



MANAGEMENT ANALYSIS & PLANNING, INC.

WYOMING EDUCATION FINANCE

SUMMARY OF VOCATIONAL EDUCATION CASE STUDY SITE VISITS

SUBMITTED TO
WYOMING STATE LEGISLATURE

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Introduction

This report summarizes findings from site visits conducted at sixteen Wyoming school districts offering secondary vocational education services during the 2000-01 school year. Districts were selected based on their relative size and intensity of student participation in vocational services, as well as to ensure that a representative sample was identified from each region of the state.

Site visits were conducted over a four-week period in May and June 2001 by research staff from MPR Associates. To ensure site visitors collected comparable information, MPR staff developed a set of site visit protocols that were used to structure case study interviews. These protocols included specific questions that each site visitor was required to ask, and each researcher attended a series of training sessions to gain familiarity with the protocol instrument and the manner in which case study data would be used in the final report.

Case study researchers worked individually to conduct site visits. To ensure accurate collection of data, in most cases researchers simultaneously audiotaped and took written notes of each interview. Each researcher summarized these notes immediately following the site visit; in some cases, local staff were contacted to verify information or clarify important points.

What follows is a summary of case study write-ups from each site, as transcribed from notes and tapes by each researcher. These write-ups are intended to provide the reader with background information on each site, as well as the impressions and commentary provided by local staff. While each write-up is intended to communicate the information reported to MPR staff; no attempt was made to independently verify the accuracy of district provided information. Consequently, all information presented in this summary report represent the opinions of staff from Wyoming school districts and may not accurately reflect the actual state of district vocational services.

Site Selection Methodology

To obtain a representative sample of districts for case study site visits, it was necessary to devise a selection strategy that incorporated district characteristics and scale of student participation in vocational services. After reviewing the available information, it was decided to sort sites into a three-by-three matrix based on their relative size and their intensity of student participation in vocational education. Sites were then randomly selected within cells, with steps taken to ensure that each region of the state was represented.

Establishing Matrix Columns and Rows

Data on district size and student participation in vocational education were based on 1999–2000 data supplied by the Wyoming Department of Education. Cut-points for the intensity of student participation in vocational education were established by first dividing the number of student participants in vocational education by district ADM, in order to quantify the proportion of students engaged in vocational instruction.

These district data were then sorted by level of student participation and classified to ensure roughly equal proportions of students were included within each category. Since students participating in more than one vocational program area are double-counted, participation rates may exceed 100 percent. Based on this approach, 36 percent of all vocational participants were enrolled in districts with a vocational participation rate greater than 105 percent. Similarly, 38 percent of all vocational participants were enrolled in districts with a rate of 80–105 percent, and 25 percent of all participants in districts with rates less than 80 percent.

District ADM cut points were established by reviewing grades 7–12 ADM data to identify clusters of districts with similar enrollments, as well as by assessing cut points established for the intensity of student participation in vocational education. Districts were classified to ensure that there was at least one local agency per cell. Using this approach, a total of eight sites with more than 1,500 ADM students were identified: these sites enrolled approximately 55 percent of state ADM students. A total of 14 sites were identified with between 500–1,500 ADM students (29 percent of state ADM), and 25 sites with less than 500 ADM students (16 percent of state ADM).

Selecting Case Study Sites

Sixteen districts were selected for case study site visits. A site was selected for each four districts within a cell, meaning that at a minimum, 25 percent of districts within each cell would be visited. To ensure all regions of the state were included, sites were randomly selected within each cell; however, once a region was identified, other districts within the region were excluded. This approach meant that a larger number of smaller districts were selected for case study visits, in keeping with the over-representation of small districts within the state.

Based on this approach, four of the eight largest districts were selected for site visitations (50 percent). Among mid-sized districts, four of 14 districts were selected (29 percent) and among small districts, eight of 25 were selected (32 percent). The sampling matrix used to identify sites is attached, along with copies of the protocol used to conduct site visit discussions.

Sampling for District Site Selection
Proposed sites in bold

Intensity of Student Participation in Vocational Education (% vocational students)				
District Size 7-12 th grade ADM		Rate > 105 %	Rate 80 – 105 %	Rate < 80 %
		Enrollment > 1,500 VISITS: 4 OF 8 SITES	0301–Campbell #1 (109) 2101–Uinta #1 (108)	1101–Laramie #1 (83)
	Enrollment 500 – 1,500 VISITS: 4 OF 14 SITES	601–Crook #1 (114) 801–Goshen #1 (140) 1001–Johnson #1 (115) 2301–Weston #1 (106)	725–Fremont #25 (81) 1202–Lincoln #2 (82) 1506–Park #6 (100) 1601–Platte #1 (98)	401–Carbon #1 (55) 501–Converse #1 (32) 701–Fremont #1 (61) 1501–Park #1 (36) 2001–Teton #1 (8) 2201–Washakie #1 (51)

Intensity of Student Participation in Vocational Education				
(% vocational students)				
	Enrollment < 500	402–Carbon #2 (111) 1201–Lincoln #1 (110) 2307–Weston #7 (168)	201–Big Horn #1 (87) 203–Big Horn #3 (101) 204–Big Horn #4 (89) 502–Converse #2 (90) 702–Fremont #2 (89) 706–Fremont #6 (87) 1703–Sheridan #3 (85) 1809–Sublette #9 (94) 2104–Uinta #4 (90)	202–Big Horn #3 (29) 714–Fremont #14 (79) 724–Fremont #24 (63) 738–Fremont #38 (0) 901–Hot Springs #1 (25) 1102–Laramie #2 (63) 1401–Niobrara #1 (36) 1516–Park #16 (68) 1602–Platte #2 (15) 1701–Sheridan #1 (20) 1801–Sublette #1 (74) 2106–Uinta #6 (68) 2202–Washakie #2 (78)
	VISITS: 8 OF 25 SITES	Visits: 3 of 9 sites	Visits: 5 of 14 sites	Visits: 8 of 24 sites

Notes: Student participation in vocational education based on 7–12th grade duplicated count of student participation.
 Districts may include multiple high school sites.
 High schools may or may not include 9th grade level.

**Big Horn School District #1
SITE VISIT SUMMARY**

Background

A. Site demographics

Big Horn School District #1 is located in Big Horn County in Northern Wyoming. This small school district serves seven towns in a rural area. Student enrollment in the district was 779 students in the 2000–01 school year. Of 141 FTE staff employed by the district, 90 are classified as FTE instructional and six as FTE vocational. The following table summarizes student enrollment at the district’s eight schools:

School	Grade span	Enrollment
Frannie Elementary	K–5	56
Byron Elementary	K–5	61
Cowley Elementary	K–5	81
Burlington Elementary	K–6	169
Rocky Mount Middle School	6–8	112
Burlington Junior High	7–8	34
Rocky Mount High School	9–12	175
Burlington High School	9–12	98

B. Program description

The district believes in preparing students for post-secondary education as well as the world of work. Past trends indicate that most students go on to a regional two-year institution such as Northwest College in Powell. The local farming and industrial community provides ample employment opportunities for graduates of vocational agriculture and welding programs.

The district offers four vocational education programs: Trade/Industry, Family and Consumer Sciences, Vocational Agriculture, and Business. At the time of the site visit, district staff reported that it would be easy to introduce a new vocational education program provided they could find qualified teachers.

Across the district, there were roughly 348 students participating in vocational courses in the 1999–2000 school year. Of these students, a total of 79 individuals concentrated in vocational education, completing a sequence of at least three courses in a vocational program area.

Program Overview

A. District funding process

The superintendent and the district's business manager determine the allocation of state funding to different school buildings. Once the total amount is allocated to each school, the principal, with input from an advisory council, decides how those funds are to be distributed between different academic and vocational program areas. The primary source of federal funding for vocational education is the Perkins grant that is used primarily for vocational education equipment and staff development. A vocational committee that meets annually to determine funding priorities disburses federal funds for vocational education.

The mix of vocational education programs is historical: the district is located in a rural, agricultural community whose long-term needs have driven vocational education offerings. Nonetheless, the district has in place a process for teachers to propose plans for new vocational programs or classes. These requests are forwarded to the curriculum board. In this way, the district is very supportive of teachers introducing new classes and programs as long as there is demand and the resources are available.

Vocational Costs

A. Purchasing vocational services

There are no differences in the salaries of academic and vocational teachers. The number of vocational staff is determined by program offerings. In general, administrative staff reported that it would not be difficult to set aside resources to hire additional vocational teachers. Their problem is getting teachers who are qualified enough. There is also some concern about losing technology teachers to the private sector, especially when the district has invested considerably in training them. While there were no staffing changes that had taken place around the time of the site visit, the district anticipates that when vocational and technical standards are implemented, the district will have to reassess its staffing to ensure that the new standards are being met.

B. Equipment and supplies

District staff reported that the state of their vocational education equipment was not adequate. However, it is important to note that at the time of the site visit, the district was in the process of replacing a significant portion of its vocational education equipment. Providing students with state-of-the-art technology and learning opportunities is a priority for this district. In the process of improvement, the district is acquiring new computer laboratories, and AutoCAD and business software. Perkins money is used to maintain such computer labs and advanced software. Currently, the district does not receive any donations of equipment from industry.

Due to the investment demands for equipment and supplies, the overall cost of vocational education is higher than academic programs. All programs, academic and vocational, follow a five-year funding cycle. At the time of the site visit, the programs that had most recently received funding were Health/Physical Education and Foreign Language. Vocational/Technical programs are slated to receive funding next year. If expenditure needs arise between funding cycles, the building principal determines whether there is money available.

C. Class size

The average class size is about 15–20 students for all classes, including vocational education classes. Some vocational program areas (welding and woodworking) might have smaller classes, but it was not clear whether this was because of less demand or because of safety issues dictating smaller class size in these particular areas.

Effects of Funding System

In general, there did not seem to be much concern about the basket approach and its implications for providing quality vocational education. In fact, because Big Horn #1 is a very small district, it has actually benefited from the basket approach and has received more funds because of the small schools adjustment component of the new funding formula. If the formula based on the MAP model is not altered, district staff reports that they would have more flexibility to address vocational education needs, and to be able to adjust practices and programs in response to these needs. The basket model would also allow the district to be more innovative by infusing traditional vocational areas with new technology. However, they are currently in limbo because they know that the formula might be adjusted and they might end up losing vocational education funding if the small schools adjustment is removed.

Sites Visited:

School district office

Analysis of Data

The Technology/Perkins Coordinator for the district and the Curriculum Director were able to provide very little information about the funding of vocational education in their district. Most questions about the costs of vocational education were directed to the Business Manager, Cathy May. Ms. May committed to providing the district's version of vocational education expenditures for 1999–2000 and 2000–2001.

Campbell County School District #1
SITE VISIT SUMMARY

Background

A. Site demographics

Located in Gillette, Wyoming, Campbell County School District #1 is the third largest school district in the state. Student enrollment in the district is approximately 7,800 students.

The district includes the following: one junior/senior high school, one alternative/transitional school, one junior high transitional school, two junior high schools, two middle schools, and 15 elementary schools (three rural). The district has 1,239 full-time and part-time employees, including 634 certified (teachers, specialists, administrators). The district's average Student/Teacher Ratio is 19.2 to one.

B. Program description

District philosophy toward vocational education

Vocational education is one of the most important areas of education in Campbell County School District #1. According to the Vocational Education Coordinator and the Superintendent, the district has a history of providing extensive vocational preparation to meet the local demand for vocationally skilled youth. The local community is very supportive of vocational education programs and is involved in different ways—whether it is through representation on decision-making committees or by providing youth with employment opportunities. Essentially, the district views its provision of high quality vocational education as a “service to the community.”

The district regards vocational education as “not just being vocational education any more...it is more career-oriented and involves 100% of the students.” Moreover, state standards require that all students have career preparation. The district has strong articulation agreements with post-secondary institutions. The district has also established a strong Tech-prep articulation process. The Vocational Education Coordinator also oversees an advisory committee that brings together staff in vocational education, School-to-Career, and Tech-Prep.

The Superintendent oversees all of the educational programs in the district. It is my sense that a major reason for this district's strong vocational education program is the leadership provided by a highly motivated Vocational Education Coordinator who is well known across the state and nationally for her contributions to the field of vocational education. Not only does she help direct high quality vocational education programs, but she is also very proactive in applying for additional sources of funding to support them.

Types of vocational programs offered

The district's approach is to provide comprehensive vocational education. Vocational education in the junior high schools is primarily exploratory in nature; once students progress to high school, the vocational education becomes more career-focused. The district has four well-defined career pathways: Engineering, Technology, and manufacturing; business, marketing, and information systems; arts and humanities; and, health and human services. Courses are module-based rather than project-based and try to provide consistency between what is taught in junior high school, high school, and college.

Number of students participating/concentrating

Across the district, 4,054 students in grades 7 through 12 are enrolled in vocational courses. At Campbell County High School (the main high school) 3,047 students in grades 9 through 12 are taking vocational classes. There are a total of 685 vocational concentrators—defined as those taking at least two courses in a sequence in a program area—in three high schools.

How do class sizes for vocational programs compare to other forms of instruction? How do class sizes vary by program area and course level?

Class sizes for vocational programs are smaller than those for other program areas. Most vocational education classes average about 15 students.

Program Overview

A. District funding process

How are resources allocated for vocational instruction? How is program mix determined?

Once funds are allocated to different schools in the district, building principals determine expenditures across different areas of education. Faculty councils advise principals about needed expenditures. Different vocational program areas are funded on a rotating basis. State funding accounts for a small portion of vocational education activities taken as a whole. In addition to state and federal funds, the school district supports its current level of vocational education through other sources of funding such as grants. It appears that in this district, the ability to offer quality vocational education depends in large part on the number of grants received. Some examples are technology grants, US West grants, and AT&T grants. As a result of strong partnerships with professionals in the community, the Vocational Education Coordinator also has a budget committee comprised of people from different careers. Funding is determined by student need and the number of students served.

A notable aspect of this school district is the extent to which the local community and industry is involved in different capacities. For example, a BIG E (Business Industry Government Education) Round Table is held annually where representatives from different industries provide information to vocational teachers on recent industry trends so that teachers can make their curriculum and equipment as current as possible. There are over 600 businesses in Gillette that can employ students.

Vocational Costs

A. Purchasing vocational services

Factors contributing to salary differentials

The salaries and benefits of vocational teachers are the same as those of other teachers. Any differences are attributable to variations in academic qualifications and experience. However, vocational teachers are sometimes compensated for the additional responsibilities that they might take on. In general, Campbell County has a hard time hiring and retaining vocational education teachers primarily because these teachers often find more lucrative employment in the local industry. For example, teachers in Vocational Agriculture are hard to find. Also, if a teacher in a particular area retires, he/she might be hard to replace. Other factors that might affect the district's staffing needs are changes in student interest and local demand for certain types of vocational skills.

