

Report to the Nevada Committee to Evaluate
Higher Education Programs

D R A F T

National Center for Higher Education
Management Systems (NCHEMS)

State Higher Education Executive Officers (SHEEO)

Western Interstate Commission for
Higher Education (WICHE)

June 17, 2004

Report to the Nevada Committee to Evaluate Higher Education Programs

I. INTRODUCTION

Assembly Bill No. 203 as passed by the Nevada legislature created the Committee to Evaluate Higher Education Programs (the Committee) and charged that Committee to:

1. Examine and evaluate the need in this state for existing and potential higher education programs to ensure economic progress and development within the State of Nevada to ensure that the educational needs of its residents are being met;
2. Identify areas of high priority where needs are not currently being met, including, without limitation, the areas of educational programs for students who desire to become nurses or teachers;
3. Determine whether it is feasible to reallocate existing resources within institutions to meet the critical needs of the State of Nevada that are not currently being met;
4. Determine whether appropriations from the State of Nevada and student fee revenues are being efficiently distributed internally at each campus of the University and Community College System of Nevada; and
5. Recommend to the Board of Regents and the Legislature such action as may be needed for the efficient and effective operation of higher education in Nevada if the State is to progress economically and socially.

The Committee solicited proposals from qualified organizations to assist them in their work. This proposal is being submitted in response to that solicitation.

As a result of the competitive process, a contract was awarded to a consortium comprised of three organizations:

- The National Center for Higher Education Management Systems (NCHEMS)
- The Western Interstate Commission for Higher Education (WICHE)
- The State Higher Education Executive Officers (SHEEO)

The work associated with this project is now complete. This document represents the final product of the project as proposed by the consortium (see Appendix A for the substantive elements of the proposal).

In addition to this brief introduction, the report is organized in five major sections:

- Section II A description of project activities.
- Section III The major findings and observations resulting from activities conducted by the project team.
- Section IV The conclusions reached by the project team organized in such a way as to respond to the five key questions and provide context for the recommendations.
- Section V Recommendations to the legislature and to the University and Community College System of Nevada (UCCSN).
- Section VI Supporting information, a compilation of data displays referenced in the report.

II. PROJECT ACTIVITIES

In fulfilling the purposes of the project, staff members of the three organizations conducted a variety of activities specifically designed to respond to the important issues identified in AB203. The major kinds of activities are described below.

A. DATA ANALYSES

As a key element of the project, the team conducted an extensive series of data analyses. These analyses focused on both the State of Nevada (its demographics and economy) and on the state's public institutions of higher education. With regard to the State of Nevada, the analyses encompassed:

- Population trends and projects—numbers, race/ethnicity, age, and county of residence.
- Economic status of residents—per capita incomes, population living in poverty.
- Education attainment levels of the population.
- Occupations and industries in which the state's residents are employed as well as projections of future workforce needs.
- In- and out-migration of individuals engaged in various occupations.
- Economic development strengths and weaknesses of the state.
- Tax structure and the extent to which the state does or does not have a structural deficit.

- College attendance patterns—the identification of the institutions that *de facto* provide the majority of the educational services to residents of each of the counties in Nevada.

The analyses that focused on the institutions included attention to:

- County of origin of student served by each institution
- Levels of funding of each institution as compared to a set of peer institutions
- Use of institutional resources
 - Expenditures per student for various functions (instruction, administration, etc.) as compared to peers
 - Staffing patterns
 - Incidence of small programs—evidence of programmatic inefficiency
- Institutional performance
 - Degree production in various fields
 - Graduation rates
 - Research funding

B. INTERVIEWS

In addition to data analyses, project team members gathered information through interviews and discussions with individuals having very different perspectives on the current and future needs of the State of Nevada and on its system of higher education. These interviews were held with:

- Legislators and legislative staff
- Heads of state and regional economic development agencies
- Employers and heads of employer associations
- Local officials and other community leaders
- College and university presidents and institutional staff members
- UCCSN leadership

These personal contacts were a means to “go beyond the numbers” and obtained more nuanced information about the likely needs of the state, the capacity of the state’s

system of higher education to respond to the needs of the state and its citizens, and the policy environment in which the accommodation between need and capacity must be reached.

C. REVIEW OF MATERIALS

Some of the information germane to the project could be found in various documents (or in the electronic versions of these documents). Project team members gathered data from such sources as:

- The Nevada constitution and the section of state code (Section 396) dealing with higher education
- *Building Nevada's Future: A Master Plan for Higher Education in Nevada*, adopted in April 2002, the UCCSN report on Performance Indicators (April 2004), and summaries of institutional strategic/master plans
- Results of others studies, especially:
 - Report of the Committee to Study the Funding of Higher Education (Legislative Council Bureau Bulletin No. 01-4), 1999-2000
 - The RAND report entitled, "The Road Less Traveled: Redesigning the Higher Education System of Nevada"
 - Report of the Advisory Committee to Examine Locating a 4-Year State College in Henderson (LCB Bulletin No. 01-9)
- Minutes of meetings of the UCCSN Board of Regents meetings for 2003-04
- The management study on facilities utilization and capital budgeting
- Policies and Procedures of the UCCSN
- Materials furnished by economic development agencies, individual institutions, and other interested parties

D. THE TEMPLATE USED

In conducting the interviews and reviewing the materials, we looked for the presence of certain characteristics that we have learned lead to effective state higher education policy. These characteristics, or criteria, are:

1. A state-level capacity to focus on a long-term strategy linking higher education to the future economy and quality of life of the state (and each of its regions).
2. A focus at the state level on **what** the higher education system needs to do to meet these strategic priorities.
3. Delegation to the institutional level the responsibility for determining **how** each institution is to be led and managed—i.e., that decisions be made closest to the point of service delivery about such things as:
 - Personnel/human resource—e.g., ensuring allocation of faculty time in ways consistent with both institutional missions and statewide priorities.
 - Maintenance and renewal of buildings and equipment.
 - Initiation of programs within the confines of institutional mission.
4. A financing system that reflects:
 - A clear understanding of the shared responsibility of the state, students and parents, and other (non-state) entities for the financial support of the postsecondary education system of the state.
 - A realistic assessment of the capacity of each partner to provide this support.
 - Incentives for efficient use of resources at all institutions.
 - Incentives for collaboration among institutions in providing cost-effective responses to educational needs in all parts of the state.
 - A clear linkage between the key state fiscal policies affecting higher education—state appropriations to institutions, tuition policy, and student financial aid policy.
 - A mechanism for sustaining financing policy over time.
5. Policies of finance and governance that provide incentives for the system to **function as a system**, not simply a collection of separate institutions under a single governing structure. Incentives must be in place to foster institutional collaboration not only **within** the system but with key partners **outside** the system—e.g., K-12; business and industry; local, state and federal governments; and economic

development. In other words, a good system must be **more than the sum of the parts**.

6. A state-level capacity for raising and addressing strategic issues—such as substantive change in institutional missions and the creation of new institutional capacity—that require multi-year commitments.
7. A state-level accountability system that monitors:
 - System-level performance related to achieving the agreed-upon public agenda.
 - Institutional performance regarding achievement of mission, efficiency of operation, and contribution to achievement of state priorities.

In short, effective systems are those that address strategic issues at the state/system level and delegate the tactical or operational issues to the institutional level.

E. REGULAR MEETINGS WITH THE COMMITTEE

Members of the project team attended all the regularly scheduled meetings of the Committee subsequent to the award of the contract—on February 3, March 24, April 29, June 17, and July 7. During each of these meetings, team members presented material, responded to questions from members of the Committee, and gleaned additional insights and perspectives that have shaped the conclusions and recommendations included in this report.

As a consequence of discussions held during these meetings, project staff were asked to prepare written responses on a series of specific topics related to the broader questions at the core of the project. These topics were the:

- Analyses concerning needs for additional dentists in Nevada
- Impact of the Millennium Scholars program on college participation
- Utilization of space on the campuses and the need for additional space (especially research space)
- Treatment of indirect cost reimbursement funds in other states

The written responses to each of these questions are attached as Appendix B to this report.

III. FINDINGS AND CONCLUSIONS

As noted in the Introduction, AB203 specified a five-part charge to the Committee. Four of the five parts require the Committee to examine evidence and reach conclusions concerning the needs of the state and the extent to which existing resources are being used efficiently

and effectively. The fifth part requires the Committee to recommend actions to the Board of Regents and the Legislature. This section compiles the project team's findings and conclusions explicitly organized around the first four topics of the charge. At the end of this section, other findings are presented that impact the recommendations made in the following section of the report.

