program minimum standard, 26 of 79 high schools qualified for supplemental funding (see table 7).¹⁹ While in some cases the size of the supplemental weight is quite substantial, schools must actually generate FTE vocational enrollment in order to benefit from their increased weight.

¹⁸Cost effectiveness criteria limit this adjustment for small, geographically isolated schools located less than five miles from a neighboring school in the district. As detailed in the assumptions section, schools not eligible for increased funding include: Bear Lodge, Douglas Alternative, Expedition, Fort Mackenzie, The Learning Center, Rawlins Cooperative, Rock Springs Alternative, Shoshone Learning Center, Swift Creek Learning Center, Western Wyoming, Westwood, and Whiting Alternative High School.

¹⁹The existing MAP model employs a rolling three-year average ADM to determine districts' funding eligibility. Based on recommendations contained in MAP's July 2001 report, *Wyoming Education Finance: Implementation Issues*, MPR has modeled state funding assuming that districts' revenues were based on actual ADM of the prior year. The weighting approach developed by MPR can be modified to accommodate a three-year average, however, if the state were to maintain its existing funding criteria.

Table 7: ADM students, number of vocational FTE and weighted FTE, and the net change in vocational FTE student enrollment: 2001–02

School	ADM Students	Number Vocational FTE Students	Formula Weight
Wyoming	27,813	3,991	
Campbell County High School ^{*a}	1,642	295	1.29
East High School	1,520	150	1.29
Natrona County High School [*]	1,429	176	1.29
Central High School [*]	1,191	151	1.29
Kelly Walsh High School [*]	1,010	138	1.29
Evanston High School	984	151	1.29
Green River High School ^b	981	139	1.29
Rock Springs High School ^{*c}	942	109	1.29
Laramie High School ^{*d}	860	106	1.29
Sheridan High School ^{*e}	813	79	1.29
Riverton High School	813	216	1.29
Cody High School	803	121	1.29
Lander Valley High School	698	78	1.29
Star Valley High School ^f	714	129	1.29
Jackson Hole High School ^g	657	36	1.29
Douglas High School ^h	539	79	1.29
Rawlins High School ⁱ	533	63	1.29
Powell High School ^j	530	75	1.29
Worland High School	468	45	1.29
Torrington High School	430	86	1.29
Buffalo High School ^k	352	50	1.29
Wheatland High School	324	49	1.29
Newcastle High School	320	47	1.29
Triumph High School	277	24	1.29
Lyman High School	276	39	1.29
Hot Springs County High School	271	58	1.29
Glenrock High School	255	45	1.29
Roosevelt High School	255	35	1.29
Mountain View High School	252	42	1.29
Kemmerer High School	239	44	1.29
Lovell High School	222	41	1.29
Wright Jr./Sr. High School	196	55	1.29
Pinedale High School	190	28	1.29
Big Piney High School	179	28	1.29
Moorcroft High School	171	11	1.29
Rocky Mountain High School	162	32	1.29
Greybull High School	161	27	1.29
Wyoming Indian High School	158	24	1.29
Tongue River High School	158	11	1.29
Sundance High School ^l	151	10	1.29
Big Horn High School	149	9	1.29
Burns Sr High School	148	29	1.29
Niobrara County High School	147	27	1.29
Wind River Secondary School (9-12)	143	27	1.29

Table 7: ADM students, number of vocational FTE and weighted FTE, and the net change in vocational FTE student enrollment: 2001–02—Continued

School	ADM Students	Number Vocational FTE Students	Formula Weight
Saratoga High School	124	23	1.35
Riverside High School	114	24	1.47
Shoshoni High School	111	17	1.51
Pine Bluffs Sr High School	111	36	1.51
Dubois High School	107	28	1.57
Upton High School	104	16	1.61
Southeast High School	100	23	1.67
Lingle-Ft Laramie High School	95	11	1.75
Hulett High School	92	10	1.82
Guernsey-Sunrise High School	86	17	1.96
H.E.M. Senior High	84	16	1.99
Cokeville High School	73	14	2.30
Burlington High School	68	4	2.47
Little Snake River Valley School 9-12	63	13	2.64
Rock River High School	59	7	2.84
Kaycee High School	59	27	2.84
Midwest School 9-12	56	11	2.99
Chugwater High School	55	7	3.05
Farson-Eden High School	49	6	3.44
Meeteetse School 9-12	45	10	3.74
Encampment High School	45	12	3.75
Ten Sleep High School	43	11	3.86
Arvada-Clearmont High School	43	6	3.90
Pathfinder Learning Center	41	0	4.10
Albin Sr High School	40	7	4.16
Glendo High School	30	3	5.53
Districts with 9th Graders Attending Junior High School**			
Natrona County #1	903	118	1.29
Laramie County #1	889	97	1.29
Campbell County #1	559	106	1.29
Sweetwater County #1	356	42	1.29
Albany County #1	270	33	1.29
Sheridan County #2	225	22	1.29

#Totals differ from scenario worksheets due to differences in how weighting was applied

*High school grade span 10-12 (does not include 9th graders attending junior high school)

**9th grade FTE voc. students calculated by averaging high school FTE vocational participation rates

^a Cost effectiveness includes Westwood HS

^b Cost effectiveness includes Expedition

^c Cost effectiveness includes Rock Springs Alternative

^d Cost effectiveness includes Whiting Alternative HS

^e Cost effectiveness includes Fort Mackenzie

^f Cost effectiveness includes Swift Creek

^g Cost effectiveness includes Western Wyoming HS

^h Cost effectiveness includes Douglas Alternative HS

ⁱ Cost effectiveness includes Rawlins Cooperative

^j Cost effectiveness includes Shoshone Learning Center

^k Cost effectiveness includes The Learning Center

^l Cost effectiveness includes Bear Lodge

Although high schools in Wyoming typically enroll students in grades 9–12, seven high schools—Campbell County, Central, Kelly Walsh, Laramie, Natrona County, Rock Springs, and Sheridan—serve only grade 10–12 students. Junior high schools within each high school district provide 9th-grade students with educational instruction. These schools include: Carey JHS, Casper JHS, Centennial JHS, CY JHS, Dean Morgan, JHS, East JHS, Johnson JHS, Laramie JHS, McCormick JHS, Rock Springs East JHS, Sage JHS, Sheridan JHS, Superior Academy, Twin Spruce JHS, UW Laboratory School, and White Mountain JHS.

Since 9th-grade students attending junior high schools often have a choice of which district high school they will eventually enroll, it is not possible to allocate these 9th-grade students into a single high school. For this reason, 9th-grade students attending junior high schools are summed across all junior high schools within the district and weighted at the 1.29 formula weight. Resources generated for these students through the funding formula would be provided to the district of reallocation at local discretion.

Calculate the Vocational Equipment and Supply Adjustment

On average, state spending for equipment and supplies came to \$6,130 per secondary FTE vocational instructor in the 2001–02 school year.²⁰ Equipment expenditures accounted for just over one-fifth (21 percent) of this total, with districts spending \$1,307 per FTE vocational instructor. These estimates are based on unaudited, district-reported expenditure data collected by MPR during the summer of 2002, and represent the most current information on district spending available to the state.

To maintain vocational spending at the statewide average, districts in Wyoming would need to allocate \$2,064,286 per year to support equipment and supply expenditures. Since the state already provides funding to support equipment and supply instruction—the prototypical model provides roughly \$31 million for secondary equipment and supplies in the 2002–03 school year—the state would not incur any additional expense to compensate schools for this cost.²¹

²⁰Expenditure estimates do not take into account expenditures made for 9th-grade students attending junior high schools.

²¹To conform with the Supreme Court ruling, state resources for equipment and supplies should be reallocated based on the extent of vocational program offerings within districts. Due to data limita-

The funding model is also premised on the assumption that all schools will be funded to provide a minimum of two FTE vocational instructors, meaning that the proposed formula should provide all qualifying schools with a minimum of \$12,220 per year (\$6,110 x 2).²² Not all schools within the state currently have the equivalent of 2.0 FTE vocational instructors on staff, however, indicating that the state will need to allocate supplemental funding to compensate districts for staff that will be funded under the vocational adjustment formula.

Table 8: High schools with less than 2.0 FTE vocational teachers and additional state funding required to provide sufficient equipment and instructional materials: 2001–02

District	High School	Current FTE Voc Teachers	Additional FTE Needed	Additional State Resources
Total		15.78	8.22	\$ 50,386
Albany 1	Rock River	0.67	1.33	8,152
Big Horn 1	Burlington	1.83	0.17	1,042
Carbon County 2	Encampment	1.84	0.16	981
Freemont County 2	Dubois	1.25	0.75	4,597
Johnson County 1	Kaycee	0.71	1.29	7,907
Park County 16	Meeteetse	1.42	0.58	3,555
Platte County 1	Chugwater	1.34	0.66	4,046
	Glendo	0.83	1.17	7,172
Sheridan County 1	Big Horn	1.43	0.57	3,494
Sheridan County 3	Arvada-Clearmont	1.15	0.85	5,210
Sweetwater County 1	Farson-Eden	1.51	0.49	3,004
Weston County 7	Upton	1.80	0.20	1,226

As Table 8 illustrates, there are a total of 12 schools in 11 districts that employed less than 2.0 FTE vocational instructors in the 2001–02 school year. These schools would require an additional 8.2 units of equipment and supply funding to ensure instructors have the necessary materials to bring spending to the state minimum of two vocational programs. Assuming each of these schools were to qualify for minimum program funding, this would generate an additional cost to the state of \$50,386 per year.

tions, this reallocation is not performed in this analysis, meaning that all districts are funded at the statewide average for vocational equipment and supplies. Based on data collected for the class size adjustment, the state would need to reallocate less than \$10,000 among districts to compensate for differences in the extent of vocational programs. Since the cost of collecting complete district expenditure data would be substantial, MPR opted not to reallocate resources in this study. The state could choose to reassess this assumption as additional data become available in the future; however, given the magnitude of resources affected, it is not worth the state effort to attempt this reallocation.

²²This assumes that districts will be able to generate sufficient student contact hours to qualify for a two-program minimum. Districts unable to reach a threshold of 26.7 FTE vocational students under the continuous weighting system are only funded for the actual number of student contact hours generated. This ensures that districts do not reallocate funding for non-vocational purposes.

Upgrading Equipment

In the absence of specific state content and performance standards or a district-wide fixed asset inventory, it is impossible to quantify how much additional money should be allocated to bring schools' equipment holdings to a desired level of quality. Analysis of district submissions under the recent urgency grant program suggest that districts may have considerable resource needs: 28 districts requested a total of \$1.9 million to either replace outdated equipment or offset tuition costs of transporting students to neighboring institutions.²³

To support the purchase of new equipment and supplies, the state may wish to augment current district spending for vocational equipment, with the expectation that districts would upgrade equipment across programs on a 10- to 15-year funding cycle, which would vary by program area. While this augmentation would not be sufficient to upgrade all programs simultaneously, schools could choose to concentrate funding within program areas to increase purchasing power.

