Utah Rural Schools Association Evaluation -- Executive Summary

Introduction

The original team of evaluators included subcontractors from Spectrum, a consulting group in Logan. As the project proceeded, Western Institute for Research and Evaluation (WIRE) personnel were asked by the URSA leaders to assume sole responsibility for the study. The early site visits were conducted under the direction of Spectrum and involved six different districts. These site visits helped the evaluation team become more familiar with the situations associated with rural high schools. From these visits, and especially from meetings with the URSA board, questions were devised for the Superintendent's and Principal's Questionnaires. The URSE board provided excellent review and direction in creating these questionnaires.

The Superintendent's Questionnaire was distributed to all 26 districts in the state with rural high schools. The Principal's Questionnaire was distributed to all 46 principals of high schools identified as rural high schools. After several follow-up efforts the final sample for analyses included 20 districts and 34 high schools (two district superintendent questionnaires were returned well after the analyses were completed, and since they did not differ in any significant way from the other responses, they were not included).

The Utah State Office of Education provided an analysis of the Senior Survey data. The information from all rural high school seniors, but those from three of the rural district high schools which had not provided the state with data, were compared to the urban/suburban high school seniors' responses. Data were also gleaned from the rural district's reports to their patrons, the state office testing data, and other offices at USOE such as the Certification Office.

The information from these sources is presented in detail in the three major sections of the report: Superintendent's and Principal's Questionnaires, Utah Rural School District Report Card, and Intentions and Accomplishments of Utah High School Seniors -- 1998. These findings will not be presented in full is this executive summary. Rather, the responses to individual issues will be summarized, aggregated, and interpreted to provide the reader with a relatively brief, but hopefully insightful and impactful, version which will provide the foundation for discussion and action.
Findings

The major findings and the conclusions from the extended report are as follows:

Summary

Teacher Issues:

- Nineteen of 22 rural school districts replaced elementary teachers for the 1997-98 school year. Up to 20% of the elementary teachers in the district were replaced, although the average was just 4 teachers per district. The superintendents indicated that replacing elementary teachers was generally not a problem with an average number of applicants of 19 elementary-trained teacher candidates per position. One exception was the difficulty some superintendents indicated they had in filling special education positions.

- Only one district did not hire secondary teachers for the 1997-98 school year. Two districts reported that they hired all or nearly all new secondary teachers. Excluding these two outliers the average of the other 20 districts was 11% new secondary hires for the 1997-98 year. Whether or not this was a problem depended on the teaching majors, minors or endorsements needed and the location of the district. Although there was an average of 9.7 candidates for each position, about a fourth of them did not have the proper set of endorsements for the position, and some positions were very hard to fill. In particular, superintendents indicated that it was difficult to fill positions in the area of computer/technology classes. It was also of "some concern" for the superintendents to fill positions in lab sciences, other sciences, secondary math (especially level 4), home economics, manual arts, and other specialty areas such as music, foreign languages, secondary reading, art, drama, etc.

- The percent of secondary teachers in rural schools presently requiring authorization by the state to teach in content areas outside their major, minor, or endorsements is 10.5%, while the state average across all high schools (including the data from the rural high schools, which would have the effect of slightly increasing the state average) is only 4%. Thus, the percent of rural high school teachers presently
difficulty for rural teachers to receive the additional education they need for the endorsements because of distances and time restraints are significant barriers to overcome in obtaining the endorsements needed.

- Housing is a possible problem for new teachers according to several principals. Costs are high and availability is low in many rural communities. On a three point scale ranging from 1 = not a problem, 2 = somewhat difficult, and 3 = very difficult, the average superintendent's rating for how difficult housing is in their district was a 2.25.

**Curriculum and Achievement Issues:**

- The size of the rural secondary schools included in the analyses ranged from 56 to over a thousand students. The average size was 382 students. However, more than half (19, or 56%) included grades 7 and 8, and 31 (or 91%) included grade 9 as well as the traditional 10th, 11th, and 12th grades. Thus, the relatively small student body at some schools becomes an even more difficult curriculum and teacher assignment problem when the students come from more than the usual three high school grades. In contrast, most urban/suburban high schools are larger, and only include the three traditional high school grades.