B. Equipment and supplies

State of current vocational equipment

How does the annual cost of vocational equipment compare with other forms of instruction?

Cost of replacing equipment—funding cycle

While the district tries to do the best that it can, providing all of its vocational programs with adequate equipment is a constant struggle. Some sources of high costs are: computer equipment that typically gets outdated relatively quickly, software upgrades, expensive maintenance agreements with companies that provide equipment, and multimedia equipment. District staff indicate that they are able to maintain equipment only through other sources of support: "With the money we have from the state we wouldn't even have a chance of being close to providing what we need...we go out and find other sources of funding."

The district estimates that providing vocational education is typically two to three times higher than other forms of institutions. The more equipment involved, the more expensive the courses. A small portion of equipment is donated by industry, but for the most part it is outdated and used for courses and labs that require less sophisticated computers. The cost of vocational

education also varies by program area. Engineering and Technology Education is most expensive because several areas are subsumed within it. Business education is also expensive, as is Family and Consumer Sciences—both of which require extensive multimedia usage.

Any remaining costs

Career (CTSO) advisors: Teachers are given extra pay to perform this role. These costs are typically covered either through state funds or Perkins.

Effects of Funding System

A. Effect of basket model

How has change affected vocational program quality?

What are implications of funding change?

Flexibility to change programs

There is consensus amongst district staff that the basket model has been detrimental to vocational education in the district. In general, the model drastically underestimates the district's costs for vocational education. For example, the district has Special Programs Coordinators that are supported through other sources of funding: the MAP model does not account for these sorts of expenditures on vocational education.

In the face of the basket model and its implications, the pressing issue for the district is to maintain the variety and quality of their vocational education programs. This district's very strong commitment to vocational education is reflected in their hiring a Vocational Education Director. Districts that have Vocational Education Directors have been able to find additional funding. Campbell decided that it would not let go of its programs but would instead seek funding elsewhere: "...we will try and make vocational education stay no matter what." The ultimate threat that the basket model poses to the district is that programs might have to be slashed. As it is, there is an overwhelming local demand for vocational education courses. Reducing courses and slashing programs would only hurt the students and community further. The programs that will be most vulnerable are the ones that are most equipment intensive. In addition to maintaining current programs, introducing a new program using state funds as allocated under the current basket model would be almost impossible. As things stand now, the district might have to make sacrifices in other areas to sustain important vocational education programs. As one staff member said, "...we're in a life-support mode."

B. Other concerns

Another concern for the district is staffing. The district currently needs about eight additional vocational education teachers.

Analysis of Data

A. Summarize information collected on district finances, including:

Accuracy of data

The data we received from the state and provided to the district prior to the site visit was largely inaccurate. In the data we sent them, General Fund expenditures were significantly underestimated, Perkins was overestimated, and “Other Federal” was somewhat accurate. The district has provided accurate data.

District Staff Interviewed:

Dr. Lynne Velle, Vocational Education Coordinator
Dr. Mark Higdon, Superintendent
Ms. Stacy Hammond, Financial Officer

**Carbon County School District #2
SITE VISIT SUMMARY**

Background

A. Site demographics

Located in Saratoga, Wyoming, Carbon County School District #2 is one of the smaller school districts in the state. Student enrollment in the district was 791 students in the 2000–01 school year.

The district includes the following: three senior high schools, three junior high schools, and five elementary schools. The district had nearly 59 full-time equivalent employees in the 1999–2000 school year, of whom 104 are classified as instructional and 8.5 are classified as FTE vocational.

B. Program description

District philosophy toward vocational education

The district philosophy is to provide high quality vocational programs that will equip students with the skills they will need to find employment and/or pursue further education.

Types of vocational programs offered

Vocational programs are offered in five areas: Agriculture, Family and Consumer Sciences, Trade/Industry, Business, and Technical Education. Program offerings are determined by the availability of employment in sectors.

Number of students participating/concentrating.

Across the district, there were roughly 498 students participating in vocational courses in the 1999–2000 school year. Of these students, a total of 79 individuals concentrated in vocational education; that is, completed a sequence of at least three courses in a vocational program area.

**How do class sizes for vocational programs compare to other forms of instruction?
How do class sizes vary by program area and course level?**

Vocational education is in high demand in the district. Nearly all students participate in vocational education, and roughly 70 percent concentrate in a vocational area. Vocational classes are generally smaller than academic classes. Class sizes for vocational classes range from five to 10 students across program areas, depending on the program. Advanced courses are often

smaller. Since academic classes are not much larger, perhaps 12 to 18 per class, the district cannot offset higher cost vocational programs by adding students above average cost of 22 per class.

Program Overview

A. District funding process

How are resources allocated for vocational instruction?

How is program mix determined?

The district allocates resources for equipment and supplies to school sites based on student enrollment. At the school level, building principals work with teachers to allocate resources across programs, using the state plan as a guideline. The district uses Perkins resources to support high tech programs, such as purchasing plasma cutters for the welding program. The district also leverages teacher abilities, student interest, and the local economy to develop unique programs; for example, it has developed a fish hatchery using resources from outside and internal sources, that reflects the region's focus on fly fishing and tourism.

Vocational Costs

A. Purchasing vocational services

Factors contributing to salary differentials?

Vocational educators, on average, earn a greater amount than other instructors. This is due to two reasons. First, vocational educators are offered extended contracts that are for as much as 20 additional days. Secondly, vocational teachers in the district have more years of service than other instructors.

B. Equipment and supplies

State of current vocational equipment

How does the annual cost of vocational equipment compare with other forms of instruction?

Cost of replacing equipment—funding cycle

Vocational equipment tends to vary across programs. Using the rotation system, the district has been able to equip some programs, such as hydro agriculture, with sufficient equipment to offer high quality programs. However, within some programs, such as welding, there is a mix of expensive, high tech equipment and low-tech machines that can limit teachers'

ability to teach. The cost of maintaining low-tech, outdated equipment can also put significant cost on districts.

The belief was that *with an infusion of funding on a one-time basis, the district would be able to bring programs up-to-date and use the existing formula to support all programs for a number of years.* The problem is that the existing formula does not provide sufficient funding to simultaneously maintain program equipment and purchase high-cost, low-tech equipment.

Not all programs are able to maintain programs with the existing formula. For example, home economics has the need for high-cost sewing machines and cooking equipment that exceed the equipment rotation stipend.

The district relies on private contributions from business and industry to support programs. It is estimated that contributions from business account for as much as 20 percent of total district expenditures. This raises an equity issue in that not all districts are able to solicit contributions from the private sector.

Costs not accounted for include travel and maintenance of facilities. Vocational classes are often larger, meaning that they require greater utilities than an average classroom, and are often dirtier than other classrooms due to sawdust, metal shavings, etc.

Effects of Funding System

A. Effect of basket model

How has change affected vocational program quality?

What are implications of funding change?

Flexibility to change programs

The main shift in the funding system came in the 1986–87 year with the shift away from instructional units. Prior to this time, vocational education was funded at two times the rate of other courses. The shift to a new formula has had relatively little effect on programs. The problem is that it is not sufficient to bring all programs to high quality levels, only to maintain status quo.

This raises the question of whether being a small district complicates the provision of vocational education. Small districts may have difficulty providing programs when they only have a limited number of students participating, in part because they are below average to begin with across all programs. While many students tend to participate in Carbon County #2, this still raises the question of what is meant by “Equality of Opportunity.” Should small districts provide vocational coursework across a large number of programs and, within programs, across a number

of different vocational course areas (e.g., automotive mechanics or agricultural horticulture), even if this is relatively more expensive to provide due to economies of scale?

Can a one-time bump bring all or most programs within schools to minimum levels of quality and for how long will the quality hold? How much would this cost? Estimates in Carbon County are that one-time bump would last for up to 10 years within a program. The cost for such a bump could be significant. The only way to check would be to have districts do an inventory check and identify equipment needed to replace.

B. Other concerns

The district has not had great difficulty hiring teachers, in part because there has been relatively little turnover. The district did recently fill a position for a teacher who had been present for many years, but administrators believed that this was due to luck. Administrators also believe they will have great difficulty filling positions if they were to lose teachers.

District Staff Interviewed:

Dr. Robert Krisko, Acting Superintendent
Mr. Garry Goergen, Business Manager

Converse County School District # 1
SITE VISIT SUMMARY

Background

A. Site demographics

Converse County School District #1, a rural area in the Eastern portion of the state, is in transition due to changing economics and reduced population. Converse experienced an economic boom during the 1970's because of the available energy resources. They had a population of over 15,000 in Douglas (main town of the county), which is now only 5,000. Naturally, this decrease in population led to a reduction in resources available for the school system.

The district has a primary school, rural schools, an intermediate school, a middle school, a high school, and an alternative school. Converse County has 1800 students in the district, with 500 high school students (down from 549 at the beginning of the year). There are 147 teachers in the district, grades K–12. Douglas High School has 38.5 FTE academic teachers and 6.2 FTE vocational teachers (two are part-time). Districtwide, the student teacher ratio is 25:1.

B. Program description

District philosophy toward vocational education

Converse County believes that vocational education is a key component of education. Consequently, they developed vocational standards for grades 4, 8, and 11. They initiate vocational education at the 3rd-grade level with career awareness units that are integrated into the curriculum. Middle school focuses on career exploration courses, and high school has a variety of introductory and skill-development vocational courses. The district believes that the community demonstrates strong support for vocational education. For example, when the school board attempted to eliminate the agriculture program to cut costs, community protests were so strong that the measure was dropped and the program was continued.

The welding, auto, and business programs are highly regarded and students regularly win state and national prizes. This seems to be an exception as most of the programs—even at the high school level—are introductory rather than advanced. Teachers say this is due to budget cut backs. They would like to upgrade the curriculum and the technology for all of their programs in curriculum and technology—in response to changes in industry—but they lack the funding to do so.

Types of vocational programs offered

Programs offered by the district are woods, metals, and consumer and family life, beginning in the middle school grades. At the high school level, vocational education is organized into the following departments: business, vocational agriculture, auto mechanics, drafting, metals, and woods. They have one Tech Prep program which combines several areas, such as health occupations, sports medicine, and foods. The vocational programs that do have advanced-level courses offer college credit through articulation agreements.

Number of students participating/concentrating.

Across the district, there were roughly 270 students participating in vocational courses in the 1999–2000 school year. Of these students, a total of 150 individuals concentrated in vocational education—that is, completed a sequence of at least three courses in a vocational program area.

How do class sizes for vocational programs compare to other forms of instruction? How do class sizes vary by program area and course level?

Academic classes have approximately 25–30 per class; vocational classes have 15–20 (this number is sometimes higher depending on demand). They expect these numbers to shift as layoffs and fewer staff members are anticipated (i.e., they say this is due to the limitations imposed by the basket funding). With the number of sections reduced and some classes eliminated, the average class size may go up. It is also important to note that multiple levels of students are often combined into one vocational class.

Program Overview

A. District funding process

How are resources allocated for vocational instruction?

How is program mix determined?

Despite significant leadership changes at Converse County which may have altered the specifics of the allocation process, the district approach still occurs in two stages. First, the district decides on the overall budget and sends a “block” of funding to the high school. Second, the high school leadership, in collaboration with all departments, determines the amount that each vocational area will receive. Budgets are finalized in July and approved by the board.

Perkins is the only funding source that targets vocational education. The district receives no other grant or funds specifically for vocational education. The Perkins funding is rotated among the high school vocational departments, with the bulk of the funds going to one

department each year (e.g., the business department used a large amount of the Perkins funding to create a new computer lab). A small amount of the Perkins funds goes to the middle school level for job assessment and career awareness software packages.

According to district and school administrators, the programs are determined by community and employment needs. With the decrease in energy related industry in their region, the county is predominantly a ranching community. However, teachers report that employers are lacking qualified local workers in fields as wide ranging as mining and information technology.

Vocational Costs

A. Purchasing vocational services

Factors contributing to salary differentials

Vocational teachers are paid on the same scale as the academic teachers. Differences in salary are attributable to experience and education.

B. Equipment and supplies

State of current vocational equipment

How does the annual cost of vocational equipment compare with other forms of instruction?

Cost of replacing equipment—funding cycle

During the 70's, the district had the resources to expand and build new programs. These programs were equipped well for their time, but the equipment is now over 25–30 years old. It will be impossible with current funding to replace or upgrade all of the equipment.

Consumable materials (i.e., raw materials such as welding supplies) are very expensive for the district to provide. These costs continue to rise but the funding level from the state is stable and does not accommodate increases. Other costs arise from maintenance of the buildings and vocational facilities, utility bills, salaries and benefits, and repairing equipment.

According to the business manager, Converse County spends the largest portion of the general funds on academic education. The second highest amount spent is on special education and the third is on maintenance of the schools. The fourth highest amount spent is on vocational education—however, the cost per student rate is higher in vocational education than it is in academic education. This is due to the relatively high cost of supplies and equipment in the vocational areas. (See above for a description of how Perkins funds are rotated to help replace or upgrade equipment.)

Any remaining costs

Effects of Funding System

A. Effect of basket model

How has change affected vocational program quality?

What are implications of funding change?

Flexibility to change programs

The district is considering cutting programs at the middle school grades to save costs and focus their resources on the high school programs. This concerns district administrators as the lack of feeder programs at the middle school level could lead to reduced enrollment and a change in the curriculum (i.e., if the middle school programs are eliminated, students entering programs in high school will not have had any introduction to the field).

The teaching staff is among the lowest paid in the state and there is pressure on the district to raise their salaries. Administrators report that they could eliminate positions, freeing up resources for higher salaries, but this may lead to reducing or closing programs. With the relatively high cost of running a vocational program, the district business manager is concerned that vocational instructors face greater risk of being laid off than the academic instructors. They also report that they have difficulty replacing teachers once they leave or retire due to the low salary range.

Teachers and administrators voiced strong concerns over the lack of support for vocational education in the state. In their county, 53% of the students do not go to college and about half of those that do go to college do not finish. Approximately 40–50% of their high school student population take vocational education courses, and both administrators and instructors are concerned that their dropout rate will increase if these students do not have vocational options. They are worried that their students need higher quality vocational programs than they are currently able to provide. They are also concerned that students may take fewer vocational courses because of the increasing academic requirements.

As in other districts, teachers and administrators report that vocational education was already under-funded when the switch to basket funding occurred.