²³A review of district requests suggests that some districts may have overstated their need in the hope of qualifying for a portion of their total request or to make a point to the state; for example, one district requested a total of \$790K for new equipment purchases. In contrast, a substantial number of districts (18 of 46) did not submit a request, in part because they lacked staff expertise or resources to put together a grant application. As such, it is difficult to determine actual equipment needs or how these needs have changed, based on the recent urgency grant competition.

Section 4: Modeling State Options

To comply with the Wyoming Supreme Court's ruling, the Wyoming legislature will need to modify the state's block grant model to account for variation across districts in their delivery of vocational services. Using data collected from districts, this section models the effects of allocating state resources under a number of funding scenarios. The options for allocating equipment and supply resources on a FTE vocational instructor basis are also considered. The section closes with a set of recommendations to assist state policymakers in selecting a funding strategy and approach for transitioning to the proposed allocation mechanism.

Quantifying the Contribution of Vocational Education

Vocational resources are already, on average, incorporated within the education block grant model, and in particular, in the teacher salary and benefits component. Accordingly, to comply with the Supreme Court's ruling, the state could simply choose to reallocate existing funding for teacher salaries among schools, based on student participation in vocational education. Schools with above-average rates of student participation would gain resources while those with below-average participation would lose. Statewide spending would be held constant because funding from below-average districts would be transferred to compensate those with above-average student participation.

To avoid penalizing districts in the short term, the state could choose to implement a hold-harmless provision to maintain funding at sites that are presently overcompensated for their vocational services. While the state has no legal obligation to do so, instituting a hold-harmless provision could dampen the initial impact of the new funding scheme. To achieve legal compliance with the Court's findings, the hold-harmless provision would presumably need to be phased out over time.

In addition to compensating schools for the cost of staffing vocational classrooms, the state will also need to develop a mechanism for distributing funding for vocational equipment and supplies. Since these resources are already incorporated, on average, in the block grant model, the state will need to identify how much of these

resources are intended for vocational purposes, as well as the additional amount, if any, that the state will allocate to provide a minimum program standard and/or stipend for equipment purchase.

State legislators will also need to consider a number of issues related to program implementation, and MPR has included suggestions for addressing these issues within this section. What follows are recommendations and, where appropriate, an array of possible options the state may consider in adopting a resource allocation for vocational education.

Recommendation 1: Compensate Districts for Their Intensity of Vocational Program Services

To comply with the Wyoming Supreme Court's ruling, the state has a number of options for compensating districts for the level of student participation in vocational education. At a minimum, state legislators should adopt a weighted adjustment that provides additional funding to vocational students to offset the higher unit cost of staffing vocational classrooms, along with a strategy for ensuring that districts with above-average rates of student participation are compensated for the additional costs they face. If the state were to proceed with this approach, it would have at least four options for funding vocational coursework:

Option 1: Reallocate funding among districts holding state spending constant

The simplest, and cheapest approach for complying with the Supreme Court directive would be for the state to reallocate state resources among schools, based on the extent of student participation in vocational education. Under this approach, the state would apply a constant weight of 1.29 to each FTE vocational student identified within schools, adjust teacher salary expenditures per ADM student to take into account the increased state ADM, and reallocate resources based on the augmented membership.²⁴ Since resource transfer would occur among schools, the state would not have to put any additional resources into the system.

Applying a 1.29 weight to each FTE vocational participant would increase state secondary FTE vocational from 3,991 to 5,138 students, a net gain of 1,147 individuals. Reallocating district resources to hold state spending constant would entail adjusting

²⁴Note that adjustments to teacher salaries and benefits are for modeling purposes alone, and are not intended to imply that teacher salaries and benefits would be reduced.

downward teacher salaries and benefits per-ADM so that the product of adjusted salaries/benefits and the new, larger state ADM will equal total spending for teacher salaries and benefits under the old system (see appendix C: Scenario 1, Option 1 column).

This funding strategy would result in a reallocation of \$461,621, with 15 districts—accounting for 58 percent of state ADM—losing resources and 31 districts—accounting for 42 percent of state ADM—gaining funding. To hold state spending constant, the state would transfer resources from schools with below-average student participation in vocational education to those eligible for increased funding. While all districts with below-average concentrations of vocational students will lose resources, losses in a number of large school districts, including Laramie County #1, account for a substantial portion of reallocated funding.

The advantage to reallocating state resources is that it is both fair and cost effective: under the current funding system districts with below-average student participation in vocational education are currently being overcompensated for their level of services. Reallocation will realign fund distribution at no cost to the state, and represents the best option if the legislature's objective is to conserve state resources.

Since reallocating funding will take money away from districts, this approach would likely be highly unpopular within the state and could potentially lead to renewed court challenge from districts losing resources. Political realities may also make this approach unworkable, particularly given that more than one-half of state ADM students will be affected.

Option 2: Introduce a hold-harmless provision for districts with below-average rates of student participation in vocational education

To avoid penalizing agencies with below-average vocational participation rates, the state could elect to hold harmless the 35 schools that are presently overcompensated in the education block grant model. Since districts housing these schools are currently receiving surplus resources as part of their annual block grant model, the cost to the state of the hold-harmless provision would be \$461,621, the amount that the state would otherwise transfer from schools with below-average to schools with above-average funding eligibilities.²⁵

²⁵It would also be possible to institute the hold-harmless provision at the district level. Under this approach, the legislature would sum school eligibilities across all schools in a district to determine a

While instituting a hold-harmless provision will allow the state to both redress Court concerns and reduce statewide opposition to the new allocation mechanism, adopting this approach in perpetuity would unfairly compensate districts with below-average vocational services, allowing them to redirect resources from vocational education to support other program offerings.

To insulate districts from sudden shifts in resource allocations, the legislature could phase-in a reduction to the hold-harmless provision over a four-year period, providing affected districts with 75 percent of their surplus funding in the first year, 50 percent in the second year, and so on until the fourth year in which districts would receive no additional compensation for vocational education. Since it is possible that districts could increase their proportion of FTE vocational students over time, the actual amount of funding available under this reduction could decline.

While adopting a hold-harmless provision with funding reduction over time could allow the state to comply with the Court's directive, it is not clear that this approach will provide districts with sufficient funding to provide quality vocational programs in all schools. This is because small schools may be unable to generate sufficient student contact hours under a 1.29 weighting scheme to offset the cost of providing instruction in one or more program areas.

To conserve resources, administrators in small schools could choose to offer only low-cost, less capital intensive programs so that they may provide vocational services in two or more program areas. Administrators could also attempt to impose cost efficiency measures, either by increasing average class sizes or negotiating agreements with neighboring schools to provide shared vocational services. Finally, administrators could simply choose to reallocate funding from other instructional areas to support vocational education. While all of these options are theoretically feasible, it is likely that without some adjustment for programmatic services, administrators in small schools will have difficulty offering vocational services that are of similar scope and quality as other schools in the state.

district's net funding eligibility. In this way, schools with increased funding eligibilities would offset those of schools held harmless in the formula. While this would reduce the overall cost to the state of a hold-harmless provision, it would also undercut the purpose of the vocational funding mechanism, which is designed to ensure that all schools are able to offer a minimum level of vocational services. Although it is possible that administrators may choose to reallocate funding from schools gaining resources to offset resource losses in other schools, the formula is designed to allocate resources based on student participation in vocational education at the school level. This is in keeping with what the Supreme Court has decreed.

Option 3: Impose a two-program minimum funding standard and reallocate funding among districts

Although the Wyoming Supreme Court did not specifically order the state to compensate schools for the cost of providing a minimum program of vocational studies, the Court explicitly recognized vocational education as an important component in the legislature’s “basket of educational goods and services.” Given the state’s constitutional mandate to provide for a fair, complete, and equal education “appropriate for the times,” the legislature may find that there is a need to offer all students access to a minimum program of vocational services, delivered at a uniformly high level of quality.

To balance equity and cost effectiveness, MPR recommended that the state incorporate a two-program minimum standard in the funding formula. Under this approach, small schools—those with ADM of less than 131 students—would qualify for supplemental weighting that, in most cases, would provide them with sufficient funding to provide comprehensive instruction in two program areas. Adopting the minimum funding standard will also require that the state incur additional costs of up to \$17,179 to equip and supply vocational classrooms: this issue will be addressed in greater detail in Recommendation 2.

Qualifying schools would receive supplemental weighting for each FTE vocational student until attaining the two-program vocational enrollment threshold—calculated at 26.7 FTE vocational students.²⁶ Upon achieving this threshold, all FTE vocational students above 26.7 would be weighted at 1.29, the weight that compensates districts for the higher cost of staffing vocational classrooms. Schools must, however, reach the student threshold level to secure minimum program funding: schools unable to generate 26.7 FTE vocational student equivalents would be funded at the higher weight for only those students participating in vocational education. This ensures that districts do not reallocate excess minimum program resources for non-vocational purposes.

Imposing a two-program minimum standard and reallocating resources among districts, based on the extent of student participation in their vocational programs, would require that the state provide \$776,748 in additional funding to provide a minimum of two programs. These resources would be allocated across 26 schools

²⁶Small schools with below-average student participation in vocational education would be eligible for the net of their hold-harmless and minimum program-funding amount. Seven high schools—Arvada-Clearmont; Burlington; Chugwater; Cokeville; Glendo; Hulett; and Lingle-Ft. Laramie—would be affected by this provision.

with a combined enrollment of less than 7 percent of total state ADM.²⁷ Providing such an enhancement would benefit students in smaller schools for a modest state level investment; however, in the absence of some form of hold-harmless provision, schools and districts losing resources would be unlikely to support this approach.

Given that some schools and districts would qualify for rather large funding increases under the two-program minimum standard, the legislature could choose to phase-in the supplemental weighing system in a manner similar to that used for the hold-harmless reduction. Alternatively, the legislature could make full funding contingent on a school demonstrating that it has two comprehensive programs either already in place or ready for adoption. At a minimum, the state should establish a timetable for ensuring that schools qualifying for a two-program minimum supplement actually offer such programs: schools failing to do so within a reasonable period—not to exceed two years—would lose eligibility for continued increased funding.

Option 4: Impose a two-program minimum funding standard and a hold-harmless provision for districts with below-average rates of student participation in vocational education

Combining a minimum program standard with a hold-harmless provision will ensure that all schools have sufficient resources to offer a minimal level of educational services, and that schools with below-average rates of student participation are protected from sudden shifts in funding eligibility. Implementing this approach would cost the state \$1,222,899, in addition to up to \$17,179 for costs associated with equipping and staffing vocational classrooms.