- A. Examine and evaluate the need in this state for existing and potential higher education programs to ensure economic progress and development within the State of Nevada so that the needs of its residents are being met.

Findings

This particular part of the charge required the Committee to look seriously at both the demography and economy of the state. With regard to the population of the state and the characteristics of that population, several points that have direct bearing on the questions being addressed by the Committee should be noted.

1. The state experienced explosive growth over the decade of the 1990s and, while the rate of growth will not likely be sustained, continued substantial growth is projected. The overall state population grew by 54% during the past decade. More important to this study, the population of potential college students grew nearly as rapidly—the cohort age 18-24 grew by 52%, and 25-44 by 52%.
2. Both the overall population and the growth in that population are heavily concentrated in (especially) Clarke and Washoe counties (see Figures 1 and 2).
3. The composition of the population is changing dramatically. In 2000 slightly more than one-quarter of the state's population was composed of people of color. Over the next 20 years, however, all of the growth in the younger age groups (under 45) will be minorities and the growing minority population will be composed almost completely of Hispanics. Only in the non-working age population (age 65 and older) will growth in the white population exceed that of Hispanics (see Figure 3).
4. These population growth estimates translate into explosive growth in the projected number of high school graduates (WICHE projects the growth to be nearly 145% over the period 2000-17). The very large share of that growth will be Hispanic. The number of white high school graduates will grow very little over this period (see Figure 4).
5. The educational attainment of the population 18-64 is very low in comparison to other states in the country. Nevada is last in the percentage of 18-24 with a high school diploma (66.7%), 46th in the proportion with a baccalaureate degree (18.9%), and 47th in the proportion with a graduate or professional degree (6.2%) (see Figure 5).
6. The challenges facing the public school systems, especially those in Clark County, are daunting. They are faced with explosive growth of students, primarily Hispanic, who are difficult to retain to the point of high school graduation. Well over half of

Hispanics 18-24 in Nevada have not completed a high school education (see Figure 6).

7. The influx of working-age adults is predominantly made up of individuals with little education. By far, the largest number of young in-migrants (age 22-29) have less than a high school education. While most come from elsewhere in the United States, a significant proportion come from other countries, largely Latin America and Southeast Asia. Thus they come not only with low education attainment levels but also with languages other than English as their principle language (see Figures 7-9).
8. The overall education system of the state is moving a relatively small proportion of students from high school entrance, through high school graduation, to higher education and through to the point of college graduation. The education pipeline is leaking badly at every point of transition (see Figure 10).
 - a. More than three out of 10 ninth graders are not graduating in four years. Unless heroic steps are taken, this problem is likely to become greater as Hispanics constitute a larger and larger share of the high school population. The share of high school graduates who are Hispanic is less than half their share of the 18-year-old cohort (see Figures 11 and 12).
 - b. Nevada has a very low college participation rate—only 40% of high school graduates went directly on to college in 2000. Only in Utah is this proportion lower. In Utah, and to some extent in Nevada, this proportion is negatively affected by Mormon youth going on their church missions. Even recognizing this factor, however, Nevada has a long way to go to reach the national average of 56.7% (see Figure 13).
 - c. Not only do relatively few of Nevada’s high school students attend college, but of those who do enroll in the state’s colleges and universities, only a small proportion complete a degree or certificate program.
 - Only 41% of full-time students at four-year universities achieve a baccalaureate degree within six years. As low as this number is, however, it does not fully indicate the size of the problem facing Nevada. This statistic is for **full-time** students only. If the number of baccalaureate degrees produced is compared to the total number of students enrolled as undergraduates, Nevada is tied with Arkansas for the lowest degree productivity among the 50 states. Nevada fares somewhat better if the metric is number of Bachelor’s degrees awarded per 100 high school graduates six years earlier. Still, Nevada’s numbers would have to improve 25% just to reach the national average (see Figures 14-16).
 - The proportion of full-time students graduating with an Associate degree within three years is slightly better than the national average. However,

when degrees and certificates awarded are compared to total enrollments, Nevada places 49th of the 50 states. Again, when the metric is Associate degrees awarded compared with high school graduates three years earlier, Nevada compares somewhat more favorably; but again degree production would have to increase substantially (19%) to reach the national average (see Figures 17-19).

- Finally, it must be noted that the mechanism in place to deal with certification of high school dropouts—the GED—is serving a very small portion of the eligible population. In 2000, Nevada had nearly 60,000 people age 18-24 with less than a high school education. In that same year, 2,000 GEDs were awarded to residents in this age cohort (see Figure 20).

With regard to the economy of the state, another set of observations is central to an understanding of the conditions facing the state and the recommendations made for future action. Key observations in this regard are as follows:

1. The Nevada economy is very different from that of the United States as a whole; it is much more oriented to the services sector (especially the gaming and resort industry) and much less to manufacturing. The population boom has also translated into a large construction industry (see Figure 21).
2. The structure of the economy is such that it results in much more of the population being employed in low-skilled service jobs and much less in those kinds of jobs normally associated with high wages—manufacturing, health care, and high tech jobs. Nevada has a smaller percentage of its workforce employed in management and professional occupations than any other state in the nation. Similarly, it has a smaller percentage employed in the professional, education, health and social service industries (see Figures 22-24).
3. Within the economy as it is structured, jobs in Nevada pay well. In most job categories, Nevada earnings are higher than the national average; but because of the preponderance of jobs in the low-skilled services sector, earnings for all jobs are below the national average (see Figure 25).
4. The structure of the economy is also such that Nevada employs a smaller proportion of individuals with college degrees than the national average in almost all job categories. The exceptions are health care and natural resources, both relatively small employment sectors (see Figure 26).
5. There is a widespread myth in Nevada that students drop out of high school and/or do not go on to college because jobs that do not require an education are so lucrative in the state. The stereotype is the individual who makes \$80,000 a year parking cars. While there may well be such instances, statistics refute the myth (see Figures 27-31).

- More education pays more at every level, and this is true for all age levels.
 - The difference in median earnings between college graduates and those with a high school education are particularly high at the associate level, but very substantial at the baccalaureate level as well.
6. The net effect of rapid growth in an economy that employs many low-skilled services workers and relatively few highly paid professionals is a population that has seen its per capita income slide continuously for 40 years to the point where it is now (just barely) below the national average (see Figure 32).
 7. The business, political, and education leaders with whom we met are keenly aware of the need to expand and diversify the economy—to create an economy that employs more high-skilled, high-wage jobs. Among the economic development professionals, especially those in the major population centers, there appears to be a consensus that emphasis has to be placed on the bio- and information technologies. While this consensus is emerging, the state does not appear to have a clear, integrated strategy for economic and workforce development. Nevada is benefiting from an outflow of jobs from California because of geographic proximity and favorable tax policies. The reasons employers come to Nevada are extremely varied and movement is driven by specific conditions that make Nevada attractive on a case-by-case basis. Nevada has not achieved a critical mass in any new economic sector that can be pointed to as the engine that can drive the push to a future economy with many more high-skilled, high-wage jobs.

Conclusions

In direct response to the first item in the AB203 charge to the Committee, the assembled facts lead us to conclude that higher education will help ensure the future well-being of the state and its citizens only if:

- UCCSN can expand to accommodate the very substantial growth with which it will be faced.
- Higher education institutions, especially those in Clark County, can become more effective partners with the public schools in improving both student learning and graduation rates.
- The UCCSN works hand-in-hand with state and regional economic development agencies to develop and implement a long-term strategy for expanding and diversifying the economy of the state.
- Higher education participation rates are increased and collegiate graduation rates are improved. There is a need to get more students through the education pipeline and into an economy that can take advantage of their talents.

- The issue of adult literacy is faced squarely. Individuals without at least some level of postsecondary education will not be well prepared for an economy that is less dependent on low-skilled, low-wage service jobs. While the subject matter content of workplace literacy programs is precollegiate, the audience is beyond the age of high school attendance. This means that the higher education enterprise must play a central role in addressing this problem.

- B.** Identify areas of high priority where needs are not being met, including without limitation the areas of educational programs for students who desire to become nurses or teachers.