B. Other concerns

The district is now discussing the option of charging fees for participation in advanced vocational education. This is a highly controversial decision locally and the board has not approved it yet. District administrators believe a student fee would help to offset the rising

materials cost, but they are also concerned that a fee could reduce their enrollment in vocational courses.

The issue of replacing teachers is a major concern in Converse County as in other counties.

Analysis of Data

A. Summarize information collected on district finances, including:

Accuracy of data

Financial data for Converse County was partially accurate. Some data were missing and other figures were reported incorrectly. The district provided budget reports and corrected the data from state and federal sources.

District Staff Interviewed:

Donna Ricks, Business Manager
Trish Cook, Director of Curriculum

School Staff Interviewed:

Gary Dahmke, Assistant Principal
Al Pierce, Director of Vocational Education and vocational instructor
Gary Glenn, Vocational instructor

**Fremont County School District #2
SITE VISIT SUMMARY**

Background

A. Site demographics

Located southeast of Yellowstone National Park, Fremont #2 School District serves the rural town of Dubois. The district consists of one elementary school grades K through 8 and one high school grades 9 through 12. In 1999–2000, approximately 290 students were enrolled in the district and 100 students at Dubois High School. While 26 full-time equivalent teachers are employed districtwide, because of its location the district has had difficulty attracting and keeping qualified teachers. Several teaching positions are open. Student enrollment in the district was 291 students for the 2000–01 school year. The district has 56.5 full-time-equivalent (FTE) employees, of whom 32 are classified as FTE instructional and 1 is classified as FTE vocational.

B. Program description

District philosophy toward vocational education

The superintendent and high school principal believe that providing vocational education opportunities to every student is important. They believe that not every student is college bound and therefore needs to be provided with training to enter the workforce. Administrative staff indicated that their current program does not adequately meet the needs of the students in the their district. Furthermore, because of the new funding system, the district's budget has been cut by 10 percent and is struggling to keep the limited program they have in place.

Types of vocational programs offered

Dubois High School offers vocational courses in the following three program areas: 1) trade and industry, 2) family and consumer science, and 3) technical applications. In addition, through grant monies, the school has developed and runs the CISCO Academy and a Microsoft certification program. The trade and industry program, which consists of welding, wood shop/drafting (CAD) and small engine courses, has been in existence for over 10 years. Similarly, the family and consumer science program, which offers cooking and childcare courses, has been in place for over seven years. In the past two years, the school has included three courses in technical applications, tech apps II and I and advanced tech apps. In 1998–1999, the school received a three-year grant to create the CISCO Academy that teaches students about hardware and wiring of computer systems. In 1999–2000 it received other monies to develop a Microsoft certification program where students take courses to earn upon graduation Microsoft certification. Both these programs have been fully operational for about two years.

High school students are required to take at least one vocational class before graduating. Approximately, 16% of all high school students are vocational concentrators. Only technical applications courses and drafting (CAD) courses offer sequential course offerings, therefore a vocational concentrator is one who has taken any two vocational courses offered by the school. However, if students are interested in pursuing upper division courses in the same area, they must take the same course twice because there are few elective courses to choose from. Teachers reported making the curriculum more challenging for students who take the course twice.

The high school reports that roughly 77% of students who graduate enroll in a postsecondary institution. Approximately 35% enroll in two-year or tech programs and 40% in a four-year institution.

Number of students participating/concentrating.

Across the district, there were roughly 212 students participating in vocational courses in the 1999–2000 school year. Of these students, a total of 17 individuals concentrated in vocational education—that is, completed a sequence of at least three courses in a vocational program area.

**How do class sizes for vocational programs compare to other forms of instruction?
How do class sizes vary by program area and course level?**

Typically vocational classes have 10 or less students with two exceptions: family and consumer science class, which has jumped to 25 students this past year (previous years 10 to 15 students), and the tech app classes, with 18 to 22 students per class. Trade and industry classes are small because of OSHA regulations regarding equipment safety. The new drafting program will be able to hold up to 20 students once computers have been relocated. In comparison, academic courses at Dubois High School seat on average of 20 students.

Program Overview

A. District funding process

**How are resources allocated for vocational instruction?
How is program mix determined?**

The district does not have a formal process in place to allocate funding. Funding allocations for vocational instruction are based primarily on previous year expenditures and available funds. The mix of classes is determined by student interest. When few or no students are interested in a particular class, that class is eliminated from the schedule.

Vocational Costs

A. Purchasing vocational services

Factors contributing to salary differentials?

Salaries for vocational teachers in Fremont #2 School District are higher compared with all other teachers because of the number of years vocational teachers have been with the district (24 and 9 years). According to both the high school principal and superintendent, vocational teachers do not cost more.

B. Equipment and Supplies

State of current vocational equipment

How does the annual cost of vocational equipment compare with other forms of instruction?

Cost of replacing equipment—funding cycle

With the exception of the CISCO academy computer lab and Microsoft certification program, the vocational equipment has not been replaced in over eight years and in trade and industry in over 20 years. Trade and industry classes have upgraded or replaced some items as needed for safety issues but no major equipment purchases have been made. Perkins funds are used to upgrade equipment and have also been used to add CAD curriculum and fund the CISCO academy. CISCO academy has received additional funds from School-to-Career initiative as well.

Staff agreed that vocational equipment and supplies are more expensive than other forms of instruction but did not quantify by how much. While general fund money covers some of the supplies needed for vocational education, it does not cover all expenses. Teachers have indicated they have spent personal funds in many instances to pay for supplies. In addition, some courses ask students to pay for supplies needed throughout the course. In other courses, such as the welding class, the shop/welding teacher has secured donations from the local welding company to compensate for needed supplies.

Effects of Funding System

A. Effect of basket model

How has change affected vocational program quality?

What are implications of funding change?

Flexibility to change programs

The basket model has had a detrimental effect on the school district. It has received less money since its introduction and expects to receive even less next year. Even with the small school adjustment, the school district is operating with fewer monies. The superintendent indicated that they are presently struggling to keep existing programs and people across the board. The decrease in funding has affected all programs, including vocational education. The major cuts have occurred in the area of supplies and equipment. Administrative staff indicate that any further cuts in the district's budget will result in drastically cutting if not eliminating vocational education.

Administrative staff reports that the state has not adequately taken into consideration the challenges small districts face. The superintendent indicated that small districts in general face specific problems that the state needs to be aware of when making funding decisions. For example, the vast majority of small districts in Wyoming are those located in rural and often time isolated areas. These districts have an extremely difficult time recruiting and hiring teachers because of their geographical location. Furthermore, small districts have an even harder time finding vocational teachers, especially those certified in areas of need. Finally, funding based on per pupil expenditures is not adequate for small districts. The district notes that when one student leaves out of 40, a district cannot cut 1/40 of a teacher or administrator.

When asked to provide suggestions to improve the funding system, administrative staff made four suggestions. First, staff indicated that Wyoming is too small of a state to have local control. The state should take more of a lead in terms of both funding allocations and vocational education. Second, the funding system has not taken into consideration the increasing costs of teacher benefits and workers compensation. Staff indicate that one of their greatest problems in terms of budgeting is paying for increasing costs of teacher benefits and workers compensation. It was suggested that some type of cap be applied or supervision be provided to those agencies in Wyoming who offer benefits and workers compensation packages so as to keep these raising costs bearable. Third, the state should consider setting aside funds for vocational education that may be accessed through a grant application process. Finally, the state should set aside money for research and development.

Effects of Funding System

A. Summarize information collected on districts finances, including:

Accuracy of data

Overall, general funding for vocational expenditures has increased over the past two years by roughly \$8,000. Vocational expenditure for supplies and equipment has increased. This is due primarily because of Perkins and School-to-Career grants for CISCO Academy and CADD curriculum addition. Furthermore, overall salaries and benefits were lower for state collected vocational expenditures by approximately \$3,700 than district provided data because

district included a vocational guidance counselor's salary and benefits that they had not included previously.

District Staff Interviewed:

Mr. Lon Streib, Superintendent of Instruction

**Fremont County School District #14
SITE VISIT SUMMARY**

Background

A. Site demographics

Located on the Wind River Indian Reservation, and according to the superintendent, Fremont School District #14 serves a community with one of the highest rates of unemployment in the state. The district consists of one high school (grades 9 through 12), one middle school (grades 7 and 8) and one elementary school (grades K through 6) and serves approximately 647 students, 169 of whom attend Wyoming High School. The district office is located adjacent to the high school in what is called the technology center where the majority of vocational classes are taught. District personnel consist of the Superintendent, business manager, assistant business manager, and one secretary. The district has 177 full-time-equivalent (FTE) employees, of whom 114 are classified as FTE instructional and 3.4 are classified as FTE vocational. Student enrollment in the district was 647 students for the 2000–01 school year.

B. Program description

District philosophy toward vocational education

The district acknowledges that providing vocational education to its student population is essential because of the low rate of college attendance.¹ The district personnel and high school principal believe that students must leave high school as adequately prepared for the workforce as possible and that it is the school district's responsibility to equip them with the necessary skills. Consequently, students at Wyoming High School are required to take one vocational high school course before graduating.²

Types of vocational programs offered

Vocational education at Wyoming High School consists of courses in the following areas: Agriculture, Trade/Industry and Technical Education. Similar to other small schools, in general sequencing of courses does not exist. Rather, students who are interested in the course and want to continue learning the topic retake the same course. Teachers adjust to make the class a bit more challenging for the students the second time around. Consistent with other schools, Agriculture and Trade/Industry have been able to compensate somewhat for reductions in

¹ While the district office reports that 80 percent go on to enroll in postsecondary education and training, they do not indicate what proportion of the 80 percent that go on to postsecondary education attend a four-year institution. District personnel estimate that about 20% of high school graduates actually attend a four-year institution.

² The district did not provide MPR Associates, Inc. with the number of vocational concentrators for the 2000-2001 school year.

funding by looking to the community for help. They often sell what they produce. For example, interested residents who wish to purchase a trailer can do so through the welding class. The residents agree to purchase materials needed to build a trailer, which the welding class builds and delivers to the resident. Similarly, the agriculture program three years ago secured a greenhouse for the school through community funds. Produce grown is sold to the community and funds from the sell are placed towards materials and supplies for the following year. Vocational teachers indicated that without community support, students would not have the opportunity to work on diverse projects such as those described above because there is no money in the budget to purchase costly or extensive materials and supplies.

Number of students participating/concentrating.

Across the district, there were roughly 140 students participating in vocational courses in the 1999–2000 school year. Of these students, a total of 31 individuals concentrated in vocational education; that is, completed a sequence of at least three courses in a vocational program area.

**How do class sizes for vocational programs compare to other forms of instruction?
How do class sizes vary by program area and course level?**

Vocational courses are typically smaller in size than academic courses with the exception of math courses. The average class size for science and English classes is 18 while the average class size for math is 10. Great variation exists by vocational program area in terms of class size. The smallest classes are in Technical Education (as small as four students per class) while Agriculture and Trade/Industry program areas have classes on average of 10 to 12 students per class. The largest average class size can be found in the Business program where classes enroll between 18 to 20 students.

Program Overview

A. District funding process

**How are resources allocated for vocational instruction?
How is program mix determined?**

Both the superintendent and the high school principal are the main decision makers with respect to vocational funding. According to both the superintendent and the principal, program mix is mostly determined by the previous year's funding and by student interest. However, new courses and improvements to vocational education have been the product of highly motivated and professional development conscious teachers. One of the vocational teachers at the high school has for the past year gone to summer institutes for professional development as well as taken several distance learning college courses. This particular teacher developed and teaches the integrated calculus course.

Vocational Costs

A. Purchasing vocational services

Factors contributing to salary differentials?

District personnel indicated that vocational teachers are on the same pay scale and therefore are no more expensive than other teachers. However, district personnel did indicate that vocational teachers are more difficult to find.

B. Equipment and Supplies

State of current vocational equipment

How does the annual cost of vocational equipment compare with other forms of instruction?

Cost of replacing equipment—funding cycle

Overall, equipment is about 15 years old. The high school and vocational building is also about 15 to 20 years old but in very good condition. Staff indicated that equipment is replaced every couple of years and that small items are replaced as needed and major equipment upgrades are accomplished with Perkins funds.

Effects of Funding System

A. Effect of basket model

How has change affected vocational program quality?

What are implications of funding change?

Flexibility to change programs

While district personnel indicated that the basket model has not adversely impacted the quality of vocational education, they did note that they feel restricted in making improvements to their programs because of budgetary constraints. The district indicated that a 10% decrease would result in eliminating courses from the program.

District personnel had a very strong concern about the direction vocational education is headed. According to district personnel, the standards movement in Wyoming was started by business because businesses wanted to see better-trained and skilled employees. As one district personnel indicated, “they (the state) are going to another extreme with standards.” This means that the focus on vocational education has diminished to where the state’s greatest concern is getting students to college and not preparing them with necessary skills to enter the force immediately after high school graduation. The push away from a workforce focus to a college

bound one has resulted in the reduction of some vocational programs and in the number of elective courses students take. As mentioned above, only 20 percent of Wyoming high school students attend a 4-year institution. Approximately, 80 percent of graduating high school students either enter the workforce (most find jobs in Denver or Seattle working in the oil fields or in construction/trades), some type of postsecondary education (trade school or community colleges) or are unemployed. Without the opportunity to take more vocational or elective classes that may help prepare students for the world of work, many district staff feel students are not being adequately prepared to enter a non-college world.

Furthermore, it was suggested that vocational education in Wyoming could be improved if the state invested in Tech sites where students were bussed from various schools to one vocational center. The Superintendent suggested these tech sites have been fairly successful in Kansas and Oklahoma and that these examples could serve as a starting point for changes in vocational education in the state of Wyoming.

Effects of Funding System

A. Summarize information collected on districts finances, including:

Accuracy of data

General school funding for vocational expenditures has increased by almost \$20,000 from 1999–2000 to 2000–2001. 1999–2000 state gathered expenditure data reported slightly higher expenditure data (by about \$1,270) than that provided by the district. In addition, district staff provided numbers that indicated how general fund money for supplies was distributed among the various vocational programs. Similar information was provided for Perkins funds. In addition, the district personnel noted a significant drop in Perkins money in the past two years from approximately \$40,000 in 1999–2000 to \$30,000 in 2000–2001.

District Staff Interviewed:

Mr. Lonny Hoffman, Superintendent of Instruction

**Johnson County School District #1
SITE VISIT SUMMARY**

BACKGROUND

A. Site demographics

Located at the eastern base of the Big Horn Mountains in Buffalo with a population of 3,358, is the county seat of Johnson County School District #1. Agriculture, mining, and the oil industry have all played a part in the development of Johnson County. Johnson County School District #1 is a consolidated district with attendance centers at Buffalo and Kaycee. In addition, there is a rural, K-4, two-teacher, elementary school in the county. Student enrollment in the district was 1,307 students in the 2000-01 school year.