To avoid overcompensating districts held harmless in the formula, the legislature would need to eventually phase-out the hold-harmless provision. This reduction could take place over a five-year or some other period. Again, since districts will likely shift program services in response to the new allocation mechanism, the

²⁷In its critique of the state's funding model, the Wyoming Education Coalition convened a committee on Career Technical Education to review study findings reported in the earlier MPR study, *What Does It Cost? An Analysis of Annual Statewide Expenditures for Vocational Education in Wyoming*. Among the committee's recommendations was that all Wyoming school districts offer a minimum of at least four programs. Adopting a four-program minimum quality standard would increase state funding to \$1,955,160 per year, more than double the two-program minimum, in part because a larger number of districts would qualify for supplemental resources. State spending would increase to \$2,339,689 if a hold-harmless provision were also added (see appendix D, Scenario 2).

amount of funding that would be available to the state would likely change over time.²⁸

Given the higher weight attached to students participating in vocational education, school and district administrators could have some incentive to increase the number of FTE vocational students eligible for state funding. While the model anticipates this possibility, for example by restricting funding to coursework that is taught by a vocationally-endorsed instructor as part of a vocational program sequence, it is possible that local administrators may succeed in reclassifying coursework or attracting more students to participate in vocational education.²⁹ If this were to occur, then the state would incur additional costs to compensate districts for their growth in vocational participation.

Recommendation 2: Consider Incorporating an Adjustment in the Formula to Support Educators in Upgrading Vocational Equipment

On average, Wyoming school districts allocated \$6,130 per FTE vocational instructor for the purchase of equipment and instructional supplies in the 2001–02 school year. This funding is currently incorporated in the education block grant model as part of the district-wide allocation for equipment, supplies, and instructional materials. As such, the state should incur no additional cost for maintaining current allocations at their present level: to identify the amount of state resources intended for vocational educators, local administrators would simply multiply \$6,130 times the number of FTE vocational instructors district-wide.

While the Wyoming Supreme Court specifically objected to the use of statewide average expenditures for funding vocational education, in the absence of clear content and performance standards defining what students are expected to know and be able to do, it is impossible to determine what constitutes a reasonable expenditure for vocational equipment and supplies. Depending upon the instructor, material requirements for a given class, such as welding, could range from decades old MIG

²⁸Note that these estimates are based on unaudited data voluntarily submitted by district administrators to MPR for study purposes. Accordingly, actual state costs may change as new data are collected.

²⁹To assess the impact of increased student participation in vocational education, MPR modeled state funding obligations assuming a 10-percent increase in vocational student FTE between years. Based on this assumption, state funding would increase to \$2,570,665 in the second year assuming a hold-harmless amount and the adoption of a two-program minimum (see appendix E, Scenario 3).

welding stations to state-of-the-art CNC plasma cutters. As such, basing equipment and supplies funding on average statewide spending provides some assurance of cost efficiency, since schools emphasizing capital-intensive programs are balanced out by those emphasizing more general skill instruction.

To qualify for additional funding for equipment and supplies under the two-program minimum, schools would need to generate at least 26.7 FTE vocational students under the supplemental weighing formula. Schools failing to reach this threshold would be funded based on the number of FTE vocational instructors they currently employ. Assuming the state were to adopt a two-program minimum, the state would incur an added cost of \$17,179 to provide equipment and supply resources to qualifying schools that currently employ less than 2.0 vocational instructor FTEs (see appendix F: Scenario 4, column “Compensation for Less Than 2.0 FTE Instructors”).³⁰

Quantifying expenditures does not necessarily capture the actual cost of outfitting vocational classrooms, and during case study site visits, local educators commented about their inability to replace obsolete equipment. This lack of resources for equipment purchases, to the extent it is real, may be due to a number of factors, including the manner in which local districts allocate resources among competing priorities. As demonstrated in the recent urgency grant competition, however, there is considerable pent-up demand for equipment replacement. One means of addressing this demand would be for the legislature to increase the amount of funding allocated to vocational instructors for equipment purchases.

If the legislature were to attempt to support vocational instructors in replacing obsolete equipment, for example by increasing the size of the per-vocational instructor equipment grant by 50 percent, the state would incur an additional cost of \$221,930 per year, statewide (see appendix F: Scenario 4, column “Additional 50% New Equipment Purchases”). This, in combination with a two-program minimum standard, would increase annual state spending for vocational equipment by a total of \$239,109. The effect of varying this stipend by different amounts is detailed in table 9.

³⁰If all schools eligible for supplemental weighting were to also attain the threshold level of student participation, the state would incur a total cost of \$50,386 to compensate schools with less than 2.0 FTE vocational instructors for the cost of purchasing equipment and supplies.

Table 9: Cost of providing supplemental funding for vocational equipment purchases

Augmentation	Additional Funding per FTE Instructor	Vocational FTE Instructors	Additional State Spending
No Adjustment	\$ 0	336.8	\$ 0
25 percent	326.8	336.8	110,965
50 percent	653.6	336.8	221,930
75 percent	980.4	336.8	332,891
100 percent	1,307.2	336.8	443,856

To ensure that additional funds were used for their intended purpose, the legislature could require districts to track and report equipment and supply expenditures over time. The state would then have the option of terminating this supplemental funding in the event that additional resources were being spent for other purposes.

Recommendation 3: Fund Vocational Program Start-Up Costs Through a Separate, Competitive Grant Program Authorized at \$250,000 per Year

The cost of introducing a new vocational program can be significant. In addition to hiring a new vocational instructor, districts must purchase equipment and supplies to support instruction across three or more vocational courses. Since teacher salaries and benefits are generated by student contact hours in the preceding academic year, districts face a Catch-22 in rolling out new programs: school administrators must hire first a teacher if they are to generate FTE vocational eligibilities, but hiring a teacher requires that districts have sufficient resources, which are only generated by student contact hours.

To support districts in rolling out new programs, the state could provide districts with a planning grant to assist educators in developing course materials and hiring staff. To qualify for a grant, districts would need to submit a proposal to the state documenting their rationale for introducing a new program, labor market data detailing the need for instruction, the purposes of grant expenditures, and an outline of proposed course curriculum. Districts with approved planning grants would be funded to hire an instructor and to purchase equipment and supplies. Districts' resource eligibilities would also be adjusted to take into account prior year funding generated by sunset programs. Subsequent year funding would be based on initial year program enrollments.

Although conversations with district administrators indicate that program start-up is a fairly infrequent event, there are a number of districts, and schools within districts, that have relatively low rates of student participation in vocational education. To avoid losing funding, these agencies will need to increase the number of students participating in coursework, either by increasing the number of students participating in existing offerings or by adding new courses or programs that will appeal to a larger number of students.

To support districts in adding coursework or programs to increase student participation in vocational education, the legislature should consider authorizing \$250,000 per year in start-up funding, to be distributed on a competitive grant basis. This amount would allow Wyoming districts to introduce an average of five new vocational programs each year, which would include the cost of salaries and benefits for up to five FTE vocational instructors (\$37,325/beginning instructor), the associated cost of equipment and supplies (\$6,130/ instructor), and planning grants of up to \$6,000 per district (\$30,000) applying for funding in the following year.

To ensure that resources are distributed fairly, the Wyoming Department of Education may also wish to develop priorities for distributing start-up funding, particularly in the short term. For example, the state could choose to initially target funding on schools or districts with below-average rates of student participation in vocational education to reduce the likelihood that these agencies would lose funding under the hold-harmless option.

Recommendation 4: Allocate Resources to Administer the Vocational Funding Model

Introducing a separate cost component for vocational education will add to the responsibility of state staff at the Wyoming Department of Education and Department of Audit. New administrative responsibilities could include:

- **Reviewing District Vocational Programs Offerings**

The current funding formula bases funding on the provision of a sequence of three vocational courses in a program or career cluster area that prepare students with skill training that will enable them to obtain employment and/or pursue advanced skill training. To ensure that district programs are of high quality, Wyoming Department of Education staff will need to periodically review district program offerings to ensure they both meet the needs of students and align with state content and performance standards.

- **Considering District Waiver Requests**

Districts seeking to qualify coursework taught by non-vocationally endorsed instructors or programs of less than three courses in a sequence or career cluster area will be required to petition for a state waiver from the Wyoming Department of Education. Department staff will be required to create waiver criteria and guidelines and review district requests on an annual basis.

- **Collecting Data on FTE Vocational Students**

School and district resource eligibilities are determined by the extent of student participation in vocational education. To ensure that counts of FTE vocational students are valid and reliable, the Wyoming Department of Education will need to specify criteria and guidelines for identifying vocational coursework and for counting students participating in these courses. This will likely require the development of new data collection instruments that must be administered statewide, on an annual basis.

- **Reviewing Start-up Grant Requests**

Districts seeking to start up new vocational programs will apply to the Wyoming Department of Education for funding to support program start-up. State administrators will need to specify criteria for granting start-up program funding, review district applications for planning grants and program funding, and monitor the status of introduced programs.

- **Auditing State Data**

State staff from the Department of Audit will need to periodically review local data submissions to ensure that district staff are not attempting to game the system to qualify for increased funding. Audits are typically performed on a subset of districts each year, with the goal of auditing all agencies over a given period of time.

- **Monitoring District Use of Vocational Resources**

If state funding for vocational education is not categorical, resources generated by the vocational adjustment to the block grant model may be used for a variety of purposes. To assess how districts are using state resources, staff from the Wyoming Department of Education will need to collect data on district expenditures for vocational education and/or other variables associated with program provision.

While it is beyond the scope of this study to attempt to quantify the cost of performing these functions, it is likely that the state would need to add the equivalent of a full-time staff member to administer and monitor the operation of vocational services offered at the district level. It is estimated that the cost of this person, including salaries and benefits and support services, would be approximately \$100,000 per year.

Recommendation 5: Require Districts to Report Annually on How Vocational Resources Are Used, but Do not Impose a Categorical Spending Constraint

The education block grant model is intended to provide district administrators with flexibility in how they spend resources allocated to them by the state. With the exception of special education and transportation funding, which is allocated on a cost reimbursement basis, all resources generated by schools may be spent at district discretion. The advantage of employing a block grant approach is that districts superintendents may allocate resources on an as-needed basis, shifting resources across programs to address local needs.

If district staff were able to reallocate resources generated by the vocational funding formula, then it is possible that money intended to compensate districts for the higher cost of providing a minimal vocational program could be spent for non-vocational purposes. Diverting resources in this manner could adversely affect the quality of vocational programs and undermine the purpose of the court-ordered adjustment.

The state has a number of options to guide vocational resource allocation. These options include:

Option 1: Categorize vocational funding

Districts must spend all of their vocational eligibilities in support of vocational education, though they would retain control over how resources were spent (i.e., for staff or equipment and supplies). Categorizing funding would prevent administrators from raiding vocational funding to supplement other areas, but could lock districts into maintaining vocational education at higher levels than they might choose.