In the previous section, emphasis was placed on identifying the broad conditions that will have to be achieved to ensure a bright future for the State of Nevada and its citizens. This part of the charge to the Committee forces attention on the need for specific programs that might be offered by UCCSN institutions. In seeking to address this part of the charge, the project team members:

- Reviewed the Nevada Department of Labor projections of employment in occupations in which there are expected to be high demand and a large number of annual openings.
- Analyzed Bureau of the Census data to identify occupations requiring a college education in which Nevada has been relying on growth and in-migration of educated individuals to meet the demands of the workplace.
- Held discussions with employers, educators, and economic development professionals to obtain their perspectives on needs for a trained workforce.

Findings

Based on this set of activities, the project team makes the following observations.

1. Occupations for which there are projected to be large numbers of annual openings—and that require some level of postsecondary education—are found primarily in the education, health care, and construction trades industries. In addition, there are projected substantial needs for general managers and for individuals trained in various aspects of computer and information technologies. Table 1 indicates those occupations for which there are expected to be large numbers of annual openings through 2010.

TABLE 1
Occupations with a High Projected Number of Annual Openings

Occupation	Annual Openings	Degrees Produced
General and Operations Managers	929	555
Carpenters	871	23
Registered Nurses	676	269
Elementary School Teachers, Except Special Education	608	392
Electricians	400	116
Automotive Service Technicians and Mechanics	379	14
Computer Support Specialists	364	153
Accountants and Auditors	279	140
Secondary School Teachers, except Special and Vocational Ed.	230	183
Financial Managers	228	
Business Operations Specialists, All Other	220	
Construction Managers	201	18
Middle School Teachers, Except Special and Vocational Ed.	180	
Heating, Air Conditioning, and Refrig. Mechanics and Installers	120	3
Licensed Practical and Licensed Vocational Nurses	117	40
Pharmacists	116	
Pharmacy Technicians	99	77
Computer and Information Systems Managers	90	134
Medical and Health Services Managers	83	18
Teachers, Primary, Secondary, and Adult, All Other (OES Only)	78	40
Network Systems and Data Communications Analysts	69	
Computer Systems Analysts	67	4
Civil Engineers	61	81
Healthcare Practitioners and Technical Workers, All Other	60	
Surgical Technologists	57	49
Civil Engineering Technicians	56	
Dental Hygienists	53	41
Computer Software Engineers, Systems Software	51	
Architectural and Civil Drafters	50	42
Paralegals and Legal Assistants	48	
Respiratory Therapists	46	11
Medical and Clinical Laboratory Technologists	45	35
Physical Therapists	42	17
Computer Software Engineers, Applications	41	
Special Education Teachers, Secondary School	39	103
Physician Assistants	32	
Special Education Teachers, Middle School	30	
Financial Analysts	29	

2. Information about in-migration of college-educated individuals reinforces the point. Those occupations for which substantial numbers of recent college graduates come to Nevada for employment include:

- School teachers
- Health care professionals
- Business operations specialists

- Engineers
- Financial specialists
- Computer specialists

Except for engineers and computer specialists, occupations being filled by older workers coming to Nevada from other states are the same. Overwhelmingly, the critical need is for school teachers, nurses, and other health care workers (see Figures 33-35).

If the requirements for a college degree are relaxed—areas where college degrees would be helpful but not required—the various construction trades come to the fore in a very large way (see Figures 36 and 37).

3. When asked about areas in which there are unmet needs, employers tend to respond in ways at variance with the statistics. They acknowledge serious needs for teachers and health care professionals. In addition, however, they almost unanimously define individuals with basic workplace skills and a work ethic as their most critical workforce development needs. The needs in this area far outweigh their needs for graduates of any particular college program.
4. When the concept of unmet needs for college programs is broadened beyond the narrower definition of **instructional** programs, another priority emerges. From the previous section it became clear that a premium should be placed on activities that foster economic development. When data from the Corporation for Enterprise Development are considered, it becomes clear that Nevada needs to improve its “innovation assets,” most of which must emerge from the actions of colleges and universities. For example, Nevada is in the bottom 10 states in such key areas as:
 - University spin-outs
 - Royalties and licenses
 - University R&D
 - PhD scientists and engineers
 - Science and engineering graduate students
 - Industrial diversity

See Figure 38.

These findings are buttressed by data about the research levels and competitiveness of the UCCSN universities. The data reveal that overall university research is not large and that the one area of apparent strength is in the physical sciences. In those

areas related to primary areas for economic diversification—bio- and information technologies—the university research capacity is notably small (see Figures 39-45).

Conclusions

Based on these findings, we conclude that:

1. With very few exceptions, the instructional programs needed to serve the current and future needs of the state are already in place. The requirement is to produce more graduates from the existing programs. In some cases—nursing, for example—steps have already been taken to expand capacity in pursuit of this objective. In the matter of teacher education, the issue is more one of creating student interest in the program than of expanding production capacity. As someone noted, “There are no waiting lists for entry into teacher education programs.” Areas in which capacity is needed to produce more graduates include:
 - Pharmacy
 - Pharmacy tech
 - Respiratory therapy
 - Dental hygiene
 - Etc.
 2. Adult literacy/basic workplace skills is a “program” which needs and deserves much more attention. The programs that focus on this topic are housed in the State Department of Education, and as a consequence institutions of higher education (especially the community colleges) are not engaged in being part of the solution to the problem.
 3. Graduate education and research—particularly in those areas tied to the economic development priorities of the state—also represent “programs” requiring considerably greater development.
- C. Determine whether it is feasible to reallocate existing resources within institutions to meet the critical needs of the State of Nevada that are not currently being met.

It almost goes without saying that it is **possible** to reallocate funds to meet critical needs of the state. The question of **feasibility**, however, frames the issue in a more complex way. The simplest case is one in which institutions have excess resources that can be devoted to new priorities—there is slack that can be redirected. This is largely a technical judgment. The more difficult case occurs when redirection toward new priorities involves ceasing to support other programs or activities—reordering priorities in such a way that lower priority functions are eliminated. Such judgments are not technical; these are value judgments. In such cases feasibility rests on the capacity to:

1. Forge a consensus about the reordering of priorities, and
2. Free up sufficient resources (by laying off employees and otherwise effecting savings) to successfully pursue alternative priorities.

In order to assess the ease (or difficulty) with which UCCSN institutions could reallocate resources, project team members undertook a variety of analyses. All of these analyses helped shape the conclusions at which we arrived. These analyses included attention to:

- Overall funding levels—do UCCSN institutions have so many (or so few) resources that reallocation should prove relatively easy (or difficult)?
- Allocation of resources to functions—are resource allocation patterns such that, for example, resources could be shifted from support functions (administration) to instructional priorities without harming the institution?
- Staffing patterns—is there evidence that institutions have more staff than necessary and that reallocations are possible?
- Breadth of program offerings—are institutions offering “too many” programs and could they pursue new priorities by paring their program inventory?
- Class sizes—are institutions offering many classes with small enrollments? Could they achieve substantial savings by reducing current course offerings?

For most of these questions, there are no objective standards on which to base an easy yes or no answer. The best that can be done is to compare Nevada institutions with like institutions elsewhere in the country and, on the basis of this comparison, reach an informed professional judgment. That was the approach taken by the project team. It should be noted that instructions from the Committee were to look only at the feasibility of **intra**-institutional reallocations; **inter**-institutional possibilities were not explicitly stated.

Findings

Based on these various analyses, the findings are that:

1. The Nevada institutions, based on comparisons with peer institutions, are generally funded at appropriate levels. When revenues from the two primary sources—state appropriations, and tuition and fees—are considered, the data show that:
 - Community College of Southern Nevada (CCSN) is considerably underfunded (by \$1,500 or so per FTE student), whereas the University of Nevada-Las Vegas (UN-LV) and Western Nebraska Community College (WNCC) are slightly underfunded.

- All other institutions are funded at generally appropriate levels given their sizes and missions.

The data also show that, except for the University of Nevada-Reno (UN-R), the institutions are heavily reliant on these two primary sources. They get relatively little of their funding from government grants and contracts and from private gifts (see Figures 46-52). [Special note: The peer group data for Nevada State College (NSC) is for that institution when it achieves some level of stability and maturity—4,000 FTE students. Since NSC is very much in start-up mode, current data are essentially meaningless.]