- WIRE was asked to assess the availability of specific classes to the students at rural high schools. Classes from the subset specifically assessed which were **offered most often** included: keyboarding (32/34, 4.14, 21), business classes (30/34, 4.11, 19), physics (29/34, 1.52, 15), chemistry (28/34, 2.26, 20), college algebra (27/34, 1.76, 20), and second year Spanish (25/34, 2.44, 17). Among the **least offered** courses are: second year German (4/34, 83, 12), AP math (7/34, 1.14, 31), AP science (7/34, 1.57, 21), AP social studies/history (10/34, 2.25, 23), second year language classes other than Spanish and German (13/34, 1.42, 16), and AP English (14/34, 1.54, 23).

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1 The figures in the ()s indicate the number of schools out of 34 in which at least one class period of a given class is offered, the average number of class periods it is offered, and the average number of students per class. Thus, 32/34 means that this class is offered in 32 of the 34 schools reporting, 4.14 means that it is offered an average of 4.14 periods per day, and 21 means that an average of 21 students are enrolled per class.
teaching outside their areas of endorsements is more than two and one-half times (262%) the state average.

- The teachers in these rural secondary schools teach an average of slightly more than 4 different classes (classes with different titles) each day. There is a tendency for the teachers in the smaller schools to teach more different classes each day. This places a heavy load on all these teachers, but especially those in the smallest schools. The load on teachers is helped somewhat by the fact that most teachers in these rural secondary schools have a preparation period. The problem of teacher load is made more severe by the expectation that these rural secondary school teachers must also carry a heavier than usual load in extracurricular activities such as coaching, sponsoring clubs, traveling with students to school events, etc.

- The average teacher’s salary for rural schools as reported by the principals is lower than either the state-wide average (by about $1800) and the nation-wide average (by about $8500). Such differences do not take into account differences in the average length of service, degrees held, etc. which affect salaries. The rural districts differ from one another markedly in terms of the average years of service of their teachers (the overall average was 11 years, although five principals indicated that the average years of service of their teachers was under five and three indicated that in their school the average years of service was over 20), average salary, and other benefits.

- At the lower end of the salary picture for the lowest six rural districts and lowest six urban/suburban districts for secondary teachers only the difference between rural and urban pay is even greater -- more than $4400.

- Principals indicated that one significant problem for many rural schools is finding and obtaining qualified substitutes for teachers who are ill or who are gone from school on assignment. Several mentioned that it was difficult to find anyone with college education, let alone someone who could teach specific subject matter.

- It was mentioned above that 10.5% of the rural secondary teachers are teaching at least one class outside their major, minor or endorsements. Provisional authorization allows this to continue for three years. During that time it is expected that the teacher will secure the needed endorsement(s) or be reassigned. The
The other classes WIRE researchers assessed were offered by 24 schools out of 34 (trigonometry and advanced English), 21 schools (calculus), or 19 schools (advanced sciences). In the case of calculus the average number of classes offered per school was 1, and the average number of students enrolled was 13.

- The primary reasons given for not offering an advanced course were not enough students wanted to take it and/or no teacher was available to teach it.

- A wide variety of concurrent enrollment courses offered through several community colleges, ATCs and universities are available to rural high school students. At most rural high schools the concurrent enrollment class sizes were small. At some rural high schools a desired course could not be offered because it was not available via television and no local teacher with a masters degree or higher was available to teach it.

- The results of students taking the ACT indicate that rural seniors score below state and national averages on each of the four section tests (English, Math, Reading and Science) as well as the ACT Composite score. While rural seniors report that 77.7% have taken four years of English, their average ACT score is 19.8 compared to the 21.1 for the state average. Excluding rural seniors' scores from the state average of all scores (including the rural students) would result in the scores of urban seniors being even higher than the state average, and thus even more disparate from the scores of the rural seniors. It must be pointed out that a difference of a point or more indicate very important differences. For example, each of the four subtests and the composite score of rural high school students on the ACT compared to the state average the differences are as follows: English (rural = 19.8, or about the 51st %ile, state = 21.1, or about the 60th %ile), math (rural = 19.7 or about the 57th %ile, state = 20.8 or about the 63rd %ile), reading (rural = 20.5 or about the 52nd %ile, state = 22 or about the 61st %ile), science reasoning (rural = 20.5 or about the 54th %ile, state = 21.6 or about the 63rd %ile), and composite score (rural = 20.3 or about the 53rd %ile, state = 21.5 or about the 62nd %ile). In four of the five comparisons the rural students score 9 %ile points below the state average.