Buffalo has an elementary school, consisting of grades 1-4. The middle school houses grades 5-8, and the high school enrolls grades 9-12. A variety of educational programs, supportive services, and extracurricular activities are offered in the schools commensurate with other schools in Wyoming. The district's budget is approximately \$9.3 million.

District enrollment (all students/vocational students)

School	Grades	Enrollment (2000)
Buffalo High School	9-12	385
Kaycee High School	9-12	63
Clear Creek Middle School	5-8	365
Kaycee Junior High School	7-8	36
Billy Creek Elementary School	K-4	11
Kaycee Elementary	K-6	80
Meadowlark Elementary	K-4	375

Faculty size (district office/academic teachers/vocational teachers)

The district had 206 full-time equivalent employees in the 1999-2000 school year, of whom just over 132 are classified as FTE instructional and just over 10 are classified as FTE vocational.

B. Program Description

District philosophy toward vocational education

Types of vocational programs offered

Number of students participating/concentrating

Johnson County School District #1 considers vocational education to be an integral part of preparing students for life beyond high school, whether it is entering the world of work or continuing on to postsecondary education. Students are encouraged to pursue at the very least a K–14 education. The district considers its vocational education programs to be some of its best programs, primarily because of the highly qualified staff that use the resources effectively to run high quality programs. Offered at Buffalo High School, two of the district’s strongest programs are Computer Aided Design and Industrial Arts.

With its goal of exposing students to various career alternatives, the school follows a broad-based approach towards vocational education: in junior high school, students are exposed to a wide spectrum of vocational areas and then decide to concentrate only in the higher grades. High schools in the district offer four types of vocational programs: Agriculture, Business, Technology Education, and Industrial Arts. Most of the vocational education programs at Buffalo High School have articulation agreements with postsecondary institutions in the region that allow students to receive dual-credit for courses. But dual-credit courses also require the school to provide classes and technology/equipment that meet the requirements of the postsecondary institution.

Across the district, there were roughly 734 students participating in vocational courses in the 1999–2000 school year. Of these students, a total of 198 individuals concentrated in vocational education; that is, completed a sequence of at least three courses in a vocational program area.

C. Class size

How do class sizes for vocational programs compare to other forms of instruction?

How do class sizes vary by program area and course level?

Class sizes for vocational education are generally smaller. The class size across all program areas and courses ranges between 17 to 20 students. For vocational education the class size ranges between 13 to 20 students.

Buffalo High School will soon be moving to a new facility. A problem is that with the building of a new high school, the amount of area available for the woodworking program will be significantly reduced, thereby forcing the school to either compromise the safety of students by retaining current class sizes, or to reduce class sizes and provide additional funds to hire

teachers for the extra classes. A third option would be to make the program available fewer students, an unfortunate outcome since the demand for these classes continues to be high.

Program Overview

A. District funding process

How is program mix determined?

Most existing vocational programs are ones that have been historically important to the district and the local community—for example agriculture and business receive considerable support from the local industry. Another factor contributing to the addition or removal of a program is the availability of appropriate staff.

Recently, the district has gone to a block-schedule to meet the state’s requirements for more core classes in academic areas and to keep providing students with the vocational courses they need to take. This has created more choices for students on their electives and most vocational programs have seen an increase in enrollment this past year.

How are resources allocated for vocational instruction?

Allocation of resources across different program areas typically follows a rotating schedule but also takes into account program needs. In the recent past, there was an advisory committee that made recommendations for funding across different program areas. Arts, woodworking, business, CAD, and agriculture programs make up the bulk of expenditures for vocational education. Most of this funding comes from state funds. The Perkins money is allocated to different program areas on a rotating schedule and based on shared decision-making by teaching and administrative staff in the high schools. Perkins is primarily used for equipment, professional development, and field trips, etc. District staff reports that Perkins funds are very important in providing quality vocational education and in its absence it would be impossible to introduce new courses.

Vocational Costs

A. Purchasing vocational services

Factors contributing to salary differentials

Vocational teachers earn more because they typically have more years of experience and also because they work more days as compared with other teachers.

B. Equipment and supplies

State of current vocational equipment

How does the annual cost of vocational equipment compare with other forms of instruction?

Cost of replacing equipment—funding cycle

Cost of supplies

Any remaining costs

The district considers vocational education to be much more expensive than regular education. For instance, "...we can run six times the number of students through English than we can through CAD or Agriculture."

While district staff report that the overall state of vocational equipment is "good", the resources available do not allow them to be "excellent". The CAD lab was updated last year and welders a few years ago. The machines in the industrial arts program have a 4-year cycle but the program never has enough funding to replace all the machines at one time. Also, the vocational programs that rely heavily on computers have benefited tremendously from the donations of an IBM benefactor who donates fairly usable computers to the high school on a regular basis. This has allowed the school to make these classes available to many more students than they would have been able to otherwise if all they had to rely on was state funding.

Effects of Funding System

A. Effect of basket model

How has change affected vocational program quality?

What are implications of funding change?

Flexibility to change programs

The perceptions of district and school staff about the implications of the MAP seem to vary somewhat. District staff reported that the MAP model had benefited their district by allowing them to fund vocational programs at existing levels. The district received a little more funds for vocational education than it has in the past. Another way in which the MAP model has benefited the district is by allowing them to hire more vocational teachers to meet the higher staffing needs of block scheduling (the new schedule will allow the district to offer more sections of vocational education classes). The external cost adjustment component of the MAP model has allowed the district to raise the base of teacher salaries. As things currently stand, the district also benefits tremendously from the small schools adjustment aspect of the model. If this is taken away, the district will have to resort to the drastic measure of cutting vocational programs.

Vocational staff at Buffalo High School expressed concerns about the MAP model and its failure to account for the higher cost of vocational education. One teacher pointed out that economies of scale do not apply for technology and computer-intensive programs such as Industrial Arts. Just as many machines and updated software will be needed for one class as will be needed for multiple classes. Therefore, the cost of providing quality vocational education—particularly where computers are involved—will always be much higher than other types of instruction. Furthermore, there are also variations between programs. For example, 70 percent of the expenses on the Industrial Arts program might be for equipment and only 30 percent might be for supplies; the proportion of expenses is reversed for a program like woodworking.

Analysis of Data

A. Summarize information collected on district finances, including:

Accuracy of data

The data on expenditures from the state funds were mostly inaccurate and underreported the district's expenditures on vocational education. The financial manager provided correct numbers for all 1999–2000 expenditures by vocational program area and by source of funding.

District and School Staff Interviewed:

Ms. Zoe Palczewski, Business Manager

Ms. Joel Dvorak, Director of Instruction and Programs (Vocational-Technical Coordinator)

Mrs. Joyce Hall, Vocational Teacher at Buffalo High School and Perkins Coordinator

Mr. Walter Farwell, Vocational Teacher

Laramie County School District #1
SITE VISIT SUMMARY

Background

A. Site demographics

Located in Cheyenne, Wyoming, Laramie County School District #1 is the largest school district in the state. Student enrollment in the district was 13,264 students for the 2000–01 school year.

The district includes the following: three senior high schools, three junior high schools, and 26 elementary schools. The district has 1,844 full-time and part-time employees, of whom 1,168 are classified as instructional and 60 are classified as vocational.

B. Program description

District philosophy toward vocational education

The educational philosophy in Laramie is to integrate vocational education into the program of all students through the use of career pathways. According to the district Vocational-Technical Coordinator, the district is having varying success in introducing career pathways in high schools, but is seeking to continue its effort. Upon completion of a career inventory in the 9th grade, students select a career pathway when entering the 10th grade. The pathways or academics (Central High School) include arts and humanities, business and management, health and human services, and science and technology.

To support program development, the district also maintains on-going projects to integrate academic and vocational curriculum, to offer community-based occupational education, and cooperative education. The district collaborates with local employers, labor organizations, and community-based organizations to build opportunities for students.

Types of vocational programs offered

Career and technical education classes currently offered in the district include automotive technology and auto body/paint; agriculture science, business and management, food preparation (sanitation, hospitality, and food science); mechanical drawing/computer aided drafting; computer software and programming; court reporting; fashion marketing; marketing education (retail); co-op child care; business classes, health occupations, broadcasting; welding, and wood and construction technology.

Number of students participating/concentrating.

Across the district, there were roughly 4,977 students participating in vocational courses in the 1999–2000 school year. Of these students, a total of 426 individuals concentrated in vocational education; that is, completed a sequence of at least three courses in a vocational program area.

**How do class sizes for vocational programs compare to other forms of instruction?
How do class sizes vary by program area and course level?**

Estimates are that vocational programs enroll roughly 18 to 24 students at introductory levels and 10 to 15 in advanced courses. In some cases, level 2 and level 3 courses may be combined to increase class size. The problem is that excessive class sizes can introduce safety concerns, particularly in shop classes where students may be using dangerous equipment. The feeling among administrators is that, to reduce danger, teachers make adjustments in the curriculum as the number of students within a class rises, with the result that quality suffers.

During site visits, most teachers indicated that their class sizes had not changed, and that sizes remain about where they were before the shift to the basket model. In some program areas, student demand exceeds supply, meaning that students are turned away from participating in some programs.

Program Overview

A. District funding process

How are resources allocated for vocational instruction?

How is program mix determined?

Funding is established, in large part, by prior year expenditures for salaries. Changes in year-to-year instructional programs are made based on needs assessments performed by district vocational staff and on conversations between employers and district staff to identify the types of training students' need.

Vocational programs are offered in all program areas identified by the state. Funding amounts are determined based on salaries and equipment and supplies. Programs with excess demand are expanded to adjust for student interest. However, due to funding constraints, it is not possible to meet the needs of all students interested in participating.

Vocational Costs

A. Purchasing vocational services

Factors contributing to salary differentials

Salaries for vocational educators are affected by teacher experience, as is the case for all instructors in the state. Generally, vocational educators are more likely to be veterans, and thus average salaries for these staff may be slightly higher than for academic instructors. While other factors, such as degrees, professional development, and credit on salary schedules may contribute to increases, these are generally not much different than for academic instructors.

B. Equipment and supplies

State of current vocational equipment

How does the annual cost of vocational equipment compare with other forms of instruction?

Cost of replacing equipment—funding cycle

Vocational equipment and technology is in fairly good shape in some programs, such as CAD, health care, and construction/wood shop. Equipment is antiquated in others, such as business and welding. Funding is provided out of a fixed pool of state general fund resources for the current years, which amounts to roughly \$79 thousand for textbooks and \$97 thousand for equipment and other supplies, as well as purchased services. The \$79 thousand will be cut in the following year to \$28 thousand, so resources are fairly variable. Other resources are available from Perkins and other Federal grants, such as School-to-Career. Since these funds, which amounted to roughly \$280 thousand in the 1999–2000 year will be phased out, the district will ultimately be forced to lay off its School-to-Work Coordinator, possibly jeopardizing career pathway programs.

Funds are distributed from the fixed pool on a three-year rotation, with some program qualifying for relatively large distributions in certain years. The advantage is that it allows the district to channel sufficient resources to some programs that enable them to purchase equipment needed to update instruction. The problem is that in highly popular courses, such as business, these funds are insufficient to provide all equipment needed.

The district suggests that a number of areas not captured by costs, including utilities, travel to national conferences and competitions for students, and in-kind donations solicited from business. In some cases discretionary funds from school general resource pools may also be accessed to supplement vocational programs.

EFFECTS OF FUNDING SYSTEM

A. Effect of basket model

How has change affected vocational program quality?

What are implications of funding change?

Flexibility to change programs

There is a general feeling among staff that the new funding system has had little effect on program offerings. Laramie received a funding bump, which the district used to increase salaries and benefits for teachers, many of whom it was felt were not adequately compensated. So increased resources were not channeled into program equipment or supplies.

One major concern is that quantifying costs of vocational expenditures will only document the status quo and not address issues of program quality. In particular, there is a concern that the quality of vocational programs offered in some areas are little more than dropout prevention and the quality is not in keeping with the constitutional mandate of the “best possible.” Concern is that documenting current costs fails to address real question of what constitutes a high-quality program. One suggestion is that the state consider quantifying what it would cost to teach vocational coursework aligned with the state vocational standards—that one knowing what a high quality vocational program would cost one would help to judge state spending.

Accounting differences and unclear instructions on the WDE335 mean that much of the existing state data on vocational costs likely underestimates actual district expenditures. While the state has transitioned to new accounting format, not all districts adopt, meaning that not all sites disaggregate vocational costs. One suggestion is that the state undertake a systematic survey, with districts not using new accounting format to supply missing data to allow quantification of costs of existing program.

What level of student participation justifies program provision? In Laramie, where student participation is relatively high, the principal stated that vocational education was a loss leader; that academic classes often have 25–30 students, and this is in part due to a need to compensate for relatively smaller vocational courses.

Other concerns

There is a feeling is that some costs have shifted onto students, such as supplying food money for trips or in providing some operating costs for clubs. Also, the districts has reported that hiring vocational instructors is also challenging, in part because it is difficult to pay them enough to lure them out of industry or away from other districts.

Effects of Funding System

A. Summarize information collected on districts finances, including:

Accuracy of data

The data we received from the state and provided to districts was somewhat inaccurate, in part because the data reported by the district were misidentified (i.e., WDE335 does not disaggregate state from federal resources). The district will review the data we have and supply new information.

District Staff Interviewed:

Mr. Jeff Stone, Vocational-Technical Coordinator
Mr. Terry Bridwell, Director of Instruction (Title I)

**Lincoln County School District #2
SITE VISIT SUMMARY**

Background

A. Site demographics

Located in a valley south of the Teton Mountains, Lincoln County School District #2 serves a mostly rural area composed of small-incorporated towns—the main town being Afton. The construction of various homes was observed on the drive to Afton. As noted by both the construction noted on the drive to the school district and as commented by district personnel, the town of Afton is becoming the home to older residents who are making this beautiful area their summer home.

Star Valley High School, one of two high schools in Lincoln County, was recently built with state money. Because it has such a large Title I population, most of the facility was built with state money. The high school serves approximately 700 9th through 12th grade students. The second high school serves approximately 100 students in similar grades. The district also has one middle school (7th and 8th grades) and 5 elementary schools (K through 6th grades). The district has 327.6 full-time-equivalent (FTE) employees, of whom nearly 214 are classified as FTE instructional and 13.5 are classified as FTE vocational.