Option 2: Establish minimum expenditure levels

Districts must spend a proportion of their vocational allocation to support vocational programs (e.g., 85 percent of additional funds). Alternatively, districts could be required to spend all (or most) of their equipment and supply allocation for vocational purposes, and be allowed to reallocate other resources. Providing some flexibility can enable districts to tailor program spending to meet district needs, while

ensuring vocational educators receive the funding necessary to maintain programs over time.

Option 3: Support local discretion over funding

Districts would retain discretion over how they spend all state resources, including those generated through the vocational formula. Supporting local control would enable districts full flexibility in moving funding to provide education services, with the caveat that districts choosing to reallocate funding away from vocational education would likely reduce their future funding eligibility.

Conversations with advisory panel members and district superintendents suggest that there is no clear consensus on whether vocational resources should be categorized. To preserve local control of education spending, while providing some assurance that vocational resources are spent for the purpose they are intended, MPR recommends that the state require school districts to report, on an annual basis, how resources generated for vocational education were ultimately used. This could require that the Wyoming Department of Education develop a data collection instrument similar to the WDE-335, which was used in the 1998–99 school year to track district expenditures by budget category, or that the state track how vocational services are delivered, for example by monitoring changes in vocational class sizes or course definitions.

Summary

On average, the Wyoming education resource block grant model provides Wyoming school districts with sufficient funding to offer a basic program of vocational services. Schools and districts use these funds for a variety of purposes, including providing vocational classes that are on average smaller than those in non-vocational subject areas and for equipping and supplying vocational classrooms. Since funding levels are based on statewide averages, districts providing above-average vocational services are not compensated for their additional cost.

To ensure that districts are not penalized by the state funding formula, the Wyoming Supreme Court directed the state to adjust the block grant model to incorporate the higher cost of offering vocational instruction and to concentrate resources on districts maintaining above-average vocational programs. Since a large proportion of the variation in district expenditures for vocational education is due to the manner in which instructional programs are offered, there is a need to allocate resources in a manner that both recognizes the scale of district programs and provides for the most equitable, cost-effective distribution of resources.

One means of assuring cost effectiveness is to allocate resources based on the number of FTE students participating in vocational education, weighted to account for their higher instructional cost. State policymakers have various options for allocating resources among districts. Depending upon legislators' goals, the state could either choose to apply a 1.29-weighted adjustment to all FTE vocational students statewide, or institute a two-program minimum quality standard with a continuous weighted adjustment to ensure that all students have access to a minimum program of vocational studies.

The Wyoming Supreme Court did not specifically direct the state to compensate schools for the cost of providing a minimum program of vocational studies. However, failing to incorporate a minimum program standard in the vocational funding formula may make it difficult for small schools, and in particular small schools located in small districts, to offer the same number of vocational programs or quality of instruction as larger agencies. This is because small schools, by virtue of their size, are unable to generate sufficient student contact hours to offset the fixed cost of

providing vocational instruction. For this reason, the state will need to balance equity against cost efficiency when selecting a resource allocation mechanism.

Due to economies of scale, it is more cost effective to allocate equipment and supply materials on a per-vocational instructor basis, in part because once the fixed costs of equipping and supplying vocational education are met, additional resources generated on a per-student basis will overcompensate districts for their capital costs. In selecting a mechanism for distributing vocational equipment and supply funding, legislators will need to determine whether there is a need to supplement districts' resource eligibilities to support educators in replacing obsolete equipment, and if so, the level of funding that is appropriate.

Finally, irrespective of the approach the state will take, there is a need to build state infrastructure to support the proposed vocational funding model. In addition to providing for start-up grants to assist district administrators in introducing new coursework, there will be a need to increase state level staff to support the collection and analysis of student participation in data. Short-term state needs will include the design of new data collection instruments and procedures, and the development of criteria and guidelines to assist educators in complying with new funding requirements. Longer-term needs will include maintaining programmatic data and monitoring local program operation to ensure data are valid and reliable for funding purposes.

Responding to the Court's ruling will require that the legislature identify a process for allocating resources that assures districts are funded at the level of their need, in a manner that encourages equitable, cost-effective delivery of vocational services. With some modification, the existing state block grant model can serve as a vehicle for concentrating state resources on districts with the greatest intensity of student involvement in vocational education, at a level that compensates them for the added cost of providing vocational services.

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Appendices

Appendix A: Number of 2001–02 Wyoming teachers, by certification, school type, and district

	Certification			
	Vocational	Academic	Other	Missing
Total	556	9	26	0
School type				
High School	425	6	16	0
Junior High	107	1	4	0
Middle School	24	2	6	0
District (numeric)				
Albany #1	26	0	0	0
Big Horn #1	10	0	1	0
Big Horn #2	7	0	1	0
Big Horn #3	4	0	0	0
Big Horn #4	7	0	0	0
Campbell #1	47	1	2	0
Carbon #1	9	0	0	0
Carbon #2	11	0	0	0
Converse #1	12	0	0	0
Converse #2	7	0	0	0
Crook #1	7	0	0	0
Fremont # 1	9	0	4	0
Fremont # 2	4	0	1	0
Fremont # 6	6	0	0	0
Fremont #14	5	2	1	0
Fremont #24	8	0	0	0
Fremont #25	12	0	7	0
Goshen #1	17	0	0	0
Hot Springs #1	8	0	0	0
Johnson #1	10	0	0	0
Laramie #1	60	0	0	0
Laramie #2	16	0	0	0
Lincoln #1	4	0	1	0
Lincoln #2	16	0	0	0
Natrona #1	54	0	4	0
Niobrara #1	4	0	0	0
Park # 1	8	0	0	0
Park # 6	17	0	0	0
Park #16	5	0	1	0
Platte #1	12	0	0	0
Platte #2	5	0	0	0
Sheridan #1	6	0	1	0
Sheridan #2	12	0	0	0
Sheridan #3	3	0	0	0
Sublette #1	4	0	0	0
Sublette #9	3	1	0	0
Sweetwater #1	28	0	0	0
Sweetwater #2	17	2	0	0
Teton #1	6	1	0	0

Appendix A: Number of 2001–02 Wyoming teachers, by certification, school type, and district—Continued

	Certification			
	Vocational	Academic	Other	Missing
Uinta #1	13	0	0	0
Uinta #4	5	2	2	0
Uinta #6	7	0	0	0
Washakie #1	10	0	0	0
Washakie #2	4	0	0	0
Weston #1	8	0	0	0
Weston #7	3	0	0	0

Appendix B: Average class size of vocational and academic courses and student/teacher ratio by school type, district size and school size: 2001–02

	Average Class Size		Student-Instructor Ratio ³
	Vocational ¹	Academic ²	
Total	14.0	17.0	16.1
School type			
High School	13.0	17.0	16.5
Junior High	16.3	16.4	17.5
Middle School	16.1	17.9	13.7
District Size			
Less than 200	9.6	—	—
200-599	11.1	—	—
600-999	13.6	13.6	—
1000 or more	15.2	17.5	—
School Size			
Less than 200	9.7	—	—
200-599	14.1	—	—
600-999	16.0	—	—
1000 or more	16.1	—	—

¹Vocational class size is calculated using only courses taught by vocationally endorsed teachers.

²Academic class size is based on course enrollment data from 22 districts.

³Student Teacher Ratio is calculated excluding vocational teachers and other non-classroom positions.

SOURCE: MPR Associates, Inc. 2002 Survey.

Appendix C: Scenario 1: Weighting based on a 1.29 weight and 2 program minimum program quality standard (131 ADM threshold): 2001-02

School	Teacher Salaries in the Block Grant Model	2001-02 Number of Grade 9-12 ADM Students	2001-02 State Funding for Teacher Salaries	2001-02 Number of Vocational FTE Students	CLASS SIZE ADJUSTMENT USING 1.29 WEIGHT PER FTE AND HOLD HARMLESS PROVISION					
					Number of Vocational Students 1.29 Weight	Net New FTE Vocational Students 1.29 Weight	Adjusted Teacher Salary to Support No New \$	Adjusted Funding Using New Teacher Salary No New \$	Reallocated Funding Among Schools to Hold State Spending Constant	Hold Harmless Cost to State to Allow Districts to Keep Extra Resources
Garnsey-Sunrise High School	3,906	85.6	334,328	16.8	21.6	4.8	3,751	339,127	-	4,799
Sheridan County #1	3,626	306.4	1,111,047	19.4	25.0	5.6	3,482	1,086,393	(24,654)	-
Big Horn High School	3,626	148.6	538,766	8.9	11.5	2.6	3,482	526,301	(12,465)	-
Tongue River High School	3,626	157.8	572,281	10.5	13.5	3.0	3,482	560,092	(12,189)	-
Sheridan County #2	3,516	1,038.1	3,499,833	100.3	129.1	28.8	3,376	3,602,393	(47,440)	-
Sheridan High School*	3,516	813.1	2,858,740	78.6	101.1	22.6	3,376	2,821,583	(37,157)	-
Sheridan County #2	3,516	225.0	791,093	21.7	28.0	6.2	3,376	760,810	(10,282)	-
Sheridan County #3	3,745	42.9	160,846	5.9	7.6	1.7	3,597	160,871	(275)	-
Avalon-Clearmont High School	3,745	42.9	160,846	5.9	7.6	1.7	3,597	160,871	(275)	-
Sublette County #1	3,452	190.0	655,839	28.2	36.3	8.1	3,315	656,655	816	816
Pinedale High School	3,452	190.0	655,839	28.2	36.3	8.1	3,315	656,655	816	816
Sublette County #9	3,462	178.6	618,213	27.6	35.6	7.9	3,325	620,091	1,877	1,877
Big Piney High School	3,462	178.6	618,213	27.6	35.6	7.9	3,325	620,091	1,877	1,877
Sweetwater County #1	3,465	1,346.7	4,666,351	157.2	202.4	45.2	3,328	4,631,624	(34,727)	-
Faison-Eden High School	3,465	48.6	168,529	6.2	8.0	1.8	3,328	167,739	(750)	-
Rock Springs High School*	3,465	942.0	3,264,229	109.4	140.9	31.5	3,328	3,239,432	(24,797)	-
Sweetwater County #1	3,465	356.0	1,233,593	41.6	53.5	11.9	3,328	1,224,413	(9,180)	-
Sweetwater County #2	3,459	981.3	3,393,856	138.9	178.8	39.9	3,321	3,391,814	(2,042)	-
Green River High School ^a	3,459	981.3	3,393,856	138.9	178.8	39.9	3,321	3,391,814	(2,042)	-
Teton County #1	3,408	657.1	2,239,424	36.2	46.5	10.4	3,273	2,184,612	(54,811)	-
Jackson Hole High School ^d	3,408	657.1	2,239,424	36.2	46.5	10.4	3,273	2,184,612	(54,811)	-
Uinta County #1	3,432	984.2	3,378,086	151.2	194.6	43.5	3,296	3,387,317	9,231	9,231
Evansston High School	3,432	984.2	3,378,086	151.2	194.6	43.5	3,296	3,387,317	9,231	9,231
Uinta County #4	3,414	252.0	860,277	42.5	54.7	12.2	3,278	866,181	5,905	5,905
Mountain View High School	3,414	252.0	860,277	42.5	54.7	12.2	3,278	866,181	5,905	5,905
Uinta County #6	3,508	276.2	968,895	38.8	50.0	11.2	3,368	968,074	(821)	-
Lyman High School	3,508	276.2	968,895	38.8	50.0	11.2	3,368	968,074	(821)	-
Washakie County #1	3,370	468.3	1,578,150	44.7	57.5	12.8	3,236	1,557,116	(21,034)	-
Worland High School	3,370	468.3	1,578,150	44.7	57.5	12.8	3,236	1,557,116	(21,034)	-
Washakie County #2	3,485	43.4	151,220	11.3	14.6	3.3	3,347	156,126	4,906	4,906
Ten Sleep High School	3,485	43.4	151,220	11.3	14.6	3.3	3,347	156,126	4,906	4,906
Weston County #1	3,548	320.5	1,137,128	47.3	60.9	13.6	3,408	1,138,356	1,228	1,228
Newcastle High School	3,548	320.5	1,137,128	47.3	60.9	13.6	3,408	1,138,356	1,228	1,228
Weston County #7	3,765	104.1	391,891	16.0	20.5	4.6	3,616	392,929	1,038	1,038
Upton High School	3,765	104.1	391,891	16.0	20.5	4.6	3,616	392,929	1,038	1,038