- In terms of the percentage of rural students versus urban/suburban students taking the Advanced Placement courses, the rural students take almost as many as the
urban/suburban students. In English, rural students actually take more AP courses (36.4%) than the urban/suburban students (28.3). However, the data indicates that rural seniors do significantly less well than the urban/suburban students on the AP tests. In 1996 a total percentage of the 69.1% of the AP tests taken by students in Utah were passed. However, the pass rate of the rural seniors was 56%, and if the Park City High School seniors are removed from the rural high school senior sample the pass rate becomes 47%. Thus, since the state AP passing percentage included the rural seniors, if they were removed from the state data the percent of urban students passing the test would be even higher than the state average reported. Further, quite a number of the small rural high schools did not have any students taking the AP exams.

Rural students liked their school's academic course offerings and generally feel that the quality of high school courses was "good" to "excellent". However, the rural seniors are more likely than urban/suburban seniors to rate their high school courses as having less quality. They were also more likely than the urban/suburban seniors to rate their high school education as "general" (rural = 59.4%, urban/suburban = 52.1%) and less likely to rate their education as "college oriented" (rural 31.9%, urban/suburban 39.9%).

Resources:

- Principals generally indicated that the funds available to their school were only enough to offer a basic educational opportunity to their students. Some rural high schools lacked auditoriums, adequate science labs and equipment, and adequate manual arts teaching space and equipment.

- The small school formula is critical to the funding of these rural schools. However, even with the additional help they receive, some principals indicate that because they are serving several small communities spread out from each other they have a relatively larger number of schools per capita than in large, metropolitan areas. This results in the O&M costs being greater per student. Their small size keeps them from realizing many of the benefits of economy of scale. Further, older buildings and grounds which need repair are a major problem in many rural districts.
The distance that a rural high school is from the district office, the service center, the community college, university or ATC, and other such resources negatively affects its ability to provide some programs or to receive needed service or administrative support. On average these rural high schools are 85 miles from a service center, 63 miles from a community college, 86 miles from the nearest ATC, and 100 miles from a 4 year university or college. The high schools furthest away from these resources are at least 170 miles and up to 300 miles from the nearest resources in each category.

All principals indicated that their school received televised courses as an addition to their curriculum. Many had very fine facilities and equipment to support these courses. EdNet has been a valuable aid to the schools. However, many of the televised courses are not well attended, so much of the potential of this resource has not yet been realized.

With some schools distant from the service centers which serve them, and with the service centers serving several districts, some needed services are not adequately available to serve students from either the service center or the district office. Special education services, mandated by law, are available from one source or another in every district, although one district superintendent indicated that special education services are available in the district only 30% of the time, another only 50% of the time. Other services which were available in most districts include speech and hearing specialists (19 of 20 districts), school nurses (18/20), and psychological services (17/20). Even in those districts where such services were available, they tended not to be available all of the time in the district, and certainly not all the time in the individual schools in the district. The least available services include social workers and sociologists ((9/20), report and grant writing services (9/20), physical therapists (10/20), and occupational therapists 911/20).

The superintendents also indicated other services which they either received from the service centers or which they wish they received. Other services received, and the comments of the superintendents about them, include: "special reading help -- excellent"; "library media materials -- excellent"; "audio visual repair and equipment -- excellent"; "driver ed. programs -- excellent"; technology specialist -- average -- distance is a problem"; "technology support and information -- excellent"; "curriculum specialists and leadership -- excellent"; "some grant writing support";
"planning and inservice support"; and "help with the asbestos program -- excellent". As can be seen from the above lists, the services which are provided to rural school districts through the regional service centers are very diverse. Support areas of need which are difficult to meet at the district level, have an impact on the curriculum and the training of teachers, and provide materials which cannot be provided on a cost-effective basis at the district level.