B. Program description

District philosophy toward vocational education

Staff at the high school and district office believe vocational education is extremely important. The goal of the high school principal and superintendent is to offer certificates to all students who follow a vocational path. These certificates would indicate that students have completed a certain amount of courses and gained skills in their area of interest so that they can get a job. As described below, the high school is working towards this end.

Types of vocational programs offered

Vocational courses are offered in the following five areas: Agriculture, Family and Consumer Science, Trade/Industry, Health and Business. Agriculture and Trade/Industry classes are considered Applied technology classes. Topics covered for Applied technology include, agriculture, welding, drafting, graphics, small engines, electronics, principles of technology, construction and work experience. Classes in agriculture, drafting, and principles of technology are designed to be taken as a series of classes. As is the case with other schools, the construction class is self-sufficient—it is funded by profits made from items students construct. Business classes include economics, keyboarding, business management, entrepreneurship/student store

and accounting (a sequence of courses is provided for accounting). In 1998–99, the business program area purchased over 30 new computers and software.

Classes in Family and Consumer Science include foods, sew in the fast lane, child development, experiences with children and food service and management. With the construction of the high school building, this department received the two modern refrigerators, new sewing machines (approximately 10–15), and six kitchen areas with sinks and stoves. Health is a newly created program funded with a grant from the School-to-Career Program. The director of the school-to-career program who supervises the health program is working to establish community college credit for health courses taken at the high school. The ultimate aim is to provide CNA certification upon high school graduation. The school-to-career grant pays for one teacher salary, supplies and one school-to-career course.

Number of students participating/concentrating

Across the district, there were roughly 993 students participating in vocational courses in the 1999–2000 school year. Of these students, a total of 309 individuals concentrated in vocational education; that is, completed a sequence of at least three courses in a vocational program area.

How do class sizes for vocational programs compare to other forms of instruction? How do class sizes vary by program area and course level?

In general, vocational classes are smaller than non-vocational classes with one exception—classes in Family and Consumer Science. On average, vocational classes enroll from 15 to 20 students depending on the class. However, Family and Consumer Science classes average 22 students per class. The average class size for non-vocational classes is 24.

Program Overview

A. District funding process

How are resources allocated for vocational instruction?

How is program mix determined?

The funding process is a top down model where the central office allocates money to school principals who along with selected administrators decide funding allotments for the various school departments. According to the high school principal, funds provided for vocational education is based on previous year's funding levels and student interest. If insufficient student interest is expressed (less than five students want to take a given course), that course is dropped and funding reallocated.

Similarly, program mix (the number and type of courses offered) is determined mostly by level of student interested in the class/course and grant opportunities. As mentioned above, the school now offers a health program, which was made possible both because of student interest and mostly because the school-to-career program provided the grant monies to do so.

Vocational Costs

A. Purchasing vocational services

Factors contributing to salary differentials

As noted in other districts, Lincoln School District indicates that vocational teachers are no more expensive than non-vocational teachers. Unlike other districts visited, this district's equipment is relatively new. Due to the high school's new facility, the district was able to modernize a significant portion of equipment used for vocational education. Not only was the high school able to get new equipment (most equipment is less than five years old) but it also purchased more pieces of equipment. For example, whereas other schools may have available one to four kitchen areas for their Family and Consumer Science classes, this school has eight—allowing them the possibility to serve a significantly larger number of students. However, school staff did not indicate if—with the new and additional equipment—their enrollment for classes in Family and Consumer Science had increased.

B. Equipment and supplies

State of current vocational equipment

How does the annual cost of vocational equipment compare with other forms of instruction?

Cost of replacing equipment—funding cycle

School staff indicated, as with other districts, equipment is upgraded cyclically and that Perkins money is used primarily for equipment upgrade (\$50,000 in last calendar year). The money is rotated among the three areas of vocational education. In 1998–1999 the largest chunk of Perkins money went to Business; however, in 1999–2000 and 2000–2001 it was split evenly among the three areas: Business, Agriculture and Family and Consumer Science. The school district also allocates money to the school's vocational program—they provide monies for staff and some supplies while Perkins and other funding sources like School-to-Career provides for supplies and monies for program improvement or innovation.

Not surprisingly, staff indicated that vocational education is more expensive to provide than non-vocational education but were unable to quantify by how much.

Effects of Funding System

A. Effect of basket model

How has change affected vocational program quality?

What are implications of funding change?

Flexibility to change programs

In general, district and school staff indicate that the new funding system has not had a negative impact on their budget. Staff indicate that, to some extent, the large number of Title 1 eligible students serves as a buffer from budget cuts. A substantial portion of their operating budget comes from federal monies. While they have seen some decreases, these decreases have had little effect in delivering vocational education. Consequently, the school and district staff indicate that the new funding change has had no significant implication for the district.

In addition, the district and school staff believe they have great flexibility in making changes to their vocational program. While they would like more money, they indicated that they did not feel restrained in any way because of budgetary constraints in expanding or improving their vocational program when they deem it necessary.

Effects of Funding System

A. Summarize information collected on districts finances, including:

Accuracy of data

State collected data differed from data collected by MPR Associates from Lincoln School District in that data collected on site was disaggregated. In 1999–2000, the school district spent approximately \$71,500 on vocational education funded through state general funds. State collected data reported no state general funds spent specifically for vocational education. In addition, state collected data did not capture school-to-career funds used for the health program in the amount of \$10,000. However, state collected data accurately reflected Perkins money spent on vocational education for this year: \$50,267. No major changes in vocational expenditure from 1999–2000 to 2000–2001 were noted.

District Staff Interviewed:

Mr. Ron Tolman, Superintendent of Instruction

Natrona County School District #1
SITE VISIT SUMMARY

Background

A. Site demographics

Natrona County School District is located in Casper, WY, a relatively large town in the state. The Average Daily Membership for the district is 11,524 for the 1999–2000 year. They have 985 students at Kelly Walsh High School (one of four high schools in the district). The district reports a loss of population, declining over the last four years by 1000. There are four senior high schools, eight middle schools, twenty-six elementary and four rural schools. Instructional staff numbers about 850 teachers, along with curriculum consultants, special education personnel, vocational therapists, etc.

B. Program description

District philosophy toward vocational education

Vocational education is a vital part of the educational system according to district administrators. They report that the community needs skilled workers and that there are shortages of trained workers in the trades. In their county, only about 30–40% of their graduates go to college and stay in college. They also believe that vocational education plays an essential role in helping students to meet academic standards. They don't see vocational education as a "second choice" for those students who are not successful academically. Consequently, the district is in the process of developing a sequence of courses for vocational education and aligning the district standards, which include vocational knowledge and skills, with the state academic standards. This is being done for the purpose of strengthening the academic component of vocational courses.

Types of vocational programs offered

District administrators report that all students complete a career plan and will select courses within one of four career pathways. The pathways were developed with members of the community and will help students focus their high school education around a career interest. The pathways are Health and Human Services, Business and Management, Arts and Communication, and Science and Industry Technology. All vocational programs are organized into one of these pathways. The district does differentiate between Tech Prep and College Prep, and students in college prep 'track' do not have to take any vocational education. All pathways have recommended vocational courses, but it is not required for graduation.

Number of students participating/concentrating

Currently, there are 210 students in business courses, 365 in home economics courses and 470 in industrial technology courses. The district reports that 65% of students in grades seven to 12 are enrolled in one or more of the 90 vocational courses offered in the district. Some classes available to high school students are dual credit courses offered through Casper College. Across the district, there were roughly 512 students participating in vocational courses in the 1999–2000 school year. Of these students, a total of 325 individuals concentrated in vocational education—that is, completed a sequence of at least three courses in a vocational program area.

How do class sizes for vocational programs compare to other forms of instruction? How do class sizes vary by program area and course level?

Maximum class size for vocational education is determined by a safety committee and by teacher contract in Natrona County. Most academic classes have 20–25 students with a few that have higher numbers. The typical vocational class has 10–15 students.

Program Overview

A. District funding process

How are resources allocated for vocational instruction? How is program mix determined?

The process used to allocate funding to vocational programming is very similar to the process used to allocate all funds. Generally, the district has made every effort to connect the budget process with the school improvement process. All budgetary requirements have to be justified on the basis of how they support student learning. The district also reviews the number of students enrolled in the schools, considers needs as reported by the schools, and determines the funding levels for each school. The schools decide how to split the funds among the specific programs. Schools are encouraged to set priorities, examine previous expenditures and current need, and to come to consensus over the division of funding.

Program offerings are determined in collaboration with vocational advisory committees. They determine whether there is a need in the community for a new program (or if there is no longer a need and the existing program could be eliminated or modified). Web page design is an example of a new program based on community need and student interest. Residential Building Construction and Computer Repair are examples of programs that were modified to meet changing community needs. The decision process also considers factors such as resources and staffing in determining how to develop a program. Once the program is approved, a curriculum committee is formed to develop course curriculum. Additionally, if program enrollment drops in one school, forcing the school to drop the program, students have the option of traveling to

another school to enroll in that same program (e.g., CISCO is now offered at only one high school so all interested students attend the course at that school).

Finally, district administrators explained that vocational courses are often categorized depending on the certification held by the teacher. This means that if the mathematics teacher decides to start a computer programming course, the course will be considered an academic elective course, not vocational education.

Vocational Costs

A. Purchasing vocational services

Factors contributing to salary differentials

Vocational teachers are on the same salary schedule as other teachers in the district, which is based on experience and education. As in other districts, there is strong concern that vocational teachers are difficult to find and hire because they are paid higher salaries in industry jobs than at the school. Vocational teachers are given an extended contract due to the additional duties they perform with student organizations.

B. Equipment and supplies

State of current vocational equipment

How does the annual cost of vocational equipment compare with other forms of instruction?

Cost of replacing equipment—funding cycle

The largest expense for vocational education in Natrona is the staffing, followed by equipment replacement and repair, new equipment purchases, supplies and staff development. With the exception of a new web page design program, the equipment at the high schools is grossly out of date. The metal shop teacher is still using equipment dating from World War II. The district has placed a higher priority on computer equipment so those programs have updated equipment; teachers from other programs report that their equipment is old and “falling apart.” One teacher said that his machine was a “dinosaur.” Teachers also report that training costs are higher than in academic areas because new equipment and new technologies require additional training for the teachers.

The cost per student for vocational education courses is much higher than the cost for academic instruction. Average cost for a mathematics student, for example, is \$6.61 while the average cost for a business student is \$16.19 and the average cost for an industrial technology student is \$50.74. Note also that the academic budget has remained relatively stable in comparison to the vocational education budgets, which have dropped.

Annual average cost per student in Natrona County

Year	Mathematics	Business	Industrial Technology
2001-2002	\$6.61	\$16.19	\$50.74
2000-2001	\$6.08	\$14.29	\$44.78
1999-2000	\$6.72	\$21.52	\$67.19

Vocational teachers expressed concern that many of their students are low achievers and lack the ability to transfer knowledge to new situations. This has a direct impact on their ability to learn new equipment or new software. Teachers try to ensure that students learn skills on the same equipment that is used in the industry, but this is difficult if they cannot replace or upgrade equipment as industry changes or new technology emerges. The teachers report that they are funded at approximately 20% of what they actually need to run their programs and stay current with their fields.

Any remaining costs

A district safety committee limits the number of students per vocational classroom. They establish the maximum number of students to a shop, forcing schools to add sections if there are too many students enrolled. Another ‘hidden’ cost is that the general fund does not match their teacher salary needs. To remain competitive, the district supplements teacher salaries with local funds.

Effects of Funding System

A. Effect of basket model

How has change affected vocational program quality?

What are implications of funding change?

Flexibility to change programs

Administrators and teachers report that instructional quality and curriculum has suffered because of budget cut backs and the basket funding model. Teachers have redesigned their curriculum because the equipment no longer functions and there is no money to repair it, or they lack the supplies for the students to use. For example, the welding program has only one plasma welder to be shared among all the students in the program. To avoid the elimination of programs, teachers have combined multiple levels into one class. The district also reports that they have lost approximately ten vocational education positions due to the change in funding. Finally, the district has eliminated team teaching (academic and vocational) due to lack of resources.

Administrators explain that even before the basket model went into effect, vocational education had been cut. The formula for the basket model was based on earlier categorical

funding, but the categorical funding was eliminated by the time the basket funding was established, leading to an inaccurate picture of needs for vocational education. Earlier models allowed a 2:1 ratio for vocational to academic costs; this was reduced to 1:1, forcing the district to make cuts during the 1990s. Numerous factors drive up the costs—costs such as equipment, changing technology, and new courses require new types of equipment (e.g., CISCO) or supplies, and staff development—while the budget continues to shrink. Even programs that are in high demand limit enrollment due to the cost of supplies (e.g., welding, manufacturing) and equipment. Natrona administrators and teachers are particularly concerned because the community values and needs high quality vocational education and the district will not be in a position to continue even at their current reduced level.

Natrona has an advantage over some other districts in Wyoming because of the relatively strong economy of the area. Natrona has a small amount of School-to-Career funding that they apply to vocational education. They also have a local committee, Board of Cooperative Educational Services, which is administrated by the county office and serves all of the high schools in the area. Students in the 11th and 12th grades can apply directly for tuition costs of college courses. Teachers also are allowed to apply for “mini-grants” to develop a new unit or to learn more about emerging technologies in their industry area.

Vocational teachers also apply to the district for special use funds. These applications are submitted to a vocational curriculum committee comprised of community members, teachers, district administrators, and parents. The application must explain how the request relates to the improvement of student learning. Funds for these applications are drawn from the district’s Perkins funding and additional local funding sources. The school must match 50% of the requested amount. It is important to note that the amount that the district has for this fund is only \$30,000 and they received requests totaling over \$160,000 for special projects. Furthermore, the vocational director reports that these applications represent only a “fraction of the need” across the district.

B. Other concerns

Teachers and administrators in Natrona expressed concern about teacher burn-out. They report that many of the vocational teachers are spending personal time and resources to fix machines, buy supplies, and in many ways, fill the gap left by the budget cuts.

Analysis of Data

A. Summarize information collected on district finances, including:

Accuracy of data

The business office corrected the data supplied by the state. State data were inaccurate but not as inaccurate as in other districts.

District Staff Interviewed:

Steve Hopkins, Director Budget Finance Operations
Mark Mathern, Deputy Director Curriculum and Instruction
Tom McIntosh, Vocational Director

School Staff Interviewed:

Bob Blackwell, Assistant Principal
Dave Davis, Drafting and Technology Teacher
Jamie Cordonier, Technology Teacher
Madonna Conkin, Family and Consumer Science teacher
Dana Howie, Family and Consumer Science teacher
Mary Hopper, Business/Marketing Teacher

**Niobrara County School District #1
SITE VISIT SUMMARY**

Background

A. Site demographics

Niobrara County School District is located in Lusk, WY, a rural town in Eastern Wyoming. There are 430 students enrolled in grades K–12 in the district, of which 164 are high school students. The district has a combined elementary and middle school, a rural school, and a high school.