^aHigh school grade span 10-12 (does not include 9th grades attending junior high school)
^b9th grade FTE voc. students calculated by averaging high school participation rates in voc ed and multiplying by junior high school ADM
^c**Pathfinder does not employ vocational instructors, so is not awarded minimum program standard
^dCost effectiveness includes: Whiting Alternative HS
^eCost effectiveness includes Westwood HS
^fCost effectiveness includes Rawlins Cooperative
^gCost effectiveness includes Douglas Alternative HS
^hCost effectiveness includes Bear Lodge
ⁱCost effectiveness includes The Learning Center
^jCost effectiveness includes Swift Creek Learning Center
^kCost effectiveness includes Shoshone Learning Center
^lCost effectiveness includes Fort Mackenzie
^mCost effectiveness includes Rock Springs Alternative
ⁿCost effectiveness includes Expedition
^oCost effectiveness includes Western Wyoming HS

INTRODUCTION OF A 2 PROGRAM MINIMUM PROGRAM QUALITY STANDARD (MPQS) OPTION 2						COST TO INSTITUTE A 2 PROGRAM MINIMUM STANDARD WITH REDUCTION					
Minimum Program Quality Standard Weight	Predicted Number of FTE Vocational Students MPQS Weight	Adjusted # Number of FTE Vocational Students MPQS Weight	Cost to Institute a 2 Program MPQS	OPTION 3		OPTION 4					
				Minimum Cost to Institute a 2 Program MPQS with Reallocation	Hold Harmless Cost to State to Institute a 2 Program MPQS	Option 4 with 1.29 Weight and 2 Program Minimum Standard	Year 1 Allocation 20 percent Deduction	Year 2 Allocation 40 percent Deduction	Year 3 Allocation 60 percent Deduction	Year 4 Allocation 80 percent Deduction	Year 5 Allocation 100 percent Deduction
1.96	32.76	30.71	-34,294	34,294	34,294	34,294	-	-	-	-	-
-	-	-	-	(24,654)	-	-	(4,931)	(9,862)	(14,792)	(19,723)	(24,654)
-	-	-	-	(12,465)	-	-	(2,493)	(4,986)	(7,479)	(9,972)	(12,465)
-	-	-	-	(12,189)	-	-	(2,438)	(4,876)	(7,313)	(9,751)	(12,189)
-	-	-	-	(47,440)	-	-	(9,488)	(18,976)	(28,464)	(37,952)	(47,440)
-	-	-	-	(37,157)	-	-	(7,431)	(14,863)	(22,294)	(29,726)	(37,157)
-	-	-	-	(10,282)	-	-	(2,056)	(4,113)	(6,169)	(8,226)	(10,282)
-	-	-	-	55,431	55,431	55,431	55,431	55,431	55,431	55,431	55,431
3.90	23.01	23.01	55,431	55,431	55,431	55,431	-	-	-	-	
-	-	-	-	816	816	816	816	816	816	816	816
-	-	-	-	816	816	816	816	816	816	816	816
-	-	-	-	1,877	1,877	1,877	1,877	1,877	1,877	1,877	1,877
-	-	-	-	10,495	10,495	10,495	10,495	10,495	10,495	10,495	10,495
3.44	21.35	21.35	44,472	44,472	44,472	44,472	-	-	-	-	
-	-	-	-	(24,797)	-	-	(4,959)	(9,919)	(14,878)	(19,838)	(24,797)
-	-	-	-	(9,180)	-	-	(1,836)	(3,672)	(5,508)	(7,344)	(9,180)
-	-	-	-	(2,042)	-	-	(408)	(817)	(1,225)	(1,634)	(2,042)
-	-	-	-	(2,042)	-	-	(408)	(817)	(1,225)	(1,634)	(2,042)
-	-	-	-	(54,811)	-	-	(10,962)	(21,925)	(32,887)	(43,849)	(54,811)
-	-	-	-	(54,811)	-	-	(10,962)	(21,925)	(32,887)	(43,849)	(54,811)
-	-	-	-	9,231	9,231	9,231	9,231	9,231	9,231	9,231	9,231
-	-	-	-	5,905	5,905	5,905	5,905	5,905	5,905	5,905	5,905
-	-	-	-	(821)	-	-	(164)	(328)	(493)	(657)	(821)
-	-	-	-	(821)	-	-	(164)	(328)	(493)	(657)	(821)
-	-	-	-	(21,034)	-	-	-	-	-	-	-
-	-	-	-	(21,034)	-	-	(4,207)	(8,414)	(12,621)	(16,827)	(21,034)
3.86	43.72	32.43	59,689	59,689	59,689	59,689	59,689	59,689	59,689	59,689	59,689
-	-	-	-	1,228	1,228	1,228	1,228	1,228	1,228	1,228	1,228
-	-	-	-	1,228	1,228	1,228	1,228	1,228	1,228	1,228	1,228
-	-	-	-	18,502	18,502	18,502	18,502	18,502	18,502	18,502	18,502
1.61	25.66	25.66	18,502	18,502	18,502	18,502	18,502	18,502	18,502	18,502	18,502

Appendix D: Scenario 2: Weighting based on a 1.29 weight and 4 program minimum program quality standard (261 ADM threshold): 2001-02

School	CLASS SIZE ADJUSTMENT USING 1.29 WEIGHT PER FTE AND HOLD HARMLESS PROVISION										INTRODUCTION OF A 2 PROGRAM MINIMUM PROGRAM QUALITY STANDARD (MPQS)						COST TO INSTITUTE A 2 PROGRAM MINIMUM STANDARD WITH REDUCTION						
	2001-02			2001-02			2001-02			OPTION 1			OPTION 2			OPTION 4			OPTION 4				
	Teacher Salaries in the ADM Model	Number of Grade 9-12 Students	Number of Grade 9-12 State Funding	Number of Vocational Students	FTE	1.29 Weight	Number of FTE Vocational Students	Net New FTE	Adjusted Teacher Salary to Support No New \$	Adjusted Funding Using New Teacher Salary	Reallocated Funding Among Schools to Hold State	Standards Contract	Resources	Cost to State to Allow Districts to Keep Extra	Minimum Cost to State to Institute a 2 Program MPQS with a 2 Program	Hold Harmless Cost to State to Institute a 2 Program MPQS	Option 4 with 1.29 Weight and 2 Program Standard	Year 1 Allocation 20 percent Deduction	Year 2 Allocation 40 percent Deduction	Year 3 Allocation 60 percent Deduction	Year 4 Allocation 80 percent Deduction	Year 5 Allocation 100 percent Deduction	
Rock Springs High School*	3,465	9426	3,269,229	1094	1409	11.3	3,328	3,239,432	3,239,432	(9,795)	-	(24,795)	-	(9,180)	-	-	(4,959)	(9,939)	(14,878)	(19,838)	(24,797)	(24,797)	
Sweetwater County #1	3,465	3560	1,233,593	414	535	11.9	3,328	1,224,413	1,224,413	(9,180)	-	(9,180)	-	(2,842)	-	-	(1,830)	(3,672)	(5,508)	(7,344)	(9,180)	(9,180)	
Sweetwater County #2	3,459	9813	3,393,856	1389	1783	39.9	3,321	3,391,814	3,391,814	(2,042)	-	(2,042)	-	(2,042)	-	-	(408)	(817)	(1,225)	(1,634)	(2,042)	(2,042)	
Green River High School*	3,409	9813	3,393,856	1389	1783	39.9	3,321	3,391,814	3,391,814	(2,042)	-	(2,042)	-	(2,042)	-	-	(408)	(817)	(1,225)	(1,634)	(2,042)	(2,042)	
Teton County #1	3,408	6571	2,239,424	362	465	16.4	3,273	2,184,612	2,184,612	(54,811)	-	(54,811)	-	(54,811)	-	-	(10,962)	(21,925)	(32,887)	(43,849)	(54,811)	(54,811)	
Jackson Hole High School*	3,408	6571	2,239,424	362	465	16.4	3,273	2,184,612	2,184,612	(54,811)	-	(54,811)	-	(54,811)	-	-	(10,962)	(21,925)	(32,887)	(43,849)	(54,811)	(54,811)	
Uinta County #1	3,412	9942	3,378,086	1512	1946	43.5	3,296	3,387,317	3,387,317	9,231	-	9,231	9,231	9,231	9,231	9,231	9,231	9,231	9,231	9,231	9,231	9,231	
Evanston High School	3,412	9942	3,378,086	1512	1946	43.5	3,296	3,387,317	3,387,317	9,231	-	9,231	9,231	9,231	9,231	9,231	9,231	9,231	9,231	9,231	9,231	9,231	
Uinta County #4	3,414	2520	866,277	425	547	12.2	3,278	866,181	866,181	5,965	-	5,965	5,965	5,965	5,965	5,965	5,965	5,965	5,965	5,965	5,965	5,965	
Mountain View High School	3,414	2520	866,277	425	547	12.2	3,278	866,181	866,181	5,965	-	5,965	5,965	5,965	5,965	5,965	5,965	5,965	5,965	5,965	5,965	5,965	
Uinta County #6	3,508	2762	968,895	383	500	11.2	3,368	968,874	968,874	(821)	-	(821)	-	(821)	-	-	(164)	(328)	(493)	(657)	(821)	(821)	
Lyman High School	3,508	2762	968,895	383	500	11.2	3,368	968,874	968,874	(821)	-	(821)	-	(821)	-	-	(164)	(328)	(493)	(657)	(821)	(821)	
Washakie County #1	3,370	4683	1,578,150	447	575	12.8	3,236	1,557,116	1,557,116	(21,034)	-	(21,034)	-	(21,034)	-	-	(4,207)	(8,414)	(12,621)	(16,827)	(21,034)	(21,034)	
Worldview High School	3,370	4683	1,578,150	447	575	12.8	3,236	1,557,116	1,557,116	(21,034)	-	(21,034)	-	(21,034)	-	-	(4,207)	(8,414)	(12,621)	(16,827)	(21,034)	(21,034)	
Washakie County #2	3,485	434	151,220	113	146	3.3	3,347	156,126	156,126	4,906	-	4,906	4,906	4,906	4,906	4,906	4,906	4,906	4,906	4,906	4,906	4,906	
Ten Sleep High School	3,485	434	151,220	113	146	3.3	3,347	156,126	156,126	4,906	-	4,906	4,906	4,906	4,906	4,906	4,906	4,906	4,906	4,906	4,906	4,906	
Weston County #1	3,548	3205	1,137,128	473	609	13.6	3,408	1,138,356	1,138,356	1,228	-	1,228	1,228	1,228	1,228	1,228	1,228	1,228	1,228	1,228	1,228	1,228	
Newcastle High School	3,548	3205	1,137,128	473	609	13.6	3,408	1,138,356	1,138,356	1,228	-	1,228	1,228	1,228	1,228	1,228	1,228	1,228	1,228	1,228	1,228	1,228	
Weston County #7	3,765	1041	391,891	169	205	4.6	3,616	392,929	392,929	1,038	-	1,038	1,038	1,038	1,038	1,038	1,038	1,038	1,038	1,038	1,038	1,038	
Upton High School	3,765	1041	391,891	169	205	4.6	3,616	392,929	392,929	1,038	-	1,038	1,038	1,038	1,038	1,038	1,038	1,038	1,038	1,038	1,038	1,038	