- The rural schools generally have a favorable computer/student ratio, but many of the computers are old. Software updating is a problem, and repairs and maintenance are major concerns, especially in outlying districts.

Challenges

- The foremost challenge the principals listed for the rural high schools is the restriction of the curriculum because of limited student enrollment (often spread out over 4 to 6 grade levels rather than the traditional 3 in urban/suburban high schools) and the small number of teachers which results in many of them having to teach 4 or more different classes requiring different preparations, and sometimes outside their areas of formal, certificated preparation.

- The small number of students who can and want to take advanced classes is one factor affecting the richness of the curriculum. Another factor is the challenge of finding and keeping teachers with the required academic training to offer advanced classes (made more difficult by the many preparations, relatively lower salaries, and the high cost and low availability of housing). A third factor is the apparent lower quality of the AP classes, since fewer students take the AP tests associated with the finally, the SAT scores of students and their own perceptions of the quality of their preparation point out that these rural schools, despite all the educators can do within the constraints binding them, are still not able to provide an education similar to the larger schools.

- Concurrent enrollment courses are an important factor in enabling some students to prepare better for post-secondary educational opportunities. However, the relative scarcity of teachers with masters degrees in many rural communities prevents some schools from offering all the concurrent courses which the students need. EdNet also helps expand the educational opportunities of the rural students. However,
despite having adequate facilities and equipment in most settings, the courses offered are usually not fully capitalized on by students.

At present, many rural high school students are not taking as many quarters or semesters of advanced classes as their urban/suburban counterparts. The reasons appear to be complex but may include the fact that many advanced courses are offered only once or twice per day and may conflict with other educational requirements or other desired courses. A second factor may be that only one teacher is available to offer each of the courses in a sequence within a particular content area, and some students may feel that they have gleaned all the benefit from the teacher in the earlier classes.

Another issue is the limited student experiences caused by the restrictions in cultural and vocational diversity in the communities because of their small size and homogeneous culture.

Lack of money is a major challenge rural high schools face. Even though several principals indicated that they had enough funding to provide a basic educational program for students, going beyond the basic program and providing students with a full opportunity to prepare themselves for college or a vocation is not possible in many rural high schools. Operations and Maintenance budgets are high on a per student basis because more schools are necessary to serve the spread out population base (many small schools located in each of several small and distant communities). Further, to a large extent economy of scale benefits do not occur.

Local communities and districts should review their present level of tax support for their schools and consider the benefits of making the commitment to utilize all the local levy opportunities provided to increase local support for their schools.

The funding through the necessarily existent small schools formula may be getting lost in the larger district budgets. While the superintendent and local school board members are the persons best able to determine how best to use funding in their district, the distribution of special funding to address the problems of very small schools may need to be tracked more closely to determine if it is being used specifically to address the particular problems of these schools.
• The rural school districts are not participating as fully as they could in the various funding initiatives available to them through proposal writing. The superintendents indicate that this is due to the difficulty of writing proposals, tracking and reporting on the projects back to the funding source. Both the regional service centers and USOE might consider what they can do to help rural districts with these grant related requirements. If grant writing, tracking and report writing services are made an ongoing part of the services available from one or both of these sources it is likely that more rural districts will be able to secure the additional funding available through grants.

• Busing is a way of life for many rural students. Participation in before school and after school activities requires that other means of transportation must be utilized if the busing students are to be involved. The additional costs to families of providing private transportation may be prohibitive. The time involved in getting to and from school is also a negative factor. When students participate in intramural activities, travel takes them away from regular school activities.

• Students have the opportunity to participate in many school activities because there are fewer students to compete with. One negative associated with this opportunity is that the more students participate, the more they may miss classes. While it can be argued that the value of participation in many different activities may counterbalance the missed classes, the relative value of participation in activities versus class attendance is not clearly established and rural students may be less well-prepared to compete in strictly academic pursuits.

Benefits of Being a Small, Rural High School

• Principals mentioned as a benefit the advantage to them, their teachers and the students of knowing the students personally, their families and the sense of community which existed in the school and the surrounding community.