B. Program description

District philosophy toward vocational education

The school board and the community have conducted numerous discussions regarding the role of vocational education in the Niobrara County school system. District administrators report that the community opinion swings between the view that vocational education is important and the view that only academic education is important in the K–12 system. Currently, the district is trying to place an emphasis on both academic and workplace preparation. They estimate that about 70% of their graduating students go to college and of that number about 60% complete college. Regardless of their high number of students going on to college, the district wants all students to have some vocational education.

High School teachers agree that vocational education in Niobrara County is for all students, but they also report that they do not have the space or the resources to offer a full vocational curriculum. They describe their programs as “pre-vocational” and feel that the programs give students a chance to explore a vocational area and to learn some basic level skills. The courses do not provide advanced level skill building or certification opportunities.

Types of vocational programs offered

High School students select courses across six clusters of courses. The clusters include both academic and vocational programs and students must take a number of credits in each cluster. There six clusters are:

1. Math, Science, Technology, and Practical Arts
2. Communications
3. Historical, Global, and Cultural Studies
4. Creative Arts
5. Health and Safety

6. Electives

All students take a computer class, which is taught by the business department. Additional vocational programs within the clusters include Family and Consumer Science, Drafting, Computer, Food Service, Construction, Metals, and Accounting. Students are strongly encouraged to take sequences of courses in the vocational areas. There are no vocational exploratory or awareness courses at the middle school level.

Number of students participating/concentrating

It is difficult to get an exact number of vocational students as the district requires that all students take at least one vocational class and most students take at least two classes. The district defines a vocational student as any student who takes more than one vocational class. This means that college prep students are also vocational students in most cases, leading to a 90% participation rate. Of this group of students, only 20% continue to take a third vocational education course. Despite the small size of the vocational programs, about 25% of the students in Niobrara participate in vocational student organizations and the teachers report that their students do well in state and national competitions. Across the district, there were roughly 88 students participating in vocational courses in the 1999–2000 school year. Of these students, a total of 48 individuals concentrated in vocational education—that is, completed a sequence of at least three courses in a vocational program area.

How do class sizes for vocational programs compare to other forms of instruction? How do class sizes vary by program area and course level?

Lusk is a very small town and the class sizes are very small in both the academic and in the vocational classes. Computer classes have from 4–10 students, trades have 15, and the academic classes have approximately 15–20 students. Niobrara does not set upper limits on the number of students who can take a vocational class, rather they have to work hard to keep the programs they have. To maintain course offerings, the high school schedules multiple levels of classes into one class period with one teacher (i.e., one teacher may have up to four levels of skill—beginner to advanced—in one classroom). Teachers also voluntarily schedule multiple vocational classes into one class period. One teacher has a class with two levels of food science, a hospitality program, and advanced technology, all in the same period. Another teacher has a single class in which he teaches technology I and II, welding, and drafting. Although teachers are concerned that students may not receive as much attention as they need, teachers do not want to reduce the opportunities that students have to take vocational classes.

Program Overview

A. District funding process

How are resources allocated for vocational instruction?

How is program mix determined?

The allocation process is the same for vocational education as it is for academic education. The district considers the number of students enrolled, the curriculum of the course and what is needed to teach the course. Perkins funds are rotated through the vocational departments in the high school. The district also maintains funds to help meet some of the costs as they arise (e.g., a machine needs repair or the teacher needs more supplies).

The tiny size of the district allows them some flexibility in determining their programs but also limits them in the number of vocational programs they can offer. They have to consider what teachers are certified to teach, the resources needed to begin a program, and the level of student interest. They also work closely with the local Chamber of Commerce to review local employer needs. As a result of recent discussions, the district has developed a new program in hospitality. One of the teachers volunteered to get extra training, making the new hospitality program possible.

Vocational Costs

A. Purchasing vocational services

Factors contributing to salary differentials

Salary is determined by experience and education and does not differ among vocational and academic teachers. Teachers report that their salaries are extremely low and the district has used some state general funds to supplement classroom expenditures rather than increase their salary. (Note: the teachers referred to this practice as “emotional bribery.”)

B. Equipment and supplies

State of current vocational equipment

How does the annual cost of vocational equipment compare with other forms of instruction?

Cost of replacing equipment—funding cycle

State financial formula does not allow for additional expenditures of the vocational programs. The district tries to determine how much extra money the vocational education courses need to run their programs and provides some additional funds. The district did upgrade the computers used in all programs, but other machines and equipment are in need of upgrade.

Some vocational programs have been upgraded recently and are in good shape, but others are out of date (e.g., all equipment used for the woods program is over 30 years old). The district also expects that two of the computer labs will need to be upgraded within two years.

Vocational education is more expensive than academic instruction, primarily due to the cost of supplies and equipment. They purchased welding coats for example, but these coats need to be replaced and the equipment needs to be upgraded. As in other districts, the teachers are concerned that students need to practice on current workplace equipment or software in order to be proficient at that set of skills. Niobrara, for example, is in the process of beginning a hospitality program but they are unable to buy the specialized software that is used in the hotels of their area. Teachers would like to begin a CISCO program but they know that just to start such a program on a small scale would cost over \$12,000 and these resources do not exist in the district or school.

Comparative expenses for academic and vocational courses

Subject	Cost of equipment and supplies
Family and Consumer Science	\$3900
English	\$560
Industrial Technology	\$4400
Mathematics	\$400

Any remaining costs

Teachers report that are not paid for planning and they are not paid for serving on committees or for running student organizations. These costs are not ‘visible’ on budget sheets.

Effects of Funding System

A. Effect of basket model

- How has change affected vocational program quality?**
- What are implications of funding change?**
- Flexibility to change programs**

The district cannot add new programs and some programs that had been cut due to low enrollment and lack of resources cannot be re-established. This is mainly due to their low student population. In fact, district administrators report that the limitations imposed by the basket model have not reduced their overall funding; their small size has meant that the basket funding model had less impact than it did in larger districts. Although the funding model does not recognize the significantly higher costs of vocational education, the district’s funding is sufficient to maintain their programs. Teachers concur and report that the basket funding did not change their programs or resource levels significantly. They believe that the district has controlled the funding for

vocational education and has never provided a higher level of funding for vocational programs, even when it was permissible in the state.

A school administrator reports that although resources are very limited the school does have more control than in previous years. They say that they used to give the district budget requests but they are now given a lump sum each year and they have control over how to spend their funds.

Administrators are concerned, however, that they will not be able to expand or upgrade equipment. Currently there are no vocational programs of any type in the elementary or middle schools and the district sees this as a gap. They would like to provide some introductory courses at the middle school level and resources in the basket model are too limited.

B. Other concerns

Their population is shrinking and the district expects the trend to continue.

Analysis of Data

A. Summarize information collected on district finances, including:

Accuracy of data

The data from Niobrara was incomplete but accurate. The district provided some of the missing data.

District Staff Interviewed:

Rick Lucksinger, Superintendent
Bonnie Zowada, Business Manager

School Staff Interviewed:

Candy Christianson, Hospitality and Business Instructor
Lois Dooper, Family and Consumer Science Instructor
Ron Nelson, Industrial Technology Instructor
Sue Fullmer, Computer and Mathematics Instructor

Sheridan county School District #1
SITE VISIT SUMMARY

Background

A. Site demographics

Sheridan County School District #1 is one of three school districts located in Sheridan County, Wyoming. The district educates approximately 900 students from the communities of Parkman, Big Horn, Dayton, and Ranchester. Of 162 FTE staff employed by the district, 109 are classified as FTE instructional and roughly six as FTE vocational. The following table summarizes student enrollment at the district’s eight schools:

Student enrollment in the district was 895 students in the 2000–01 school year. For the past 17 years, the district has operated a four-day week and has used 16 non-student Fridays for in-service and professional development. The district’s enrollment has remained consistent over the past five years. Enrollment figures for 1999–2000 are as follows:

School	Enrollment
Big Horn Elementary	153
Big Horn Middle School	100
Big Horn High School	134
Tongue River Elementary	197
Slack (1-room school)	7
Tongue River Middle School	125
Tongue River High School	176

Vocational student enrollment

Across the district, there were roughly 93 students participating in vocational courses in the 1999–2000 school year. Of these students, a total of 60 individuals concentrated in vocational education—that is, completed a sequence of at least three courses in a vocational program area.

B. Program description

The district regards vocational education as essential to students’ future success, regardless of whether they join the workforce immediately after high school or whether they decide to study further. The following vocational education programs are offered at the two high schools: Vocational Agriculture, Home Economics, Industrial Arts and Technical Education, Business, Hospitality Training, and Cisco-certified training. The district also collaborates with neighboring Sheridan College to expose students to higher-level classes in computing and technology.

In general, vocational education programs in the district have seen steady improvement. According to the principal at Tongue River High School, he would give their current programs a “B”, up from a “D” five years ago. Tongue River High School has 95 computers available for 160 students. While this ratio is satisfactory, the principal reports that there is room for improvement. The district supplies the majority of the computers to the school—expenditures for software are made from the building budget. The program at Sheridan College is paid for by the district. Given the current level of funding, the district reports that it is impossible to introduce a new vocational education program primarily because of the shortage of facilities. A significant improvement in vocational education in the district would be if they could expand the vocational agriculture program to Big Horn High School.

The high schools have three diploma pathways: college prep, standard and applied. College prep is the most academically rigorous; the applied pathway has a work-site component and is primarily intended for students who plan to join the workforce after high school.

Program Overview

A. District funding process

The district allocates a certain amount of funds for each school building and then each building decides how the money will be distributed between different programs. The district uses all of its Perkins funding for vocational education. The local community and industry advise the district on vocational program offerings and also help the district determine the skills that are expected of high school graduates.

Vocational Costs

A. Purchasing vocational services

Salaries and benefits of vocational teachers are the same as those of other teachers. Any differences are attributable to variations in academic qualifications and experience. District staff reports difficulty in hiring and retaining vocational teachers. According to them, the state-wide shortage of qualified vocational education teachers, particularly vocational agriculture teachers, is reflected at the district level. In addition to this overall shortage, the district also faces competition from industry especially in hiring and retaining welding and vocational agriculture teachers.

B. Equipment and supplies

District staff reports that the current status of their vocational equipment is satisfactory. At the time of the site visit, vocational education equipment, other than computers, had not been recently replaced. Funding for vocational education programs does not follow a specific cycle and is need-based. As and when the need arises, the district pulls together funds that are

available. The district does not receive donations from industry to support its vocational education. While the district applies for grants—for example, the Technology Innovation Grants for computers—these are for all program areas and not specifically for vocational education.

C. Class size

Class sizes for vocational programs tend to be somewhat smaller. There are also variations in class size across vocational program areas. For example, in 1999–2000 at Tongue River High School, the agriculture program averaged 10 students a class, computers and business averaged seven a class, and family and consumer sciences averaged 13 a class.

Effects of Funding System

For now, the district has not been significantly affected by the new funding formula. In fact, the district stands to benefit because of the small school and small district adjustment components of the funding formula. However, if these adjustments are taken away, the district will stand to lose. Given that the new model is based on ADM and that the district has been struggling with declining student enrollment, if the adjustments are taken away the district would receive less funding for vocational education. Furthermore, if overall funding drops, vocational education programs, particularly higher cost programs, will face losses since other core subject areas have to be maintained because of academic requirements.

The superintendent made an interesting point with regards to the nature of vocational education in Wyoming. According to him, “Vocational education is too nebulous a term”. In addition to revising the funding formula, the Supreme Court also needs to examine how vocational education is defined across the state. There needs to be consistency in what certain standards of vocational education would require both in terms of the breadth and depth of programs. For example, is it enough for a district to say that it has a vocational agriculture program regardless of the scope of the program, or is it more important to find out whether the program is offered in each school building?

Sites Visited:

District office
Tongue River High School

**Sublette County School District #9
SITE VISIT SUMMARY**

Background

A. Site demographics

Located in the Southeastern part of Wyoming, Sublette County School District #9 serves 569 students in the 2000–01. The district’s two elementary schools (grades K through 6), one middle school (grades 7 through 8), and one high school (grades 9 through 12) are located in the small town of Pig Piney. Big Piney High school enrolls approximately 200 students. All students are required to take at least one vocational class and the school estimates that more than half the students are vocational concentrators—students who have taken at least two vocational classes.

The district has 114.5 full-time-equivalent (FTE) employees, of whom 59 are classified as FTE instructional and just under four are classified as FTE vocational.

B. Program description

District philosophy toward vocational education

The principal and guidance counselor believe that the program offered at the high school is important because it meets the needs of their students. “Not everyone is college bound,” expressed the guidance counselor. According to district staff, approximately 60% of graduating seniors indicate they will enroll in some type of postsecondary education. District and school staff both indicate they do not have teachers or developed curriculum to offer students a “true” vocational program. Moreover, because the courses offered by the high school do not provide students with either certificates of completion or basic job entry skills, the Superintendent believes the vocational program offered at the high school could be characterized as exploratory at best.

Types of vocational programs offered

Big Piney High School offers two programs: college preparatory and vocational. The vocational program requires at least six vocational credits. Students can choose from courses in Industrial Arts which includes drafting, advanced drafting, welding, advanced welding, applied technology, metals, advanced metals, basic woodworking and advanced woodworking. In addition the district offers courses in home economics that include courses in foods, foreign foods, clothing, advanced clothing and family living. Business classes (accounting and advanced accounting) and computer classes (computer applications and multi-media presentations) are also included in the vocational program. In fact, two years ago the district decided to improve the technology program at the high school. Through a BOCES grant and some general fund money,

the district purchased more than 30 computers, computer software, and other hardware and wiring.

The college preparatory program requires two vocational credits for graduation.

Number of students participating/concentrating

Across the district, there were roughly 285 students participating in vocational courses in the 1999–2000 school year. Of these students, a total of 58 individuals concentrated in vocational education—that is, completed a sequence of at least three courses in a vocational program area.

How do class sizes for vocational programs compare to other forms of instruction? How do class sizes vary by program area and course level?

With one exception, vocational classes are smaller, approximately 15 to 16 students in a vocational class compared with 20 in an academic class. Computer classes are the exception—as many as 22 students are enrolled in a computer class.

Program Overview

A. District funding process

How are resources allocated for vocational instruction?

How is program mix determined?