*High school grade span 10-12 (does not include 9th graders attending junior high school)

**9th grade FTE voc. students calculated by averaging high school participation rates in voc ed and multiplying by junior high school ADM

***pupil/teacher does not employ vocational instructors, so is not an actual minimum program standard

* Cost effectiveness includes Whiting Alternative HS

* Cost effectiveness includes Westwood HS

* Cost effectiveness includes Rawlins Cooperative

* Cost effectiveness includes Douglas Alternative HS

* Cost effectiveness includes Bear Lodge

* Cost effectiveness includes The Learning Center

* Cost effectiveness includes Swift Creek Learning Center

* Cost effectiveness includes Shoshone Learning Center

* Cost effectiveness includes Fort McLennan

* Cost effectiveness includes Rock Springs Alternative

* Cost effectiveness includes Expedition

* Cost effectiveness includes Western Wyoming HS

Appendix E: Scenario 3: Weighting based on a 1.29 weight and minimum 2 program standard (131 student threshold): 2001-02

School	Teacher Salaries in 10% Existing Formula	2001-02 Number of ADM	Current Grade 9-12 State Funding for Teacher Salaries	2001-02 Number of Vocational FTE	CLASS SIZE ADJUSTMENT USING 1.26 WEIGHT PER FTE AND HOLD HARMLESS PROVISION											INTRODUCTION OF A 2 PROGRAM MINIMUM QUALITY STANDARD								
					Year 1					Year 1					Year 2					Year 2				
					Adjusted Number of FTE Vocational at 1.29 Weight	Additional FTE Vocational Students as Result of 1.29 Weight	Adjusted Teacher Salary to Support Reallocation No New \$	Adjusted Funding Using New Teacher Salary No New \$	Redistributed Funding to Support Reallocation No New \$	Hold Harmless School to Keep Extra Resources	New Student FTE Assuming 10 Percent Increase in FTE Vocational	New Resource Eligibility with 10 % FTE Voc Increase	Additional State Spending Given 10 % Increase in FTE Voc at 1.29 weight	New Student ADM Assuming 10 Percent Increase in FTE Vocational	Minimum Program Quality Standard Weight	Minimum Program Formula Predicted FTE Vocational Students	Minimum Program Formula Adjusted # of Students	State Funds to Institute a 2 Program Standard	Minimum Standard with 10 percent Increase					
Metceteer School 9-12	3,441	44.8	154,157	9.9	12.8	2.9	3,304	157,461	3,304	3,304	11	161,680	4,219	46	3.63	39.63	31.32	61.321	61.321					
Platte County #1	3,579	409.5	1,465,398	59.8	77.0	17.2	3,437	1,466,323	925	2,766	66	1,492,771	26,448	417	100.501			122.562	122.562					
Cngwater High School	3,579	54.8	196,247	7.3	9.4	2.1	3,437	195,642	(604)	-	8	198,858	3,216	56	3.00	23.99	23.99	50.303	50.303					
Glendo High School	3,579	30.3	108,380	3.1	4.0	0.9	3,437	107,143	(1,237)	-	3	108,514	1,371	31	5.46	18.60	18.60	50.198	50.198					
Wheatland High School	3,579	324.3	1,160,771	49.4	63.6	14.2	3,437	1,163,557	2,766	2,766	54	1,185,399	21,861	331				21.861	21.861					
Platte County #2	3,906	85.6	334,328	16.8	21.6	4.8	3,751	339,127	4,799	4,799	18	347,216	8,089	88	1.91	35.15	32.42	40.720	40.720					
Guernsey-Sunrise High School	3,906	85.6	334,328	16.8	21.6	4.8	3,751	339,127	4,799	4,799	18	347,216	8,089	88				40.720	40.720					
Sheridan County #1	3,626	306.4	1,111,047	19.4	25.0	5.6	3,482	1,086,393	(24,654)	-	21	1,095,088	8,695	309				8,695	8,695					
Big Horn High School	3,626	148.6	538,766	8.9	11.5	2.6	3,482	526,301	(12,465)	-	10	530,289	3,988	150				3,988	3,988					
Tongue River High School	3,626	157.8	572,281	10.5	13.5	3.0	3,482	560,092	(12,189)	-	12	564,800	4,707	159				4,707	4,707					
Sheridan County #2	3,516	103.81	3,649,833	100.3	129.1	28.8	3,376	3,602,393	(47,440)	-	110	3,645,986	43,593	1,051				43,593	43,593					
Sheridan High School*	3,516	81.1	2,858,740	78.6	101.1	22.6	3,376	2,821,583	(37,157)	-	86	2,855,727	34,144	823				34,144	34,144					
Sheridan County #2	3,516	225.0	791,093	21.7	28.0	6.2	3,376	780,810	(10,282)	-	24	790,259	9,449	228				9,449	9,449					
Sheridan County #3	3,745	42.9	160,846	5.9	7.6	1.7	3,597	160,571	(275)	-	6	163,305	2,734	44				62,127	62,127					
Arvada-Clearmont High School	3,745	42.9	160,846	5.9	7.6	1.7	3,597	160,571	(275)	-	6	163,305	2,734	44	3.83	24.88	24.88	62,127	62,127					
Sublette County #1	3,452	190.0	655,839	28.2	36.3	8.1	3,315	656,655	816	816	31	668,672	12,017	194				12,017	12,017					
Pinedale High School	3,452	190.0	655,839	28.2	36.3	8.1	3,315	656,655	816	816	31	668,672	12,017	194				12,017	12,017					
Sublette County #9	3,462	178.6	618,213	27.6	35.6	7.9	3,482	620,091	1,877	1,877	30	631,915	11,824	182				11,824	11,824					
Big Piney High School	3,462	178.6	618,213	27.6	35.6	7.9	3,482	620,091	1,877	1,877	30	631,915	11,824	182				11,824	11,824					
Sweetwater County #1	3,465	1,346.7	4,666,351	157.2	202.4	45.2	3,482	4,631,624	(34,727)	-	173	4,698,971	67,347	1,367				50,316	115,005					
Fuson-Eden High School	3,465	48.6	168,529	6.2	8.0	1.8	3,328	167,779	(750)	-	7	170,438	2,658	49	3.39	23.11	23.11	50,316	50,316					
Rock Springs High School*	3,465	942.0	3,264,229	109.4	140.9	31.5	3,328	3,239,432	(24,797)	-	120	3,286,317	46,885	956				46,885	46,885					
Sweetwater County #1	3,465	356.0	1,233,598	41.6	53.5	11.9	3,328	1,224,413	(9,380)	-	46	1,242,216	17,804	261				17,804	17,804					
Sweetwater County #2	3,459	981.3	3,393,856	138.9	178.8	39.9	3,597	3,391,814	(2,042)	-	153	3,451,194	59,300	999				59,300	59,300					
Green River High School ^b	3,459	981.3	3,393,856	138.9	178.8	39.9	3,597	3,391,814	(2,042)	-	153	3,451,194	59,300	999				59,300	59,300					
Teton County #1	3,408	657.1	2,239,424	36.2	46.5	10.4	3,315	2,184,612	(54,811)	-	40	2,199,846	15,234	662				15,234	15,234					
Jackson Hole High School ^c	3,408	657.1	2,239,424	36.2	46.5	10.4	3,315	2,184,612	(54,811)	-	40	2,199,846	15,234	662				15,234	15,234					
Uinta County #1	3,432	984.2	3,378,086	151.2	194.6	43.5	3,296	3,387,317	9,231	9,231	166	3,451,467	64,150	1,004				64,150	64,150					
Evanston High School	3,432	984.2	3,378,086	151.2	194.6	43.5	3,296	3,387,317	9,231	9,231	166	3,451,467	64,150	1,004				64,150	64,150					
Uinta County #4	3,414	252.0	860,277	42.5	54.7	12.2	3,278	866,181	5,905	5,905	47	884,110	17,929	257				17,929	17,929					
Mountain View High School	3,414	252.0	860,277	42.5	54.7	12.2	3,278	866,181	5,905	5,905	47	884,110	17,929	257				17,929	17,929					
Uinta County #6	3,508	276.2	968,895	38.8	50.0	11.2	3,368	968,074	(821)	-	43	984,919	16,846	281				16,846	16,846					
Lyman High School	3,508	276.2	968,895	38.8	50.0	11.2	3,368	968,074	(821)	-	43	984,919	16,846	281				16,846	16,846					
Washakie County #1	3,370	468.3	1,578,150	44.7	57.5	12.8	3,236	1,557,116	(21,034)	-	49	1,575,731	18,615	474				18,615	18,615					
Worland High School	3,370	468.3	1,578,150	44.7	57.5	12.8	3,236	1,557,116	(21,034)	-	49	1,575,731	18,615	474				18,615	18,615					
Washakie County #2	3,485	43.4	151,220	11.3	14.6	3.3	3,347	156,126	4,906	4,906	12	161,010	4,884	45	3.73	46.53	33.59	63,569	63,569					
Ten Sleep High School	3,485	43.4	151,220	11.3	14.6	3.3	3,347	156,126	4,906	4,906	12	161,010	4,884	45				63,569	63,569					
Weston County #1	3,548	320.5	1,137,128	47.3	60.9	13.6	3,408	1,138,356	1,228	1,228	52	1,159,109	20,752	327				20,752	20,752					
Newcastle High School	3,548	320.5	1,137,128	47.3	60.9	13.6	3,408	1,138,356	1,228	1,228	52	1,159,109	20,752	327				20,752	20,752					
Weston County #7	3,765	104.1	391,891	16.0	20.5	4.6	3,616	392,929	1,038	1,038	18	400,356	7,427	106	1.58	27.68	27.51	25,202	25,202					
Upton High School	3,765	104.1	391,891	16.0	20.5	4.6	3,616	392,929	1,038	1,038	18	400,356	7,427	106				25,202	25,202					