• The second benefit mentioned is the relatively small class sizes in these rural high schools. This allows teachers more opportunity to tailor the curriculum better and provide more individualized help to each student.
A third benefit is the opportunity for students to be involved in many school activities. This is seen as aiding the development of leadership skills, physical skills, and providing a well-rounded education.

- Principals also indicated that their school did not have many of the problems which they labeled "big city problems" -- gangs, drugs, etc. In addition, the rural upbringing was seen by the principals as encouraging in students the development of high moral character with good work ethic.

The Issue of Equity

The quality of education a student experiences is a function of (1) the student's ability, educational choices, effort, motivation, and parental support; (2) the classes he chooses to take as affected by the quality of teaching, texts available, other learning materials (such as equipment, media, etc.), and experiences (such as labs, field trips, etc.); and (3) the quality of the interactions the student has with other students, teachers, and the rest of the school staff. There may be as much variation in the quality of students' educational experiences within a school as across schools. One student in a school may graduate with 40+ hours of AP and concurrent enrollment credit (as was true of one rural student), while another student has none. One student may have been encouraged and praised and feel she can successfully compete with the best in any pursuit, while another in the same school may have been discouraged and demeaned. Similarly, one student may have taken advantage of many of the academic classes offered at the school, while another may have avoided most challenging classes. Clearly, there are many variables which affect the quality of the educational experience of a given student, including many factors not under the direct control of the school or teachers, and others which are not under the direct control of the student.

When tempted to make comparisons between "rural" and "urban/suburban" high schools we are faced with two important barriers. One is that we were not commissioned to collect extensive data from the urban/suburban high schools so for the information shared by rural superintendents and principals we lack comparable data from urban/suburban superintendents and principals. Second, it is not possible to go from the general information available from state-wide data to assess the particular educational opportunities available at any school to any particular student since so many variables affect a student's educational experiences, much less assess what might be experienced across many students within and across many schools.
We can utilize the existing data and summarize the "average" experience of the rural versus the urban/suburban high school seniors regarding their completion of academic courses. This will not take into account differences in the quality of teaching or the interpersonal relationships in the schools. We can also summarize information about resources and advanced academic classes available at the rural high schools. And finally, we can compare the average rural high school students educational experience against the entrance requirements of the state's four year and graduate institutions, not including those with open enrollment or those which offer extensive "make-up" opportunities for students who were not adequately prepared for university by the high school.

The average rural high school seniors are very much like the average urban/suburban seniors with regard to the percentage of them who state that they intend to go on for some form of post-secondary education. However, the rural seniors are more likely to choose a two year college, or one of the smaller four year institutions, rather than the larger institutions offering graduate degrees. The rural seniors also feel slightly less well-prepared for college. And, indeed they are since fewer of them take four years of English, three or four years of math, two or more years of a foreign language, and three or more years of science. These classes, as listed immediately above, are the recommended number of courses for entrance to the University of Utah, Utah State, or Brigham Young University. Other entrance requirements include a high ACT score (remember the rural students score below both the state and national averages on the ACT) and completing one or more lab science courses (sometimes available for only one class period a year, or every other year in some smaller rural high schools).

When these factors are considered along with the difficulty that rural high schools report in recruiting and retaining level four math teachers, lab science teachers, foreign language teachers, etc. it is clear that it is more difficult for rural students to arrange their schedule to take all the advanced academic classes they might need for adequate preparation for college or other post-secondary pursuits. Further, since many teachers in rural schools have four or more preparations each day, and more rural teachers than urban teachers are teaching outside their areas of endorsement, the quality of teaching may be lower in some cases. This is not to say that there aren't absolutely fabulous teachers in rural areas. There are, but the average situation may be less than fabulous.
Bottom line? Can rural high school students have an excellent educational experience. Yes, but it is more difficult for them to schedule the classes and experience appropriately prepared teachers. Do they have a comparable opportunity to the urban students? Probably not, on average. What does this all mean? What conclusions can be reached about the state of rural high schools, their unique problems and what issues need to be addressed to foster more equality in the educational opportunities and performance of rural high school students? To address such questions several of the summary statements of the findings which are presented above can be combined to create a portrayal of a problem which needs to be addressed, and perhaps, suggest possible solutions to addressing it. Such aggregations occur next.