Program mix is determined in large part to the amount of funding available and the level of student and staff interest in the class. For example, it was agreed by staff to eliminate auto shop because it was too expensive to update. Staff members agreed that given the cuts in funding one area had to be eliminated to maintain the other vocational areas. High school staff indicated that with the decrease in funding the number of courses being offered is decreasing in addition to losing vocational teachers. “When someone leaves, the program leaves”—Guidance Counselor.

Vocational Costs

A. Purchasing vocational services

Factors contributing to salary differentials

While vocational teachers are paid on the same pay scale as other teachers in the district, district and high school staff believe they should be paid in a manner that competes with industry. High school staff have indicated that while they have had some applicants or vocational positions, most are lured to industry rather than teaching.

The high school was built approximately 15 years ago, at a time when enrollment was at an all time high of 800. Consequently, facilities for vocational education are impressive in terms of size. The school built a separate vocational building where welding, wood shop, auto body/mechanics classes are held. Vocational equipment for industrial arts is in reasonably good condition. Most equipment is not outdated. However, equipment for home economics is outdated and has not been replaced since construction of the high school. Any purchases of equipment have come through Perkins money and not the general fund.

B. Equipment and supplies

State of current vocational equipment

How does the annual cost of vocational equipment compare with other forms of instruction?

Cost of replacing equipment—funding cycle

Vocational equipment costs are generally higher than costs for academic instruction. However, staff was unable to quantify by how much. Equipment is replaced cyclically. In addition, while general fund money covers the cost of most supplies, students are required to cover some if not all the costs of their supplies depending on the vocational course they are taking.

Effects of Funding System

A. Effect of basket model

How has change affected vocational program quality?

What are implications of funding change?

Flexibility to change programs

Overall, district personnel believe that the quality of vocational opportunities they provide their students is good. They reiterate they do not believe they are providing vocational education and indicate that if present funding levels persist, the quality will decrease. Additional monies are needed to provide a comprehensive vocational program at their school. Any further reductions in funding will result in dramatic cuts in the vocational opportunities they provide.

Effects of Funding System

A. Summarize information collected on districts finances, including:

Accuracy of data

State gathered data differs from district collected data in two ways. The first is that state collected data on general vocational funds for the district greatly underreports expenditures reported by the district. District collected data for 1999–2000 is approximately \$217,935 more than the state collected data. Secondly, it appears that state collected data regarding Perkins funds for purchased services is incorrect either because of data entry or reporting error. District collected data indicates from Perkins funds for 1999–2000 the district received \$4,160. In contrast, the state collected data indicated for the same year Perkins funding in the amount of \$388,184.

In addition, as noted above, the district received BOCHES monies for their technology program, which were not reported in state gathered data but were included in the data collected by MPR Associates, Inc.

District Staff Interviewed:

Dr. Weldon Shelley, Superintendent of Instruction

**Sweetwater County School District #1
SITE VISIT SUMMARY**

Background

A. Site demographics

Located in Rock Springs, Wyoming, Sweetwater County School District #1 is one of the larger school districts in the state. Student enrollment in the district was 4,665 students in the 2000–01 school year.

The District includes the following: three senior high schools (one alternative), four junior high schools, and 15 elementary schools. The district has just over 784 full-time equivalent employees in the 1999–2000 school year, of whom 460 are classified as instructional and 29 are classified as FTE vocational.

B. Program description

District philosophy toward vocational education

District philosophy is to provide high quality vocational programs for students that equip them with skills that can allow them to find employment and/or pursue further education. The district is committed to phasing out programs that do not provide high quality skills. Roughly 72 percent of students go on to college and about 25 percent graduate from college.

Types of vocational programs offered

Vocational program offerings are offered in five areas: Family and Consumer Sciences, Trade/Industry, Health, Business, and Technical Education. Within programs, courses that do not lead to a concentration may be offered if it is felt these courses support student skill development.

Number of students participating/concentrating

Across the district, there were roughly 984 students participating in vocational courses in the 1999-2000 school year. Of these students, a total of 139 individuals concentrated in vocational education; that is, completed a sequence of at least three courses in a vocational program area.

**How do class sizes for vocational programs compare to other forms of instruction?
How do class sizes vary by program area and course level?**

Vocational education courses are not provided unless they can have a minimum of 10 students per class. Vocational classes are usually smaller than academic classes. Recommended district class size is 23 students, and vocational classes run at max of between 18 to 20 students, with limitations set by availability of equipment stations.

Program Overview

A. District funding process

How are resources allocated for vocational instruction?

How is program mix determined?

District allocates resources for equipment and supplies by providing funds left after salaries and benefits are subtracted from district allocation. District consults with vocational educators to determine rotation of funding in support of programs.

Vocational Costs

A. Purchasing vocational services

Factors contributing to salary differentials

Vocational educators, on average, earn an amount equal to or less than other instructors. Salaries are determined based on teacher experience.

Staff mentioned that the district currently spends a relatively large amount on teacher salaries, and that this expenditure reflects a decision on the part of this district in particular, and all districts in general, to channel resources to teacher salaries. This means that relatively less state funding is available for use for equipment and supplies.

B. Equipment and supplies

State of current vocational equipment

How does the annual cost of vocational equipment compare with other forms of instruction?

Cost of replacing equipment—funding cycle

Vocational equipment tends to vary across programs. District has recently upgraded, for the second time, its AutoCAD program to it bring to a higher level. Here, instructional materials are state-of-the-art, as is the instruction. Students participating in these programs graduate with highly marketable skills.

For the welding program, the district has also recently purchased a plasma cutter—but within welding the basic skills are taught using equipment that may be one or two decades old. In contrast, less capital-intensive programs, such as health, have the sufficient equipment to support instructional objectives.

In general, it appears that highly capital-intensive programs have difficulty replacing or maintaining equipment at a level that allows teachers to provide instruction that will prepare students for career entry. Less capital-intensive programs are able to sustain themselves, in part because teachers do not need to upgrade equipment, so much as the content of instruction. Since the district is able to supplement purchases using Perkins funding, which it steers toward high-end equipment, at the margins students have access to reasonably advanced instruction. However, since the district is unable to upgrade basic instructional equipment in some areas, students must train on outdated tools that may or may not reflect the kind currently used in the workplace.

Equipment is replaced on a rotating 3-year schedule, mediated by teacher assessments of need. The district used to rely on donations from private industry to obtain equipment, but found that the quality of what they received was often low. The district is committed to buying high quality equipment in the belief that it will be more reliable and easier to service than cheaper goods. The district uses its federal Perkins funding to buy high-end technologically advanced equipment; state resources are used to purchase equipment and supplies.

Conversations with Rae Lynn Job focused on strategies for assisting districts in upgrading materials. She agreed that providing additional funding earmarked for equipment and supplies would assist the district in upgrading its instructional holdings. She indicated that she would attempt to quantify the amount her district would need to spend to bring its instructional holdings to a reasonable quality level, and suggested that she would talk to other administrators to obtain their feedback as well.

Costs related to utilities, travel, and student contributions not accounted for in district data.

Effects of Funding System

A. Effect of basket model

How has change affected vocational program quality?

What are implications of funding change?

Flexibility to change programs

The new funding formula has led to complications within the district, in part due to the reductions in student enrollment. The belief is that the district is still losing money, but that if

enrollments remain stable, the district would be able to support vocational education by being conservative in terms of providing programs.

One problem unrelated to the funding system is that the district recently changed suppliers and now has a more difficult time obtaining cheap materials, particularly in certain industry and trade areas. Prior to this change, the district had negotiated a very remunerative arrangement with the supplier, allowing it to obtain equipment, such as welding gas and metals, at reduced rates. As a result, instructional offerings in welding have been cutback, meaning that students have less access to different types of welding techniques or uses of different metals.

B. Other concerns

The district has some difficulty attracting new teachers. The district recruits at local colleges and universities to attract new teachers. When a teacher cannot be found, the district will close down the program.

District Staff Interviewed:

Paul Grube, Vocational-Technical Coordinator
Jack Adams, Administrative Assistant for Business
Scott Duncan, Administrative Assistant for Business
Rae Lynn Job, Director of the Office for Teaching & Learning

**Teton School District #1
SITE VISIT SUMMARY**

Background

A. Site demographics

Located just 50 miles south of Yellowstone National Park, Jackson is considered one of the most scenic parts of WY. Not surprisingly, it is home to many affluent families. Teton county is one of the most expensive counties to live in the United States. Teton School District #1 consists of five elementary schools (an additional one will be built next year), one middle school (grades 6–8), and two high schools—the largest one being Jackson Hole High School. Jackson Hole High School opened its doors in a newly constructed facility in 1998. In 1999–2000, Jackson Hole High School served 690 students while the district served a total of 2366.³

The district has 314.6 full-time-equivalent (FTE) employees, of whom 206 are classified as FTE instructional and 5.5 are classified as FTE vocational.

B. Program description

District philosophy toward vocational education

“I would like to maintain the focus of vocational education as hands on and meeting the needs of the community.”

Principal Jackson Hole High School

While the general sentiment in the district is that hands on educational experiences, career awareness and learning practical skills or a trade are important, the district sees preparing students for college as the their primary function. In 1999–2000, over 85 percent of students who graduated reported enrolling in a 4-year institution. According to administrators and teachers, the community views vocational education as unnecessary, however, they feel that the school system should prepare those 15 to 20 percent who do not plan to go to a 4-year institution for work. Teachers interviewed stated that the school does not offer a “real” vocational program as it does not provide students with certification of completion for a given vocational area. In fact, the district has no written vision or plan for providing vocational education. A description of the vocational program offered by the district follows.

³ Two charter schools are planned to open next year because the community is dissatisfied with the quality of education being offered.

Jackson Hole High School requires students to take at least one vocational course before graduation. High school staff indicates that many college-bound students take vocational courses because it offers them the opportunity to apply their academic learning in a practical setting. While some college-bound students take vocational classes, vocational concentrators are typically non-college bound students.

Types of vocational programs offered

The high school refers to their vocational program as “Career and Technical Education.” The school offers three areas of vocational education with a school-to-work component: pre-apprentice careers, broadcast arts, and computers (see enclosed chart). The pre-apprentice career area includes technical application, and trade and industry courses. Students at the high school also have the opportunity to participate in the school-to-careers program. Participation in the program requires taking the critical skills course offered through the computer vocational area or being administered the career scope, a career assessment test. Once either of these two prerequisites has been completed, juniors and seniors can participate in the school-to-career internship. This internship, either paid or unpaid, which consists of 135 hours or more, is considered equivalent to one high school credit. In addition to the high school component, the school-to-career program exists in the elementary and middle schools. It was funded through the school-to-career 3-year grant in 1998–1999. The district has indicated that it will fund the program once the school-to-career grant money has expired.

Number of students participating/concentrating

Across the district, there were roughly 81 students participating in vocational courses in the 1999–2000 school year. Of these students, a total of 128 individuals concentrated in vocational education—that is, completed a sequence of at least three courses in a vocational program area. This suggests that many participating students complete more than one vocational program area.

How do class sizes for vocational programs compare to other forms of instruction? How do class sizes vary by program area and course level?

Vocational class size ranges in number of students from 20 to 24 and are similar to academic classes where the average number of students in a class is 22 to 24. Typically, welding courses have fewer students (20 on average).

Program Overview

A. District funding process

How are resources allocated for vocational instruction?

How is program mix determined?

The funding process is a top down model where the central office allocates money to school principals who along with selected administrators decide funding allotments for the various school departments. According to the high school principal, funds provided for vocational education is based on previous year's funding levels and student interest. If insufficient student interest is expressed (less than five students want to take a given course), that course is dropped and funding re-allocated. While this happens routinely at the course level, cuts or additions in terms of vocational areas also experience a similar process. For example, last year high school administrators decided to eliminate family and consumer science all together due largely to budget constraints. No additions have been made in recent years to the mix of vocational courses—rather the school has tried to improve the mix of vocational classes they already offer, such as trying to upgrade 20-year-old broadcasting equipment and 5-year-old technical applications equipment. Funding to improve technical applications lab has come primarily from Perkins funds. Community donations have been the primary source for making repairs to broadcasting equipment with some assistance from the school's general fund. The school has been unable to raise funds through donations or provide through general funds monies needed to upgrade the broadcast equipment.

Vocational Costs

A. Purchasing vocational services

Factors contributing to salary differentials

Similar to other districts, high school staff indicates that vocational teacher salaries are no different from that of non-vocational teachers. In addition, high school staff indicates that vocational equipment is more expensive than equipment or materials for non-vocational areas but did not quantify by how much. In general, equipment is relatively new with the exception of broadcasting equipment as noted above. As with other schools, replacement of equipment is done in a cyclical fashion rotating between vocational programs. Unlike other schools who use Perkins funds to upgrade/update all if not most of its equipment, Jackson Hole High school receives relatively little Perkins funding due to the low number of Title 1 students enrolled in the high school.

“Basically, if teachers can't find other ways of funding equipment through donations or some other way, then equipment replacement or upgrading wont' happen.”

Jackson Hole HS Vocational Teacher

B. Equipment and supplies

State of current vocational equipment

How does the annual cost of vocational equipment compare with other forms of instruction?

Cost of replacing equipment—funding cycle

Staff at the high school expressed that upgrades/updates such as spending \$26,000 in memory updates for the computer lab or \$10,000 for six new computers and software has come out of the school budget and covers the bare minimum. Some vocational teachers indicated they relied on donations from local business for a significant part of their materials and supplies. Further, one program—construction/wood has become completely self-sufficient. The program builds and sells small homes to local residents and businesses. Profit from the sale is used to upgrade and purchase necessary equipment and materials. The program has been self-sufficient for more than two years.

Effects of Funding System

A. Effect of basket model

How has change affected vocational program quality?

What are implications of funding change?

Flexibility to change programs

According to both district and high school staff, the basket model has had a detrimental effect on their budget. The basket model has resulted in 1.6 million dollar cut in the district's budget. The result has been a general decrease in monies available for supplies across vocational and academic programs alike. Furthermore, the family and consumer science program has been eliminated, the school has dropped the small engines course and they are offering fewer drafting courses in response to the decrease in monies.

The district believes that without proper funding, the district cannot adequately meet the needs of all its students. Presently, the district cannot change, add or upgrade vocational programs without it having a negative effect on other vocational programs. Improving the quality of education requires change and change, as one interviewed administrator pointed out, takes money.

“As much as we like block grants, vocational education may need special attention.”

Teton Superintendent

District and high school staff indicated that current funds are not meeting the actual cost of vocational education. Staff agreed that alternative funding for vocational education was needed such as block grants. However, they were unable to give specific suggestions.