^aHigh school grade span 10-12 (does not include 9th graders attending junior high school)
^{**}9th grade FTE voc. students calculated by averaging high school participation rates in voc ed and multiplying by junior high school ADM
^{***}Pathfinder does not employ vocational instructors, so is not awarded minimum program standard
^bCost effectiveness includes Whiting Alternative HS
^cCost effectiveness includes Westwood HS
^dCost effectiveness includes Rawlins Cooperative
^eCost effectiveness includes Douglas Alternative HS
^fCost effectiveness includes Bear Lodge
^gCost effectiveness includes The Learning Center
^hCost effectiveness includes Swift Creek Learning Center
ⁱCost effectiveness includes Shoshone Learning Center
^jCost effectiveness includes Fort Mackenzie
^kCost effectiveness includes Rock Springs Alternative
^lCost effectiveness includes Expedition
^mCost effectiveness includes Western Wyoming HS

Appendix F: Scenario 4: Equipment and supply allocations compensating for less than 2.0 FTE instructors and 50 percent equipment upgrade

School	Number of Vocational FTE Instructors	Current State Allocation Supplies and Equipment	Current State Allocation for Supplies	Current State Allocation for Equipment	ADDITIONAL STATE SPENDING		
					Compensation for Less than 2.0 FTE Instructors	Additional 50% New Equipment Purchases	Combined Compensation and New Equipment
Wyoming	336.8	2,064,286	1,624,063	440,222	17,179	221,930	239,109
Albany #1***	11.8	72,146	56,760	15,386	-	7,693	7,693
Laramie High School**a	11.1	68,039	53,529	14,510	-	7,255	7,255
Rock River High School	0.7	4,107	3,231	876	-	438	438
Big Horn County #1	6.0	36,717	28,887	7,830	-	3,915	3,915
Burlington High School**	1.8	11,217	8,825	2,392	-	1,196	1,196
Rocky Mountain High School	4.2	25,499	20,061	5,438	-	2,719	2,719
Big Horn County #2	4.2	25,438	20,013	5,425	-	2,712	2,712
Lovell High School	4.2	25,438	20,013	5,425	-	2,712	2,712
Big Horn County #3	2.9	17,776	13,985	3,791	-	1,895	1,895
Greybull High School	2.9	17,776	13,985	3,791	-	1,895	1,895
Big Horn County #4	3.3	19,921	15,673	4,248	-	2,124	2,124
Riverside High School	3.3	19,921	15,673	4,248	-	2,124	2,124
Campbell County #1***	25.5	156,306	122,973	33,333	-	16,667	16,667
Campbell County High School**b	20.5	125,658	98,861	26,797	-	13,399	13,399
Wright Jr./Sr. High School	5.0	30,648	24,112	6,536	-	3,268	3,268
Carbon County #1	8.0	49,037	38,580	10,458	23	5,229	5,252
Little Snake River Valley School 9-12	2.0	12,259	9,645	2,614	23	1,307	1,330
Rawlins High School ^c	6.0	36,778	28,935	7,843	-	3,922	3,922
Carbon County #2	7.2	43,950	34,577	9,373	1,004	4,791	5,795
Encampment High School	1.8	11,279	8,873	2,405	1,004	1,307	2,311
H.E.M. Senior High	2.2	13,301	10,465	2,837	-	1,418	1,418
Saratoga High School	3.2	19,370	15,239	4,131	-	2,065	2,065
Converse County #1	6.2	38,126	29,996	8,131	-	4,065	4,065
Douglas High School ^d	6.2	38,126	29,996	8,131	-	4,065	4,065
Converse County #2	3.4	20,902	16,445	4,458	-	2,229	2,229
Glenrock High School	3.4	20,902	16,445	4,458	-	2,229	2,229
Crook County #1	10.5	64,423	50,684	13,739	-	6,869	6,869
Hulett High School	2.1	13,056	10,272	2,784	-	1,392	1,392
Moorcroft High School	4.1	24,886	19,579	5,307	-	2,654	2,654
Sundance High School ^e	4.3	26,480	20,833	5,647	-	2,824	2,824
Fremont County #1	7.5	45,972	36,169	9,804	-	4,902	4,902
Lander Valley High School	7.5	45,972	36,169	9,804	-	4,902	4,902
Pathfinder Learning Center****		-	-	-	-	-	-
Fremont County #2	1.3	7,662	6,028	1,634	4,620	1,307	5,927
Dubois High School	1.3	7,662	6,028	1,634	4,620	1,307	5,927
Fremont County #6	2.0	12,259	9,645	2,614	-	1,307	1,307
Wind River Secondary	2.0	12,259	9,645	2,614	-	1,307	1,307
Fremont County #14	2.6	15,815	12,442	3,373	-	1,686	1,686
Wyoming Indian High School	2.6	15,815	12,442	3,373	-	1,686	1,686
Fremont County #24	2.7	16,673	13,117	3,556	-	1,778	1,778
Shoshoni High School	2.7	16,673	13,117	3,556	-	1,778	1,778
Fremont County #25	10.5	64,300	50,588	13,712	-	6,856	6,856
Riverton High School	10.5	64,300	50,588	13,712	-	6,856	6,856
Goshen County #1	14.3	87,777	69,058	18,719	-	9,360	9,360
Southeast High School	3.3	20,412	16,059	4,353	-	2,176	2,176
Lingle-Ft Laramie High School	2.3	14,221	11,188	3,033	-	1,516	1,516
Torrington High School	8.7	53,144	41,811	11,333	-	5,667	5,667
Hot Springs #1	5.0	30,648	24,112	6,536	-	3,268	3,268
Hot Springs County High School	5.0	30,648	24,112	6,536	-	3,268	3,268
Johnson County #1	5.5	33,958	26,716	7,242	7,930	4,464	12,394
Buffalo High School ^f	4.8	29,606	23,293	6,314	-	3,157	3,157
Kaycee High School	0.7	4,352	3,424	928	7,930	1,307	9,237
Laramie County #1	35.1	214,967	169,124	45,843	-	22,922	22,922
Central High School*	16.6	101,752	80,053	21,699	-	10,850	10,850
East High School	14.1	86,244	67,852	18,392	-	9,196	9,196
Triumph High School	4.4	26,971	21,219	5,752	-	2,876	2,876

Appendix F: Scenario 4: Equipment and supply allocations compensating for less than 2.0 FTE instructors and 50 percent equipment upgrade

School	Number of Vocational FTE Instructors	Current State Allocation Supplies and Equipment	Current State Allocation for Supplies	Current State Allocation for Equipment	ADDITIONAL STATE SPENDING		
					Compensation for Less than 2.0 FTE Instructors	Additional 50% New Equipment Purchases	Combined Compensation and New Equipment
Laramie County #2***	8.5	52,102	40,991	11,111	23	5,556	5,579
Albin Sr High School	2.0	12,259	9,645	2,614	23	1,307	1,330
Burns Sr High School	3.5	21,515	16,927	4,588	-	2,294	2,294
Pine Bluffs Sr High School	3.0	18,328	14,419	3,908	-	1,954	1,954
Lincoln County #1	4.0	24,519	19,290	5,229	-	2,614	2,614
Kemmerer High School	4.0	24,519	19,290	5,229	-	2,614	2,614
Lincoln County #2	11.2	68,590.90	53,963.44	14,627.46	-	7,314	7,314
Cokeville High School	3.9	23,599	18,567	5,033	-	2,516	2,516
Star Valley High School ^l	7.3	44,992	35,397	9,595	-	4,797	4,797
Natrona County #1	29.6	181,438	142,745	38,693	-	19,347	19,347
Midwest School 9-12	3.0	18,389	14,467	3,922	-	1,961	1,961
Kelly Walsh High School*	10.0	61,297	48,225	13,072	-	6,536	6,536
Natrona County High School*	13.6	83,363	65,586	17,778	-	8,889	8,889
Roosevelt High School	3.0	18,389	14,467	3,922	-	1,961	1,961
Niobrara County #1***	3.0	18,389	14,467	3,922	-	1,961	1,961
Niobrara County High School	3.0	18,389	14,467	3,922	-	1,961	1,961
Park County #1	4.5	27,706	21,798	5,908	-	2,954	2,954
Powell High School ^h	4.5	27,706	21,798	5,908	-	2,954	2,954
Park County #6	7.0	42,908	33,757	9,150	-	4,575	4,575
Cody High School	7.0	42,908	33,757	9,150	-	4,575	4,575
Park County #16	1.4	8,704	6,848	1,856	3,578	1,307	4,885
Meeteetse School 9-12	1.4	8,704	6,848	1,856	3,578	1,307	4,885
Platte County #1	7.4	45,053	35,445	9,608	-	4,804	4,804
Chugwater High School	1.3	8,214	6,462	1,752	-	876	876
Glendo High School	0.8	5,088	4,003	1,085	-	542	542
Wheatland High School	5.2	31,752	24,980	6,771	-	3,386	3,386
Platte County #2	3.0	18,634	14,660	3,974	-	1,987	1,987
Guernsey-Sunrise High School	3.0	18,634	14,660	3,974	-	1,987	1,987
Sheridan County #1	3.7	22,864	17,988	4,876	-	2,438	2,438
Big Horn High School	1.4	8,765	6,896	1,869	-	935	935
Tongue River High School	2.3	14,098	11,092	3,007	-	1,503	1,503
Sheridan County #2***	9.6	58,844.7	46,295.7	12,549.0	-	6,275	6,274.6
Sheridan High School ⁱ *	9.6	58,845	46,296	12,549	-	6,275	6,275
Sheridan County #3	1.2	7,049	5,546	1,503	-	752	752
Arvada-Clearmont High School	1.2	7,049	5,546	1,503	-	752	752
Sublette County #1	3.0	18,389	14,467	3,922	-	1,961	1,961
Pinedale High School	3.0	18,389	14,467	3,922	-	1,961	1,961
Sublette County #9	3.0	18,389	14,467	3,922	-	1,961	1,961
Big Piney High School	3.0	18,389	14,467	3,922	-	1,961	1,961
Sweetwater County #1	12.0	73,556	57,870	15,686	-	7,843	7,843
Farson-Eden High School	1.5	9,256	7,282	1,974	-	987	987
Rock Springs High School ^j *	10.5	64,300	50,588	13,712	-	6,856	6,856
Sweetwater County #2***	10.3	63,319	49,816	13,503	-	6,752	6,752
Green River High School ^k	10.3	63,319	49,816	13,503	-	6,752	6,752
Teton County #1	3.0	18,389	14,467	3,922	-	1,961	1,961
Jackson Hole High School ^l	3.0	18,389	14,467	3,922	-	1,961	1,961
Uinta County #1	10.0	61,297	48,225	13,072	-	6,536	6,536
Evanston High School	10.0	61,297	48,225	13,072	-	6,536	6,536
Uinta County #4	4.5	27,583	21,701	5,882	-	2,941	2,941
Mountain View High School	4.5	27,583	21,701	5,882	-	2,941	2,941
Uinta County #6	4.0	24,519	19,290	5,229	-	2,614	2,614
Lyman High School	4.0	24,519	19,290	5,229	-	2,614	2,614
Washakie County #1	6.2	38,004	29,899	8,105	-	4,052	4,052
Worland High School	6.2	38,004	29,899	8,105	-	4,052	4,052
Washakie County #2	3.0	18,389	14,467	3,922	-	1,961	1,961
Ten Sleep High School	3.0	18,389	14,467	3,922	-	1,961	1,961
Weston County #1	6.5	39,843	31,346	8,497	-	4,248	4,248
Newcastle High School	6.5	39,843	31,346	8,497	-	4,248	4,248
Weston County #7	1.8	11,033	8,680	2,353	-	1,176	1,176