Conclusions

I. Given that rural high students take fewer advanced classes than their urban/suburban counterparts, and

- given that rural students score lower than both the state averages and national averages on the various sections of the ACT and the Composite score, and

- given that rural high schools students take fewer AP tests and pass a lower percent of them than their urban/suburban counterparts.

it is clear that the average rural high school student is not as academically prepared at the end of high school as the average urban/suburban high school student. In addition, advanced classes can be offered less often (sometimes only one period a day, or even every other year), making it more difficult for rural high school students to take the classes they desire. As a consequence, rural students tend to see themselves as less well prepared for academic and work pursuits, and their education as more general than academic. Although about the same percentage of them as urban/suburban students indicated that they intend to go on to post-secondary education, more of the rural students intend to attend community colleges, and fewer intend to attend four year universities than their urban/suburban counterparts. Therefore, action is needed now to provide more opportunity and/or more encouragement for rural students to take more higher level classes from fully qualified teachers.
Rural students must be enticed to take more of the classes offered on EdNet. Too few students utilize this resource. Consideration of which courses are needed most in the most isolated sites is needed to augment the educational opportunities provided. Further, more attention is needed in how to strengthen the actual experience of taking a class via EdNet — what is needed to ensure that students learn as much as possible from the experience.

Rural students make good use of concurrent enrollment courses (which may be one reason they take fewer AP tests) where they are offered, but concurrent enrollment is not offered in many rural high schools because they lack teachers with the qualifications to teach the courses. Creative means to involve the community and regional resources to provide qualified teachers could be explored. It should be remembered that subject matter expertise must be combined with pedagogical expertise before a class is well taught. Either without the other is likely to be a weaker experience.

The availability and quality of AP classes may be a problem. Concurrent enrollment classes encourage students to enroll in the local colleges which offer such credit. AP classes open up a wider world of opportunities for students. The educational community should consider what can be done to increase both the richness and quality of the AP offerings in rural high schools.

II. Given the need for more teachers in rural areas who can teach advanced classes, AP classes, concurrent enrollment classes, etc.; and

- given that it is difficult to attract highly qualified secondary teachers to rural areas because of lower salaries, more different classes to teach per day and more class preparations; and

- given that already many more rural teachers are teaching outside their areas of endorsement than is true of urban/suburban teachers; and

- given the problems new teachers have with locating and affording adequate housing, and

- given the drawbacks of isolation; and
• given the high likelihood that new teachers may have to teach outside their area of preparation and/or participate in extra-curricular activities for which they are not prepared.

it is hard for rural districts to hire and retain well-prepared teachers with all the endorsements needed to staff the classes in rural high schools. Therefore, the educational community must explore ways now of finding, developing, and retaining highly qualified secondary teachers to teach in rural high schools with credentials in critical content areas.

Perhaps special incentives could be offered by the state, or the district, to entice teachers with highly specialized credentials into teaching positions in rural areas. The universities and colleges could explore creative means for providing rural teachers with classes and other experiences for completing endorsements in areas of critical need without involving the excessive travel, time or costs presently associated with inservice teachers adding to their credentials.

III. • Given that the present formula for providing necessarily existent small schools with additional funding was created to represent what was being done years ago and not what was needed then, nor is it based on what is needed now; and

• given that most rural superintendents express the need for more funding in order to offer anything beyond the most basic secondary program; and

• given that most rural districts have several small schools located in communities distant from each other thereby increasing the O&M budget; and

• given many rural school buildings are old and may not meet current educational needs;

it is time to reconsider the formulas used to fund schools, especially in rural areas.

The formulas could include revised weighting of factors such as distance from other schools offering the same grade levels, the size of the student body on a grade by grade basis, the number and percent of students who have to be bused to school, the distance
from other resources such as an ATC, community college, the district office, etc., and the distance from larger cities offering the needed cultural and service resources to the school.

The reconsideration of funding formulas should not interfere with taking action on the first two issues raised above. These two issues need speedy attention or yet additional generations of rural students will not be served equitably by the educational community of the state. While local districts should be expected to do all they can to provide the full level of tax support allowed by the state in making a local effort to increase educational opportunities, the inequities are beyond their resources to resolve, and a state-wide effort is needed.