District Staff Interviewed:

Mr. Peter Carparelli, Superintendent of Instruction

Washakie County School District #2
SITE VISIT SUMMARY

Background

A. Site demographics

Located south of the city of Worland, the small town of Washakie's County School District #2 consists of an elementary school (K through 6th grades) one middle school (grades 7 through 8), and one high school (grades 9 through 12). The district enrolled a total of 131 students in 2000-20001 academic year of which 50 were enrolled in grades 9 through 12. Due to the district's small enrollment, many teachers split their time between the middle school and high school students. District staff consists of the superintendent, business manager, and one administrative staff.

The District includes the following: one high school, one middle school, and one elementary school. The district had 31 full-time-equivalent (FTE) employees in the 1999-2000 school year, of whom 19 were classified as FTE instructional and three were classified as FTE vocational.

B. Program description

District philosophy toward vocational education

"Our goal is to prepare all our students for the word of work."

Superintendent

The superintendent as well as the high school principal expressed that it is their responsibility to prepare their students to be successful in whichever path they choose—college, technical school or work. While they believe the quality of vocational education they provide is good, they would like to offer more structured series of courses to provide more depth for their vocational programs. In addition, they feel providing actual on the job training or mentoring would also improve the quality of vocational education but state that creating such bonds is difficult given their distance from large cities that can provide such opportunities.

Types of vocational programs offered

The high school offers courses in four vocational areas: Business, Family and Consumer Science, Applied Technology and Trade/Industry. Courses in business include business math (which can be taken to meet the math requirement), accounting I/II, business skills, investing and research/college preparation. Courses in Family and Consumer Science include cooking (offered to senior and juniors only), baking, and child development. Applied technology program offers

courses in computer science, publishing (the year book is created in this course) and video technology. Welding and wood shop are the only two courses offered in the Trade and Industry program.

High school students are required to take at least one vocational class before graduating. In 1999–2000, approximately 25% of all high school students were vocational concentrators. Only the Business program structured sequence of courses. However, students interested in pursuing upper division courses in the same area must take the same course twice. Teachers report making curriculum more challenging for students who take the course twice. A vocational concentrator is one who has taken any three vocational courses offered by the school.

The high school reports that on average approximately 55% of students who graduate enroll a postsecondary institution. Those who do not enroll in a postsecondary institution either attend the military or enroll in some type of technical training. While the percent who attend either the military or technical training varies from year to year due to the variation in the number of students who graduate, the number who follow either path is consistent—one to two every year.

Number of students participating/concentrating

Across the district, there were roughly 58 students participating in vocational courses in the 1999–2000 school year. Of these students, a total of 20 individuals concentrated in vocational education—that is, completed a sequence of at least three courses in a vocational program area.

How do class sizes for vocational programs compare to other forms of instruction? How do class sizes vary by program area and course level?

Typically vocational classes range dramatically in the number of students per class. For example, in the Business program, classes can be as low as two and as high as 16 while in Family and Consumer science, classes range from 10 to 12 students per class. In comparison, academic courses at the school seat on average 10 to 12 students.

Program Overview

A. District funding process

How are resources allocated for vocational instruction? How is program mix determined?

As with other school districts, Washakie school district determines funding allocations based primarily on the previous year's budget. The mix of classes is determined by student interest.

Vocational Costs

A. Purchasing vocational services

Factors contributing to salary differentials?

Salaries for vocational teachers in Fremont #2 School District are higher compared with all other teachers because of the number years of vocational teachers have been with the district (24 and 9 years). According to both the high school principal and superintendent, vocational teachers do not cost more.

B. Equipment and supplies

State of current vocational equipment

How does the annual cost of vocational equipment compare with other forms of instruction?

Cost of replacing equipment—funding cycle

In general, vocational equipment is relatively new, eight to five years old. The district uses Perkins funds to upgrade materials as needed and uses general fund to make major equipment purchases.

Effects of Funding System

A. Effect of basket model

How has change affected vocational program quality?

What are implications of funding change?

Flexibility to change programs

The district reports that the small school adjustment has been insufficient to cover the cuts in budget experienced with the new funding formula. They indicate for the 2000–2001 academic year, operating in the red. While they have had permission to use the district's reserves for this academic year, they believe that if state funding levels continue, drastic cuts will occur with electives and vocational course being the first set of cuts.

District staff concerns echo those expressed in other small districts. For example, the district staff indicated that the vast majority of small districts in Wyoming's are those located in rural and often time isolated areas. These districts have an extremely difficult time recruiting and hiring teachers because of their geographical location. Furthermore, the district needs to hire a full-time teacher for a part-time position because teachers will not otherwise come and work for the district. With respect to vocational teachers, small districts have an even harder time finding

vocational teachers, especially those certified in areas of need. In addition, as expressed in other small school districts, funding based on per pupil expenditures is not adequate to meet the needs of small districts.

When asked to provide suggestions to improve the funding system, administrative staff made no suggestion. Staff indicate that the funding system has not taken into consideration the increasing costs of teacher benefits and workers compensation. “We have experienced significant increases over the past years with respect to benefits. That’s really hurting teacher salaries,” stated one staff member. Without some type of control on these costs, staff feel the funding system will be unable to meet the needs of education in the state of Wyoming.

Effects of Funding System

A. Summarize information collected on districts finances, including:

Accuracy of data

Overall, general funding for vocational expenditures has increased over the past two years by roughly \$6,000. The increase is noted primarily in equipment and supplies. In addition, state collected data on monies received by Perkins is off. Washakie school district receives less than \$10,000 in Perkins funds a year. The \$37,000 in Perkins funds collected by the state may be a reflection of the total monies the consortium, of which the Washakie school district is part of, receives.

District Staff Interviewed:

Mrs. Judy Morrison, Superintendent of Instruction

Protocol for Site Visits

Superintendent and District Staff:

In this session, we are seeking to qualify the scale and scope of the vocational enterprise in your district and to identify the processes used to set vocational education policy.

PROGRAM OVERVIEW

- What is your district philosophy toward vocational education?
- What process does the district use to set the level of expenditures for vocational instruction vs. other forms of instruction
 - Who determines the amount that will be spent for vocational instruction?
 - Who is consulted in this decision?
- How is the mix of vocational program offerings determined?
 - How are funding amounts for programs established?

PURCHASING VOCATIONAL SERVICES

Our data indicate that the average total salary of vocational educators in Sweetwater County is equal to or slightly lower than that for other secondary instructors.

- What factors contribute to salary differences?
 - Academic degrees?
 - Years of experience?
 - Professional development?
 - High-demand pay?
 - Extended contracts?
 - Credit on salary schedule?
 - Other forms of compensation?
- How difficult is it to hire vocational teachers?

EQUIPMENT AND SUPPLIES

- How does the annual cost of vocational equipment and supplies compare with that for other forms of instruction?
 - What contributes to any differences?
- What is the current state of your vocational equipment and related technology?
 - Is it up-to-date or will it need replacing in the coming years?

- Does the annual cost of vocational equipment for the district remain relatively constant or do funding amounts cycle?
 - Does this vary by program area? If so, how?
 - To what extent is equipment donated by industry? Recycled by instructors?
- Are there any costs associated with offering vocational instruction that we have missed (e.g., maintaining equipment; maintaining facilities)?

CLASS SIZE

- Generally, how do class sizes for vocational programs compare to other forms of instruction?
 - Within vocational education, do class sizes vary by:
 - Vocational program area?
 - Course level (introductory vs. advanced)
- If so, what are average class sizes controlling for vocational program area and course level?

EFFECTS OF FUNDING SYSTEM

- How has the change from the previous funding system to the “basket” approach affected vocational program offerings or district priorities?
- Are the resources included in the new basket model sufficient, in the long-term, to support the provision of vocational programs at their current levels?
 - If not, what areas are most likely to suffer?
- How would the current funding system affect you ability to add a new vocational program area to your current program?
- In your estimation, how would vocational program quality change with a:
 - 10 percent increase in vocational resources?
 - 10 percent decrease in vocational resources?
- Do you have any concerns or suggestions that you would like to share regarding the new funding system?

Protocol for Site Visits

Local School Staff:

In this session, we are seeking to understand the costs local educators face in providing vocational services, and how, if at all, the quality and type of vocational services you offer has been affected by the new block grant approach.

- What are the primary expenses your school faces in delivering vocational services?

EQUIPMENT, FACILITIES, AND SUPPLIES

- How does the annual cost of vocational equipment and supplies compare with that for other forms of instruction?
 - What contributes to any differences?
- What is the current state of your vocational equipment and related technology?
 - Is it up-to-date or will it need replacing in the coming years?
- Does the annual cost of vocational equipment for the district remain relatively constant or do funding amounts cycle?
 - Does this vary by program area? If so, how?
 - To what extent is equipment donated by industry? Recycled by instructors?
- Are there any costs associated with offering vocational instruction that we have missed (e.g., maintaining equipment; maintaining facilities)?

CLASS SIZE

- Generally, how do class sizes for vocational programs compare to other forms of instruction?
 - Within vocational education, do class sizes vary by:
 - Vocational program area?
 - Course level (introductory vs. advanced)
- If so, what are average class sizes controlling for vocational program area and course level?

EFFECTS OF FUNDING SYSTEM

- How would you rate the quality of your current vocational programs?
- How has the change from the previous funding system to the “basket” approach affected vocational program offerings?

- ❑ Do you have sufficient resources, in the long-term, to support the provision of vocational programs at your current levels?
 - If not, what areas are most likely to suffer?
- ❑ In your estimation, how would vocational program quality change with a:
 - 10 percent increase in vocational resources?
 - 10 percent decrease in vocational resources?
- ❑ Do you have any concerns or suggestions that you would like to share regarding the new funding system?

Session Overview

In February 2001, the Wyoming Supreme Court ruled several features of the State's new school finance model unconstitutional, including the manner in which vocational and technical education is funded. To address this issue, the Court ordered the State to document the actual cost schools face in providing vocational teachers and equipment, and include this amount as a line item in a revised school funding formula. Our study is intended to help identify the costs your district, and schools within your district, face in providing vocational education. Specifically:

Costs

- ❑ How much money is allocated each year to support vocational teacher salaries, and how do the salaries of vocational educators compare to those of other teachers in your district?
- ❑ On average, what does the district spend each year on equipment and supplies for vocational programs?
- ❑ How do costs for vocational education vary by program area? Are certain vocational programs more expensive to staff and equip than others?

Student Participation

- ❑ What proportion of students participates in any vocational coursework? Go on to concentrate in a vocational program area?
- ❑ How do class sizes for vocational programs compare to other forms of instruction? Do class sizes vary by vocational program area or course level?

Funding Process

- ❑ Who decides how money is allocated to support vocational programs in your district?
- ❑ How does the district determine which types of vocational programs will be funded?
- ❑ How has the shift from the previous funding system to the current basket model affected vocational program offerings?

Program Quality

- ❑ How would you describe the quality of vocational education instruction presently offered by your district? How up-to-date is instructional equipment and related technology?

- How would vocational program quality change with an increase of 10 percent in vocational resources? Decrease of 10 percent in vocational resources?

Protocol for Site Visits—Opening Text

Introductions

- About us
 - Your name
 - MPR Associates, Inc.
 - Location
 - What we do
 - Subcontracting to MAP
 - MAP involved in developing new state funding formula
 - MPR worked on initial project by developing paper assessing “The Feasibility of Developing a Cost Adjustment for Vocational-Technical Education Programs”
 - Based in part on our work, WY Supreme Court ruled that the State must quantify actual costs of vocational equipment, supplies, and equipment.
- About you
 - Before we begin, have people introduce selves
 - Your name
 - Responsibilities

Background on the Project

As you may know, in February 2001 the Wyoming Supreme Court ruled several features of the State’s new school finance model unconstitutional, including the manner in which vocational and technical education is funded. To redress this issue, the Court ordered the State to document the actual cost schools face in providing vocational teachers and equipment, and include this amount as a line item in a revised school funding formula.

Calculating the actual cost of providing vocational education requires that the State undertake a number of activities, including collecting current data on district and school expenditures. The purpose of these local visits is to provide the State with information that can be used to quantify the actual cost educators face in staffing and equipping vocational classrooms.

These site visits are non-evaluative, and are intended only to provide information that can document the annual cost schools face in providing vocational instruction. Underlying this effort is the belief that, while it is possible to collect state-level data on vocational expenditures, it is imperative that district and school staff participate in the effort, in particular because local staff are in the best position to assess the actual costs and outcomes of vocational instruction.

Before we Begin:

Any questions?

Letter to Superintendent

April 10, 2001

Superintendent
High School
Street Address
City, Wyoming zip code

Dear Superintendent Name:

In February 2001, the Wyoming Supreme Court ruled several features of the State's new school finance model unconstitutional, including the manner in which vocational and technical education is funded. To redress this issue, the Court ordered the State to document the actual cost schools face in providing vocational teachers and equipment, and include this amount as a line item in a revised school funding formula.

Calculating the actual cost of providing vocational education will require that the State undertake a number of activities, including collecting current data on district and school expenditures. To assist the State in documenting the local perspective, the State has engaged the services of an independent contractor, MPR Associates, Inc., to conduct site visits to a number of districts and schools throughout the state.

The purpose of these local visits is to provide the State with information that can be used to quantify the actual cost educators face in offering vocational education. During the course of a one-day site visit, researchers will meet with district and school administrators, fiscal staff, and vocational instructors who can help identify the cost of staffing and equipping vocational classrooms. These site visits are non-evaluative, and are intended only to provide information that can document the annual cost schools face in providing vocational instruction.

Your district has been selected for participation in this study because your district size and level of vocational participation can provide us with important information on the costs of funding vocational education. While participation in this study is voluntary, we ask for your cooperation in this effort. ***Since information collected during these visits will be used to help establish future funding levels for vocational education, your involvement in this study is crucial.***

Please contact Teri Wigert, Director of Vocational Technical Education, at 307-777-7708 if you are unwilling to participate in this effort.

Prior to their visit, MPR researchers will provide you with a list of the specific types of fiscal data they are seeking to collect, as well as an overview of the types of questions they will ask during their visit. Site visits will consist primarily of individual and/or group interviews, approximately one-half

to one-hour long, scheduled around your staff availability. You may also wish to provide visitors with a tour of your vocational facilities, so that they can understand the scale and needs of your program.

Due to Court-imposed time limitations, site visits must be conducted prior to the end of the 2000-01 school year. To avoid conflicting with your end-of-the-year activities, we are seeking to conduct visits, at your convenience, during the month of May. A researcher from MPR will be contacting you by phone in the next few days to schedule a date for a site visit.

Thank you for your cooperation in this important matter.

Teri L. Wigert
Director of Vocational Technical Education