2. With the resources they do have, a very strong case can be made that the institutions are allocating their funds in appropriate ways:

- The amount of funding going to direct instruction is generally high in comparison to peer institutions. Even CCSN, which is significantly underfunded, is maintaining its instructional allocation by severely limiting allocations in all other areas.
- None of the institutions is spending inordinate amounts on administration (Institutional Support). All are very much at the mid-range of expenditures relative to their peers.
- All institutions except UN-R are allocating less than most of their peers on Student Services. The fact that student retention and graduation rates are relatively lower at Nevada institutions may suggest that allocations to this function are too low.
- All of the institutions are spending relatively little on scholarships and fellowships.
- Other than instruction, the one area in which UCCSN institutions are spending more than most of their peers is Plant Operations and Maintenance. At a time when most institutions are skimping in this area, and thereby contributing to an even larger backlog of deferred maintenance, it is hard to condemn this practice.

There is nothing about the patterns of resource use at the institutions suggesting the availability of substantial resources that could be diverted to other purposes (see Figures 53-58).

3. The data regarding staffing patterns are not as susceptible to consistently straightforward interpretation as the expenditure statistics. These data indicate that:

- The Nevada institutions have student-faculty ratios that are at the mid-ranges of their peer groups (i.e., they have more faculty relative to the sizes of their student bodies than many of their peer institutions. This finding is

particularly true when the ratio is calculated on the basis of FTE faculty, not just those having full-time positions. This finding is consistent with the finding under point 2 above that UCCSN institutions allocate more funding per student to Instruction than most of their peers.

- When some real outlier institutions are eliminated, most of the Nevada institutions have about as many Executives/Administrators as their comparison institutions. The exception is Great Basin College (GBC), an institution that is small but has a very broad/complex mission. This pattern is sustained when the calculation is based on all non-faculty professional personnel (Executives/Administrators plus other professionals).
- The institutions appear to have somewhat more clerical staff relative to the size of the professional staffs they support than their peer institutions. The differences, however, are not large.

Again, the statistics for the UCCSN institutions put them very much in the realm of common practice (see Figures 59-63).

4. Faculty salaries are high relative to most other peer institutions at the two universities. This places these institutions in a very competitive position in their national recruiting process, an enviable position when many other institutions have frozen salaries and otherwise created environments in which top-flight talent is looking for greener pastures (see Figures 64 and 65).

Salaries at the other institutions are generally in the middle of the pack, although salaries at CCSN are somewhat low. This is likely the consequence of rapid growth and consequent hiring of new faculty and the constraints of their overall budget situation (see Figure 66).

This latter point is given credence by reference to the tenure rates of full-time faculty; the rate at CCSN is considerably lower than that of other Nevada institutions. Except for UN-R and WNCC, all of the institutions have relatively low tenure rates, a factor in considering the feasibility of resource reallocation (see Figure 67).

5. Nevada institutions, in comparison to their peers, have more programs (at both the undergraduate and masters levels) relative to the size of their student bodies (see Figures 68-70).

This finding suggests that each of the campuses has a number of very small programs that utilize inefficiently the resources associated with them (such as faculty time). A review of the number of graduates from the programs at each of the institutions resulted in the following observations:

- a. At each institution—and at all levels at which the institution offers programs—there are programs from which relatively few students graduate.

- b. At the Associate level, almost all of these are programs that prepare students for specific kinds of work, frequently in occupations identified by the Department of Labor as occupations in which there will be a substantial number of openings annually.
- Auto and computer repair, medical records, medical lab tech, HVAC, respiratory therapy, EMT, and engineering technologies among others at CCSN.
 - Diesel and industrial machinery repair and computer-related programs at GBC.
 - Drafting, radiologic tech, auto repair, engineering techs, and occupational safety tech at Truckee Meadows Community College (TMCC).
 - Machinists, drafting, industrial tech, engineering tech, and construction management at WNCC.

This is not the complete list, but it serves to illustrate that the issue in many cases is not eliminating the program but encouraging more students to enroll in (and complete) these programs.

- c. At the baccalaureate level, the small programs include:
- Foreign languages (Spanish, French and German), sciences (physics and earth sciences), and some allied health fields (radiologic tech) at UN-LV.
 - Foreign languages (French and German), engineering (metallurgical, environmental, geological, engineering physics), sciences (geology, physics), and a variety of specialties within teacher education (music, industrial arts, foreign languages, business, etc.) at UN-R.
 - Business and instrumentation tech at GBC.
- d. At the masters level, the small programs include:
- Foreign languages (Spanish), social sciences (political science, economics, sociology), and sciences (chemistry, biology) at UN-LV.
 - Engineering (geological, mining and mineral), sciences (geology, chemistry, cell and molecular biology, math, physics), ag-related (animal science, food and nutrition), and humanities/social sciences (political science, philosophy) at UN-R.
 - Most of the doctoral programs at both universities have small numbers of graduates. At this level, it is very common to have this situation.

The point is that all institutions have small programs that could be eliminated if the only criterion was efficiency. Unfortunately, the data systems at the UCCSN are inadequate to the task of determining the costs associated with these programs and the actual savings that could be made available for reallocation. The even larger point is that many of these programs are in fields where more graduates would be of real benefit to the state. Reallocating resources away from these programs requires an overlay of value judgment that in the end will necessarily override technical judgments.

6. All of the institutions have numerous courses in which there are very few enrollments. This is especially true of:
 - UN-R at the graduate level
 - NSC at the upper-division level (at this stage of the institution's development)
 - GBC
 - WNCC

The situation at the latter two institutions is undoubtedly related to small institutional size (see Figures 71-87). Data in these figures represent another limitation of the UCCSN data systems. It is not clear that data for the various institutions are similar. For example, the data for UN-LV explicitly exclude distance education courses; it is believed that such courses are included at GBC and, worse, that the same course with enrollments at multiple sites is treated as multiple courses.

7. Information gleaned during the policy audit activities indicate that purposeful reallocation—from low-priority to high-priority programs—is going on within the campuses. [ACM—we need a couple of examples]
 - Is CCSN reallocating for nursing?
 - ???

Conclusions

Relative to the question about the feasibility of reallocation addressed to the Committee, what can be concluded? Based on the evidence, we feel that the following conclusions can be justified:

1. In each of the institutions, reallocation is possible. While none of the institutions is wealthy, only CCSN is operating at what is fundamentally a subsistence level. Further, all of the institutions have already allocated most of their resources away from support functions and to instruction. Student/teacher ratios are relatively low, and each campus has an inventory of small programs that can be reviewed. Finally,

only UN-R and WNCC have notably high tenure rates. All of these conditions create circumstances in which the institutions have some “wobble room”—they are not so tightly constrained that no reallocations are possible.

2. Having said this, it should also be noted that none of the possible reallocations is so apparent that all parties involved would instantly agree on the places from which reallocated resources obviously should come.
3. This means that, in order for internal reallocations to be successful, institutions will have to conduct well-designed processes to:
 - Establish priorities around institutional missions as well as state needs.
 - Assess constraints and the flexibility of existing resources (for example, can faculty in low-priority programs be effectively used elsewhere).

In short, yes it is feasible for institutions to reallocate within the framework of their existing missions, but only if done skillfully and through processes designed to fit the cultures of each institution.

- D. Determine whether appropriations from the State of Nevada and student fee revenues are being efficiently distributed internally at each campus of the UCCSN.

Findings

In many ways this is a particular subquestion within the broader question addressed in the context of Section C above. While the previous section focused on the use of all funds, the specific question here deals only with the use of funds in the State-Supported Operating Budget (SSOB)—those state appropriation and tuition funds going into the general programs of the institution. In order to answer this question, it is necessary to sort out SSOB funds from those from other sources and make judgments based on these findings.

Institutions of higher education acquire their resources from many different sources—among them the state, students, federal government, private donors, foundations, etc. The funds that comprise the SSOB come primarily from only two of these sources—students and state government. Table 2 provides information about total revenues for UN-R and UN-LV as well as that portion contained within the SSOB.

TABLE 2
Comparison of Total Revenues and SSOB by Source, Fiscal Year 2002

	<u>UN-RENO</u>		<u>UN-LAS VEGAS</u>	
	Total	SSOB	Total	SSOB
State & Local Appropriations	135.1	124.6	114.1	106.5
Tuition and Fees	38.2	33.4	57.5	46.6
Subtotal	173.3	158.0	171.6	153.1
Government Grants & Contracts	87.7	2.4	41.6	—
Private Gifts and Grants	9.7	—	11.2	—
Other Sources	42.6	—	23.7	—
Total	313.3	160.4	248.1	153.1

These data reveal that the institutions are augmenting their SSOB funds to a very substantial degree—more than \$150 million at UN-R and \$95 million at UN-LV. This funding allows the institutions to enrich their programs to levels far beyond those that could be supported solely by funds provided through state general fund support and through tuition and fees paid by students.