Appendix F: Scenario 4: Equipment and supply allocations compensating for less than 2.0 FTE instructors and 50 percent equipment upgrade

School	Number of Vocational FTE Instructors	Current State Allocation Supplies and Equipment	Current State Allocation for Supplies	Current State Allocation for Equipment	ADDITIONAL STATE SPENDING		
					Compensation for Less than 2.0 FTE Instructors	Additional 50% New Equipment Purchases	Combined Compensation and New Equipment
Upton High School	1.8	11,033	8,680	2,353	-	1,176	1,176

*High school grade span 10-12 (does not includes 9th graders attending junior high school)

**9th grade FTE voc. students calculated by averaging high school participation rates in voc ed and multiplying by junior high school ADM

***Does not include instructors teaching 9th grade students attending junior high schools

****Pathfinder does not employ vocational instructors and is above the threshold distance, so is not awarded minimum program standard

^a Cost effectiveness includes Whiting Alternative HS

^b Cost effectiveness includes Westwood HS

^c Cost effectiveness includes Rawlins Cooperative

^d Cost effectiveness includes Douglas Alternative HS

^e Cost effectiveness includes Bear Lodge

^f Cost effectiveness includes The Learning Center

^g Cost effectiveness includes Swift Creek Learning Center

^h Cost effectiveness includes Shoshone Learning Center

ⁱ Cost effectiveness includes Fort Mackenzie

^j Cost effectiveness includes Rock Springs Alternative

^k Cost effectiveness includes Expedition

^l Cost effectiveness includes Western Wyoming HS

Appendix G: Data Collection Forms

May 23, 2002

Superintendent
City, WY 82070

Dear Superintendent Head:

The Wyoming Legislature has authorized a study of statewide expenditures for vocational instruction as part of the effort to establish a mechanism for distributing vocational resources within the state's block grant model. The State has engaged MPR Associates, Inc., an independent education research firm, to collect statewide data that can be used to develop a weighted adjustment to compensate districts for the added cost of educating vocational students.

Last year, MPR Associates contacted you to request information on the actual cost your district faced in providing vocational equipment and supplies in the 2000-01 school year. To ensure that estimates used in our calculations remain accurate, we are asking you to review the information you recently submitted and to provide us with updated data on your expenditures for the 2001-02 school year.

To assist us in quantifying student participation in vocational education, we are in addition asking you to supply us with course enrollment data for each secondary vocational class offered in your district during the Fall and Spring semester of the 2001-02 school year. These data, which may be submitted in electronic or paper format, will be used to help estimate your district's vocational education funding eligibility in the revised education block grant formula.

Instructions for reviewing your prior year expenditure data and for submitting new data on district expenditures and vocational course enrollments are enclosed. Please note that while your involvement in this study is voluntary, if you choose not to respond we will estimate your district expenditures and enrollment based on data maintained by the Wyoming Department of Education.

Due to time constraints imposed by the Wyoming Legislature, we are requesting that you forward your vocational expenditure data no later than July 15th, 2002 to allow researchers time to validate your district submissions.

Please direct questions to Rosio Bugarin of MPR Associates at 510.849.4942 and return completed forms to her using any of the following approaches:

Email: rbugarin@mprinc.com
Fax: 510.849.0794
Mail: 2150 Shattuck Avenue, Suite 800
Berkeley, CA 94704

Thank you for your participation in this important matter.

CC: Business Manager

Instructions for Submitting Course Enrollment Data

Vocational course enrollment data will be used to help calculate district vocational student enrollment for use in the revised block grant model and to assess the average size of vocational courses compared to other forms of instruction.

To enable us to use your data, please provide us with the following information for each vocational teacher listed in the attached spreadsheet for both spring and fall semesters. You may submit data using the enclosed templates (please use one sheet per teacher) or as a printout from your district management information system.

- **Course Title of Each Class Taught during the School Day**

If a teacher teaches the same course multiple times during the day please list each class separately.

- **Vocational Program Area**

Classify vocational coursework into one of the following program areas:

- Agriculture
- Marketing
- Family & Consumer Sciences
- Trade Industry
- Health
- Business
- Technical Education
- Special Programs not Classified

- **Number of Students Enrolling in the Course**

Specify the number of students who enrolled in the course at the beginning of the year. Do not include individually identifiable information: a total count of students is sufficient.

- **Course level**

Classify vocational coursework as either:

- Introductory— the first course in a vocational program sequence or one that provides students with generic vocational skills.
- Advanced— the second, third, or fourth course in a vocational program sequence
- Other— please specify

- **Other**

- If your district provides additional vocational classes by teachers not provided on the attached list, please provide their name, assignment, FTE status and vocational course information as described above.

Please submit data in either electronic or paper format to Rosio Bugarin care of MPR Associates, Inc.

E-mail data to: rbugarin@mprinc.com Fax: 510.849.0794

Or mail to:

Rosio Bugarin
MPR Associates, Inc.
2150 Shattuck Avenue, Suite 800
Berkeley, CA 94704

Albany District #1: Vocational Teacher List

School id	Name	Assignment	Grade group**	FTE status
	Teacher 1	Home Economics	JM	100
	Teacher 2	Industrial Arts/Technology Education	JM	100
	Teacher 3	Industrial Arts/Technology Education	JM	50
	Teacher 4	Business Education	JM	83
	Teacher 5	Industrial Arts/Technology Education	JM	100
	Teacher 6	Agriculture	J9	20
	Teacher 7	Industrial Arts/Technology Education	J7	20
	Teacher 8	Home Economics	JM	100
	Teacher 9	Industrial Arts/Technology Education	JM	100
	Teacher 10	Industrial Arts/Technology Education	JM	100
	Teacher 11	Home Economics	JM	100
				873

**JM: Junior/Middle School

****Please provide a different sheet for each teacher**

**Albany District #1
Vocational Course Enrollment Data: Fall 2001-2002**

Teacher Name _____

Course Title of Each Class Taught	Vocational Program Area (see below for list)	Number of Students Enrolled	Course Level (see below for description)	# of Days Class Meets a Week	Length of Class Period (in minutes)
1. Welding 1 (example)	Trade & Industry	12	Introductory	5	55

Vocational Program Areas: Agriculture, Health, Trade & Industry, Marketing, Business, Family & Consumer Sciences, Technical Education, Special Programs/Not Classified

Course Level Classifications:

Introductory - the first course in a vocational program sequence or one that provides students with exploratory vocational skills.
Advanced - the second, third, or fourth course in a vocational program sequence
Other - please specify

****Please provide a different sheet for each teacher**

**Albany District #100
Vocational Course Enrollment Data: Spring 2001-2002**

Teacher Name					
Course Title of Each Class Taught	Vocational Program Area (see below for list)	Number of Students Enrolled	Course Level (see below for description)	# of Days Class Meets a Week	Length of Class Period (in minutes)
1. Welding 1 (example)	Trade & Industry	12	Introductory	5	55

Vocational Program Areas: Agriculture, Health, Trade & Industry, Marketing, Business, Family & Consumer Sciences, Technical Education, Special Programs/Not Classified

Course Level Classifications:

- Introductory - the first course in a vocational program sequence or one that provides students with exploratory vocational skills.
- Advanced - the second, third, or fourth course in a vocational program sequence
- Other - please specify

Albany District #1: 2001-2002 End-of-Year Expenditures: Middle/Junior High School*

Vocational Programs

Object Code		Total District Expenditures Excluding Vocational Education	Total District Vocational Expenditures	Vocational Programs							Special Programs not Classified
				Agriculture	Health	Trade Industry	Marketing	Business	Family & Consumer Sciences	Technical Education	
State General Funds											
Supplies & Materials	400										
Capital Outlay	500										
Perkins Funding											
Supplies & Materials	400										
Capital Outlay	500										
Other Federal Funding											
Supplies & Materials	400										
Capital Outlay	500										

* Junior High schools can include 7th and 8th or 7th through 9th grades. Middle Schools are those that include 6th through 8th grade

Albany District #1: 2001-2002 End-of-Year Expenditures: High School*

Vocational Programs

Object Code		Total District Expenditures Excluding Vocational Education	Total District Vocational Expenditures	Vocational Programs							Special Programs not Classified
				Agriculture	Health	Trade Industry	Marketing	Business	Family & Consumer Sciences	Technical Education	
State General Funds											
Supplies & Materials	400										
Capital Outlay	500										
Perkins Funding											
Supplies & Materials	400										
Capital Outlay	500										
Other Federal Funding											
Supplies & Materials	400										
Capital Outlay	500										

*High School are those schools which include 9th-12th or 10th-12th grades.