Table 3 presents data about the uses of these funds and shows the functional areas in which the SSOB is being augmented with funds from other sources.

TABLE 3
Expenditures by Functional Area—Total and SSOB, Fiscal Year 2002

	<u>UN-RENO</u>		<u>UN-LAS VEGAS</u>	
	Total	SSOB	Total	SSOB
Instruction	124.0	70.4	93.9	85.6
Research	44.3	10.9	25.2	.9
Public Service	32.6	9.4	11.3	.7
Academic Support	21.0	19.7	28.6	20.3
Student Services	16.9	9.2	11.1	10.0
Institutional Support	22.5	12.0	23.8	12.8
Plant Operating & Maintenance	25.4	26.4	23.4	20.7
Scholarships and Fellowships	7.7	3.6	10.1	3.7
Reserves	—	<u>-1.0</u>	—	<u>-1.6</u>
Total	294.4	160.4	227.4	153.1

These data reveal that SSOB funds are being used predominantly for:

- Those functions that are most directly related to students—instruction, academic support, and student services.
- Plant operation and maintenance.

It is to be expected that funds from other sources are used to support research and public service activities of the institutions. The federal government in particular has a long history of providing substantial funding for these functions. What is more unusual is the extent to which the administrative functions of the institutions (labeled institutional support) are being supported by funds other than those provided through the SSOB.

Conclusions

The ways in which the SSOB funds are being used in each of the institutions lead us to conclude that they **are** being used appropriately and efficiently at the UCCSN campuses.

E. Other Matters that Affect Recommendations

In the previous four sections, information developed in direct response to the questions posed in AB203 was presented and conclusions drawn. Before recommendations are presented, it is important to explicitly note some other key factors that shape the recommendations made in the concluding section of this report.

Findings

1. Nevada has a structural deficit in its state budget; state resources for the UCCSN are unlikely to keep pace with increasing demand.

Studies done for NCHEMS by the Rockefeller Institute of Government at the State University of New York (SUNY) reveal that for the period 2002-10, Nevada has a structural deficit in its budget that is worse than that for all other states except Tennessee (see Figure 84). This means that the state will be unable to fund the current level of services (e.g., same level of funding per FTE student in higher education) for the likely numbers of claimants for those services within the revenues that will be generated by the state's current tax structure. This conclusion is reinforced by the Governor's Task Force on Tax Policy in Nevada that concluded that, "If the state is to continue to afford the levels of services that it provides today, the current revenue mix of the state will not be sufficient to support that level of services." (*Are Western States' Tax Structures Adequate?*, Donald Boyd, WICHE, October 2003). The data in Figure 85 indicate the extent to which Nevada state and local revenues, adjusted for inflation and population changes, are falling behind the national average.

If these assessments are correct—and we have no reason to believe they are not—the UCCSN is very likely facing a future in which it will be operating within serious fiscal constraints. State appropriations are unlikely to keep pace with student demand for higher education in the state. Any time state governments are faced with revenues insufficient to meet the needs of their current services budgets, higher education appropriations become a likely target. No other major component of the state budget has an alternative source of revenues (in this case students through tuition and fee payments) which can be tapped to fill in the gaps.

Since there is no reason to presume a change in tax policy that would provide higher education with increases in state support commensurate with likely increases in demand, the conclusion is that the UCCSN must find alternative sources of revenue and/or become more efficient as a system if increased demand is to be accommodated.

2. Nevada has efficient campuses, but a high-cost system.

As noted previously in this section, there is no evidence that the UCCSN institutions are overfunded or are operating inefficiently. They are funded in the mid-range of funding for institutions of generally similar size and function elsewhere in the country (the exception is CCSN, which appears underfunded, not overfunded.) But while each campus within the System is functioning at a generally efficient level, the System as a whole is a relatively high-cost enterprise. This condition stems from the institutional makeup of the UCCSN and the enrollment patterns across the System’s institutions:

- Substantially more than half the FTE undergraduate enrollments are in the two universities.
- Only five other states have a higher proportion enrolled in their research universities.
- Costs per student at research universities are higher than at other types of institutions (see Table 4 below).
- Until very recently, with the opening of Nevada State College, the state had no lower cost alternative to research universities for students interested in enrolling in baccalaureate programs.

**TABLE 4
UCCSN State-Supported Operating Budgets, 2002**

	Budgeted Enrollment	\$/FTE
UN-Reno	10,817	14,832
UN-Las Vegas	16,581	9,235
CC Southern Nevada	15,247	4,847
Great Basin College	1,395	8,663
Truckee Meadows CC	4,918	6,452
Western Nevada CC	2,081	7,784

Source: Brian Burke, Legislative Council Bureau

Even if the SSOB amount of \$8,813/FTE student at the UN-LV main campus is used as the point of comparison and if CCSN were allocated an additional \$1,000/FTE student to bring it more in line with its peers, the budget implications are substantial. For every 1,000 students who enroll at UN-LV instead of CCSN, the cost to the SSOB is $1,000 \times (8,813 - 5,847) = 2,966,000$. This amount is equal to about 20% of the WNCC SSOB revenues and 25% of those at GBC. This example is presented **solely** to illustrate that:

- Managing enrollment patterns will have a far greater impact than attempts to squeeze greater efficiencies out of institutions that, in the main, are operating quite efficiently now.
 - The search for efficiencies is more productively focused at the **system** level than at the institutional level.
3. The decision to make UN-LV a more fully developed research university has fiscal implications that have not yet been fully realized.

As we understand it, decisions have been at the levels of both the Regions and the legislature to make research a more important part of the UN-LV mission. A first step in this direction was providing for general parity in faculty salaries across the two institutions. What is not yet reflected in budget allocations to the institution are the costs associated with changing faculty workloads, not all of which will be paid for by the federal government or other research funders. The costs are not so much those associated with faculty salaries as those associated with the need for more faculty; as research involvement increases, the student faculty ratio will drop and the overall number of faculty required to serve the same number of students will increase (see Figure 60 for a comparison of student/faculty ratios at UN-R and UN-LV).

According to NCES data for 2002, the difference in per-student revenues from tuition and fees and state appropriations at research universities that have neither land-grant missions nor medical schools (the average) and current levels for UN-LV are $(12,521 - 20,202 =) \$2,319/\text{FTE student}$. This amount is very similar to current SSOB funding differences between the main campuses of the two Nevada universities of $(11,025 - 8,813 =) \$2,212/\text{FTE student}$. Allowing for program differences (e.g., UN-LV does not have engineering) and being **very** conservative in the calculation, it can be estimated that the additional cost of increasing the research mission of UN-LV will be **at least** \$1,500 per FTE student. At current enrollment levels, this translates into an additional cost of \$25,000,000—a cost associated with a mission change and **no** increase in the number of students saved.

4. While the institutions operate “efficiently,” their performance is not as good as that of similar institutions.

Throughout this report, the analyses of funding levels have been made using the metrics of funding relative to the numbers of students served. In short, the focus has

been on measures of “activity” (number of clients served) rather than on outcomes produced (e.g., degrees granted). When viewed from the latter perspective, the data indicate that, on a comparative basis, Nevada institutions do not produce the same level of beneficial outcomes as institutions in other states.

- Graduation rates are low at Nevada institutions in relation to rates at their peer institutions. This is particularly true for the two-year institutions (see Figure 87).
- The State System as a whole performs poorly on a variety of measures.
 - Numbers of students served as measured by FTE undergraduates per 100 18- to 44-year-olds with a high school diploma (see Figure 88).
 - The number of undergraduate credentials awarded per 100 FTE undergraduates (see Figure 89).
 - Federal and industry R&D per capita (see Figure 90).
 - The number of Bachelor’s degrees produced relative to the number of high school graduates six years earlier (see Figure 91).

The overall System performance is shown in Figure 92. When the data are viewed by sector—universities and two-year colleges—the findings remain the same. In all instances, there are other states (many in the West) that are achieving substantially better results with the same levels of funding being provided the Nevada institutions.

The data indicate that, if efficiency is expressed in terms of outputs produced instead of clients served, the UCCSN institutions perform much less well. On some measures of key importance to the state—such as numbers of graduates produced and research activity—it is appropriate to expect higher levels of performance for the investment being made.

5. There is relatively little attention being given to delivery of services in ways that draw on the assets of multiple institutions working collaboratively.

In visiting various institutions and different parts of the state, we saw much more evidence of competition than of collaboration. Part of this is fueled by regional rivalries. It is abetted by a funding formula that rewards growth and engenders competition for students. But it is also a reflection of an approach to service delivery based on developing the capacity to deliver services in a region at the institutions in that region. The question of how to use all the assets of the UCCSN to serve needs in all parts of the state is one that was rarely encountered during the course of the project.

We would like to make several observations about service delivery that indicate unresolved issues in this arena:

- a. The questions about conditions under which four-year programs can be offered at community colleges. Our response to that question is contained in a memo included in Appendix C. What is most interesting is the focus on justifying a program rather than on getting a service delivered to a particular part of the state. A review of the UCCSN Board policy in this regard indicates that the focus is on identifying an institution to offer the program and essentially gives the four-year institutions the right of first refusal. There is no recognition in the policy of circumstances in which one institution would offer programs at another institution's physical location.
- b. The continuing uncertainty about the correctness of establishing a School of Dentistry at UN-LV. On the one hand, we would note that it is a decision that has been made and is being implemented; at this point we would suggest that it is appropriate and necessary to keep moving forward. On the other hand, it is useful to investigate various elements of the decision and to identify key lessons that can be learned from such an investigation.
 - First, a strong case was made for the need for more dentists in Nevada. The evidence indicates that the state was underserved and that oral health was suffering as a result. A key part of the statement of need was the need for indigent patient care, a need that could be at least partly addressed in conjunction with the training program.
 - Second, once need is established, the question arises as to how to respond to this need. One solution is to create a school of dentistry, but there are other options. In the West, a primary option is participation in the WICHE Student Exchange Program, a program that would allow Nevadans to enroll at other dentistry schools in the West at rates equal to 150% of the in-state tuition in the state in which the school is located. Consistently, calculations show that it is cheaper to a state to have its students served in this way than to create its own educational capacity. The difficulty is that the priority attached to providing indigent care as a joint product of the instructional program could not be realized if this approach were utilized.
 - Finally, once it is concluded that care needs as well as training needs were paramount and that an in-state training program was desirable, there is still the question of where it should be located. In almost all states, schools of dentistry are located in conjunction with medical schools (although an exception exists at Southern Illinois University at Edwardsville). This is for a reason. There are certain basic science courses and support courses that serve both programs; having them together creates some synergies and some efficiencies. However, if the

care needs to be served are located at a substantial distance from the instructional programs, feasibility becomes problematic.

With these considerations in mind, it must be inferred that the corollary benefits—provision of indigent care and strengthening related science capacity in Las Vegas—played a significant role in the decision. The important point in this is that it is the clientele to be served (their physical location and particular needs), not the interests of the institution, that is at the heart of the decision.

- c. This orientation toward serving needs through joint action is being demonstrated through the upper-division components of baccalaureate programs being offered by NSC on the WNCC and CCSN campuses. While these efforts are small, they will be good tests of whether or not such collaborations can work. The real issue is whether or not the host institution (in this case, the community colleges) see sufficient benefit to reduce their demand to serve their service area, through programs over which they have direct control.

All of these instances call into the limelight the issue of whether or not the System has in place the necessary mechanisms to ensure that the several institutions within the System can collaborate to more effectively and efficiently deliver necessary services throughout the state. The evidence, in our judgment, points toward policies and practices designed to produce single institution, not multi-institution, responses and solutions to key problems.

6. How Nevada responds to growth in demand will determine how efficiently the System eventually operates.

Unlike some other states (Indiana, for example) that have efficient campuses and high-cost systems, Nevada—because of its projected growth—has an opportunity to “grow out” of this particular predicament. Whether or not it does will be determined by the policy choices made in the state. The calculations presented in Tables 5-7 illustrate the point. Table 5 reflects the current distribution and the general level of SSOB support with two exceptions:

- The figure for UN-LV has been increased 1,500 to reflect the increased research mission.
- The figure for CCSN has been increased to overcome current underfunding.

Tables 5 and 6 indicate a statewide enrollment growth of slightly more than 100% to 105,000 students, a conservative number given projections of high school graduates over the next 15 years. Both of the scenarios described in Tables 5 and 6 presume that 80% of the growth will be in the South. Scenario 1 distributes the growth in both North and South according to current institutional shares (except in the South, NSC is assumed to grow to 4,000 students). In Scenario 2 (Table 7), community college enrollments are assumed the same as in the first scenario; however, the research university growth is constrained and the difference is assigned to NSC-type

institutions. The difference in SSOB requirements between the two scenarios approximate \$40 million per year.

These illustrations are meant only to demonstrate the impact of policy choices. To put the savings in perspective, \$40 million is about the cost of supporting 7,000 students at CCSN.

TABLE 5
Base

	Cost Per Student	Number of Students	Cost (In Thousands)
UN-Reno	11,000	10,800	118,000
UN-Las Vegas	10,300	16,600	170,980
Nevada State College	8,500		—
CC Southern Nevada	5,800	15,300	88,740
Great Basin College	8,500	1,400	11,900
Truckee Meadows CC	6,500	5,000	32,500
Western Nevada CC	7,500	<u>2,100</u>	<u>15,750</u>
		51,200	437,870

TABLE 6
Scenario 1

	Cost Per Student	Number of Students	Cost (In Thousands)
UN-Reno	11,000	16,950	186,450
UN-Las Vegas	10,300	36,100	371,830
Nevada State College	8,500	4,000	34,000
CC Southern Nevada	5,800	34,800	201,840
Great Basin College	8,500	2,000	17,000
Truckee Meadows CC	6,500	7,850	51,025
Western Nevada CC	7,500	<u>3,300</u>	<u>24,750</u>
		105,000	886,895

1. Go from 51,200 to 105,000—a growth of 53,800
2. 80% of growth in South = .80 (53,800) = 43,000
 GBC grows to 2,000
 NSC has 4,000
3. Remaining 39,000 in South distributed to UN-LV and CCSN equally
4. 10,200 in North distributed according to current shares
 UN-R .60 x 10,200 = 6,150
 TMCC .28 x 10,200 = 2,850
 WNCC .12 x 10,200 = 1,200
 10,200

TABLE 7
Scenario 2

	Cost Per Student	Number of Students	Cost (In Thousands)
UN-Reno	11,000	13,000	143,000
UN-Las Vegas	10,300	20,000	206,000
State Colleges	8,500	24,050	204,425
CC Southern Nevada	5,800	34,800	201,840
Great Basin College	8,500	2,000	17,000
Truckee Meadows CC	6,500	7,850	51,025
Western Nevada CC	7,500	<u>3,300</u>	<u>24,750</u>
		105,000	848,040

1. Growth in community colleges same as in Scenario 1
2. Only modest growth at UN-R and UN-LV
3. Balance goes to NSC-type institutions

7. Financing policy consists of a set of well-developed but independent components.

The policies and procedures that determine how higher education is funded in Nevada include:

- a. The funding formula. This is the mechanism utilized to calculate the amount of funding required to support each institution given its enrollments, distribution of these enrollments across disciplines and instructional levels (lower division, upper division, etc.) and other factors. Because it was recently revised and agreed upon (with considerable difficulty), there is great reluctance to open this element of the financing policy to further discussion at this point.
- b. Tuition policy.
- c. State funding for scholarships. The Millennium Scholarship, awarded on the basis of academic performance in high school and renewed on the basis of academic performance in college, represent the vehicle for funding mechanism in Nevada. These scholarships were established to increase college participation, particularly at in-state institutions. A memo including further observations on this program is included in Appendix C. Table 8 indicates the share of UCCSN funds, as reflected in the SSOP, comprised of Millennium Scholarship funding. It varies from 8.1% at TMCC to 18.5 at UN-R. Nevada has no need-based student financial aid program.

TABLE 8
Millennium Scholarships as a Proportion of
UCCSN Funds in SSOB, 2002

	Millennium Scholarships	UCCSN Funds in SSOB	Percent
UN-Reno (main)	5,760	31,090	18.5
UN-Las Vegas (main)	5,429	44,073	12.3
CC Southern Nevada	1,604	18,741	8.6
Great Basin College	158	1,549	10.2
Truckee Meadows CC	502	6,175	8.1
Western Nevada CC	211	2,264	9.3

Source: Brian Burke, Legislative Council Bureau; Tyler Trevor, UCCSN

- d. Capital funding. Capital funding is decided on a project-by-project basis. This is true for both new facilities and for major remodeling projects. As part of this project, we were asked to review prior work concerning calculations of new needs of new facilities. Our comments in that regard are contained in a memo included in Appendix C. Nevada has no mechanism for “expensing

depreciation” and making renewal and renovation of physical plant a part of the institutions’ operating budgets.

- e. At the moment there is no part of the state budget process that consistently provides funding for pursuing the key elements in the “public agenda.”—the Master Plan for improvement. There are funds to sustain the status quo but none to invest in change. To the extent that they exist, they come as special appropriations (e.g., funds to expand nursing programs) and not as a regular part of the budget process.

As Nevada moves forward, it will be critical to more closely integrate these policies that are now operating independently. Given the growth that will have to be accommodated, more systematic consideration will have to be given to who pays (shares to be borne by the state and the students at different institutions), the mechanisms by which resources will be allocated, and the devices (if any) to be put in place for students who do not qualify for Millennium Scholarships and for whom the cost of college attendance is beyond their means.

8. The UCCSN is moving in the right direction but has not yet fully evolved as a System.

The review of materials and discussions we have had with UCCSN and legislative staff thus far in the process lead us to the following observations:

- a. Nevada, in comparison to most other states, has not encumbered its higher education system with substantial statutory mandates or regulatory requirements that are intended to direct every aspect of institutional behavior.
- b. The UCCSN completed a system-level Master Plan in April 2002. The System has recently developed (March 2004) performance indicators to be used to assess progress toward the goals in that plan. The Master Plan and the related principles and performance indicators address most of the issues identified through our analysis with the possible exception of addressing the development of workplace skills of young adults who have not completed their high school education—a critical need and important mission of the community colleges. The goals articulated in the plan are:
 - Developing and sustaining a strong, dynamic, knowledge-based economy for Nevada.
 - Providing consistently excellent learning experiences.
 - Increasing the overall participation and success of Nevadans enrolling in higher education at all levels of education and in all ethnic groups.
 - Providing programs and services that address the unique educational needs of a highly diverse and non-traditional population.

- Increasing partnerships with the K-12 system to provide the cooperative delivery of education from pre-K through graduate education.
- Being instrumental in advancing society's objectives and enriching the lives of Nevada's citizens.

In addition to the goals, the Master Plan sets forth important principles:

- The importance of mission differentiation among UCCSN institutions.
- Cooperation between institutions to eliminate redundancies and to deliver courses in the best manner possible.
- Emphasize UCCSN's role to create efficiencies and cost effectiveness.
- Recognition that partnerships are essential (state and federal government, private industry and business, students and their families).

The Board of Regents has taken important steps to use the Master Plan as the central focus of all dimensions of policy development and implementation including linking the Master Plan and the budget process, ensuring that institutional master plans are linked to the Master Plan, and providing for consistent attention on Board of Regent's agendas to monitoring progress toward Master Plan goals.

- c. Our assessment is that the Master Plan and related developments are fundamentally sound and consistent with best practice in the country. The performance indicators recently developed are an important step forward in that they translate rather nebulous goal statements to life and serve to interpret these goals in ways that can be interpreted (and debated if need be). Nevertheless, the accountability mechanisms need further strengthening to be effective as a means for Nevada to monitor step-by-step progress toward long-term goals:

- The focus remains strongly oriented toward building a capacity for **institutional** accountability. Missing is the parallel focus on **System** accountability. This system focus is the point at which acceptance by external audiences—the Governor, legislators, etc.—is most needed because it keeps the attention on the public agenda and the accomplishments of the System, not the accomplishments of individual institutions (which fundamentally should be the concern of the Board of Regents).
- Serious gaps continue to exist in state-level data and the analytic capacity to translate data into useful information for state/system level policymakers. The focus has traditionally been on information and analytic capacity about the internal functioning of institutions. The serious gap is in analytic capacity regarding the interrelationships among

institutions and the K-12 system and the connection of the UCCSN to the major challenges facing Nevada in terms of demography, economy, environment and quality of life.

Because the Master Plan and the related accountability systems are relatively new and in the early stages of implementation, the key questions are these:

- Can the central focus on the Master Plan goals be sustained?
- To what extent is there widespread understanding and commitment to these goals external to the UCCSN—among the state’s policymakers as well as the state’s business and civic leadership?

From interviews conducted in the course of this project and analysis of the record of policy discussions, our conclusion is that Nevada faces serious challenges in ensuring that the Master Plan becomes the state’s **Public Agenda** for higher education. Specifically:

- There is limited evidence of substantial buy-in beyond the UCCSN to the Master Plan goals
 - Tactical issues related to human resources/personnel, facilities and athletics as well as relatively narrow internal institutional management issues consistently drive attention of the Legislature and the Board of Regents away from the strategic issues facing Nevada
 - There is no consistent high-level venue to ensure that issues can be addressed that cut across higher education, K-12 and economic development. The joint meetings between the State Board of Education and the Board of Regents and the recently established P-16 Council are important steps to address at least one dimension of this gap, but the consistent connections related to state and regional economic development are less developed.
- d. Despite the laudable intentions expressed in the Master Plan, UCCSN continues to function more as a “collection of separate institutions under a single governing board” than a **system**. All statewide governing boards face a challenge of balancing their responsibilities to be—simultaneously—effective governing boards for each institution as well as effective statewide **systems** focused on the synergy of the system as a whole with the long-term strategic needs of the state’s population and economy. The danger is that as a system seeks to accomplish both of these functions—system leadership and institutional governance—it may do neither well. This is clearly the challenge facing the UCCSN:
- Reinforcing initiatives underway for regional coordination to address the unique challenges and cultures of Southern and Northern Nevada,

- Reaching firm long-term agreements on institutional missions and strategic directions, including:
 - Cost-effective statewide development of baccalaureate-level capacity, including the clearly defined roles and responsibilities for Nevada State College, the community colleges and other providers.
 - The missions and strategic directions for Nevada’s capacity for research, technology, graduate and professional education and selective undergraduate education, including UN-R, UN-LV and Desert Research Institution (DRI) (including clearly defined agreements regarding the future of each entity individually as well as the coordinated capacity of these institutions linked to the economic/technology strategy for the future of Nevada).
 - Effective coordination and governance of community college services in each region, especially in Southern Nevada. As the fastest growing and most severely underfunded institution in Nevada, CCSN as currently structured is unlikely to have the capacity to serve the critical needs of Southern Nevada.
 - Leadership capacity for intensified and sustained attention to the links between higher education and K-12 (significantly improving preparation of an increasingly diverse population for postsecondary education, alignment of standards, curriculum and assessment between secondary and postsecondary education, preparation and retention of highly qualified teachers, etc.). The joint meetings between the Board of Regents and the State Board of Education and the current initiatives coordinated by the P-16 Council are important steps but unlikely to succeed without the highest level of policy commitment by the Governor and State Legislature.
 - Capacity to support strong, effective institutional leadership, including clear multi-year agreements with each institution regarding mission and alignment of budget/financing policy with institutional strategic planning and the system Master Plan. Ambiguity and inconsistency in policy direction undermines effective institutional leadership and, with specific reference to AB203, weakens the capacity for efficient and effective allocation or reallocation of resources at the institutional and system levels.
 - Shared responsibility for adult education and literacy, especially for young adults in the workforce who failed to complete secondary education or recently immigrated to Nevada

- e. The finance policy in the state is very traditional in the sense that:
- Institutional funding, tuition, and student financial aid policies are not tightly linked.
 - The major emphasis of the most recent revision of the funding policy (the Committee on the Financing of Higher Education, 1999-2000) was on development of a formula that would equitably distribute resources to the institutions. The formula approach:
 - Emphasizes “cost reimbursement” rather than incentives for efficiency and links with state and institutional priorities.
 - Rewards growth in a manner which exacerbates interinstitutional competition rather than collaboration (e.g., between CCSN, UN-LV, NSC and the K-12 system) in serving the needs of Nevada.
 - Lacks mechanisms to link to the goals in a Public Agenda—the Master Plan.
 - The formula sets unrealistic expectations regarding the level at which the formula must be “funded” before issues of strategic choices can be addressed, including misalignment of funding and mission—especially the need to address the severe underfunding of CCSN, the need for a firm commitment to fund NCS, and the need for the state to confront the significantly increased funding to move UN-LV from a mediocre AASCU institution to a major metropolitan research university.
 - The “need” generated by the formula appears to have little credibility with policymakers. This is demonstrated by the reality that the formula was not used by the Governor for his 2003-05 budget recommendations, and the Legislature was clearly reluctant to confront the formula’s implied demands for increased funding and reallocations among institutions.
 - Because the formula generates a “need” through the aggregation of independent cost calculations, it fails to take into consideration efficiencies gained through the interaction of cost categories and efficiencies of scale. In other words, the aggregation of separate calculations does not necessarily equate to an estimate of the need of a institution for revenues to develop or sustain capacity. The NCHEMS calculations suggest that revenues needed to develop and sustain capacity are in fact less than the amount generated by the current formula.
 - A formula focused on institutional costs focuses the state Legislature on internal institutional management issues rather than on the

broader strategic budgeting/financing issues of the System and the link between higher education and state priorities (the Master Plan/Public Agenda).

- The other major fiscal policy was the development of the Millennium Scholarship Program, a program designed to improve participation and success of Nevada high school students.
- The state continues to pursue financing policies, such as restrictions in the ability of UCCSN to carry over state funding from one year to the next, that severely limit the incentives for UCCSN to make efficient use of limited resources.
- Capital budgeting—both new construction and building renovation—is conducted on a project-by-project basis. Lacking is a mechanism to make strategic, differentiated investments where capacity is essential to accommodate demand (e.g., at CCSN and NSC) or to develop the state’s capacity for research and technology to achieve competitiveness in the global knowledge economy (e.g., strategic investments at UN-R and UN-LV). Limitations in the state’s capacity to issue bonds for capital purposes are leading to unrealistic expectations regarding capacity of the private sector to finance capital needs which are clearly in the **public** interest.

We would note that the fiscal mechanism that has been put in place:

- Has incentives for all institutions to grow—the formula is largely enrollment driven. While there are incentives to get students into college, there are none that promote completion and student success.
- Does not address the question of how the system will be financed in the future—what is the understanding about shared responsibility?
- Does not adequately address the question of student financial aid based on the economic circumstances and needs of students.
- Does not provide an explicit mechanism within UCCSN for investing in the kinds of institutional capacity needed to achieve statewide priorities. Rather, this is accomplished through the equivalent of “decision packages” approved through the legislative process.
- Does not provide explicit incentives or other funding strategies linked to the majority of the System’s goals.

9. Much of the content of both state statutes and Board of Regents policy is focused on the internal workings of the institutions—mainly various aspects of personnel policy.

Conclusions

The conclusions reached from the observations summarized in this section are straightforward. Succinctly stated, they are as follows:

1. The future needs of the state of Nevada are quite well known. The Master Plan developed by the UCCSN identifies the issues in a series of goals to be addressed.
2. The response to these needs thus far have been tactical, not strategic. While specific steps have been taken (e.g., the creation of NSC), there is no overarching strategy or plan that addresses such things as:
 - a. The institutional structures that will be created to accommodate growth—will the universities be capped and made more competitive? How much growth will be accommodated in state colleges? In community colleges?
 - b. The ways in which conditions will be created so that institutions, acting in their own self-interests, will collaborate to serve the needs in all parts of the state. How will instructional capacities be shared? How will synergies be created across the research capacities of UN-R, UN-LV, and DRI?
3. The finance mechanisms are tactical as well. They are devices for allocating resources during each session of the Legislature, but there is no long-term financing plan that:
 - a. Describes how the UCCSN of the future will be financed. How much is the state likely to contribute? What share will students have to cover?
 - b. Provides for systematic investment in achieving priority objects—not just growth but improved collaboration with K-12, contributions to economic development, etc.
 - c. Includes a safety net to ensure continued access to higher education for students with limited personal means.
 - d. Creates incentives for collaboration.
4. Much of the higher education policy in Nevada appears to focus predominantly on the care, feeding (and control) of the institutions. Much less emphasis has been placed on ensuring that the higher education system evolves in such a way that it efficiently serves the priority needs of the state. The development of the System Master Plan is an important step in the right direction; however, the infrastructure needed to turn this plan into reality is lacking in important areas.
 - a. The data resources needed to deal with the planning, finance, and accountability issues at the System level are not readily available at the System Office.

- b. There is no venue that brings education, political leaders, and civic and business leaders together to reach common ground about the public agenda to be achieved and the means for monitoring progress and enforcing accountability.

The imperative of developing strategic approaches to planning and financing the UCCSN are the key conclusions of this section.

II. RECOMMENDATIONS

The final element in the charge to the Committee was that it:

Recommend to the Board of Regents and the Legislature such action as may be needed for the efficient and effective operation of higher education in Nevada if the State is to progress economically and socially.

This section of the report addresses that aspect of the charge.

Based on our work in Nevada and our experience in dealing with generally similar issues in numerous other states, we have concluded that there are a limited number of critically important steps that must be taken if Nevada, as a state, is to “progress economically and socially.” There are lots of details associated with this handful of recommendations, but the real need is to build broad consensus around the major elements before embarking on the task of putting all the specifics in place. With this said, we recommend the following:

- A. That the Board of Regents and the Legislature focus their energy and attention on the state’s future.

Throughout our involvement in this project, there have been instances of a focus on the past—revisiting past decisions, not to learn from them but to question the legitimacy of their outcomes. Those of particular note are the decisions to create NSC and to build a School of Dentistry at UN-LV. For reasons described elsewhere in this report, we have concluded that the right decisions were made—NSC because it represents a cost-effective way to deal with growth and production of graduates in areas of great importance to the state, and the School of Dentistry for both its training function and its indigent care contributions. There are important lessons to be learned in both instances, the most central being the importance of keeping the attention on the needs of the state and its citizens rather than on the needs of institutions.

It is time to accept these decisions and move forward.

- B. That the Board of Regents and the Legislature develop, and agree upon, a plan for accommodating growth.

There is widespread recognition that Nevada’s educational enterprises—both K-12 and postsecondary—are likely faced with the most rapid increases in demand of any state in the country. While there is a recognition of the problem, as yet there has emerged no overarching strategy of how to deal the problem. Projections have been made and cost

estimates calculated, but no process is in place to develop—and build the necessary consensus around—the strategic elements of a response. The key decision in this arena is the tradeoff between continuing to funnel large numbers of (not necessarily well-prepared) students into the research universities, especially UN-LV, and the alternative of limiting enrollments at the universities and creating capacity at baccalaureate teaching institutions to handle the growth in demand for four-year programs.

From our perspective, the latter alternative is the much preferred option for reasons of both cost and responsiveness to the defined needs of the state. If UN-LV is to emerge as a research university, it will have to become more selective and admit only students who are prepared for, and can take advantage of, an academic institution focused more on research and economic development and less on the care and feeding of lower-division students.

Growth in Nevada, especially Clark County, will drive demand for many more openings at both the two- and four-level levels. CCSN can continue to expand by adding new campuses as it has in the past (although this will eventually force the question of how best to provide governance and oversight of a very large and complex enterprise). We recommend that the bulk of the growth in four-year enrollments be accommodated by NSC and, eventually, one or more similar institutions. This solution is not only more cost-effective but it better meets the academic needs of students who are coming to college not fully prepared to succeed in this environment.

C. That the discussions of programmatic needs be raised to the strategic level.

While there will continue to be requirements to add new programs, the funding at most of the UCCSN institutions is currently sufficient to allow funding through internal reallocation. Indeed, a policy environment requiring such decisionmaking internal to the System would be a positive step. However, there are three areas of what might be called programmatic concern that we recommend be addressed systematically. These areas are:

1. The role of higher education in assisting the public schools graduate a higher proportion of their students and ensuring that those who succeed in high school are prepared to enter college. Some P-16 initiatives are in place, but a more concerted effort is clearly needed.
2. The role of higher education in addressing adult literacy, especially the basic literacy skills of young adults. Nevada has a large—and rapidly expanding—population of young adults who have not completed high school. Attempts to diversify the economy will be severely hampered if the indigenous workforce does not have the basic communication, numeracy, and computer skills required in the workplace of the 21st century. More than any more traditional “academic” programs, this is the program that, if successfully implemented, would do the most for ensuring the economic and social future of the state.

This program has historically been, and remains, under the purview of the State Education Department. This is more often than not the case in other states, an arrangement consistent with the fact that the subject matter being taught is at the precollegiate level. However, the clients are adults, most of whom are reluctant to reengage in a system in which they previously failed. The states making the most progress on this front—Kentucky being the shining example—have assigned responsibility for landing this programmatic initiative to the state postsecondary education agency.

3. The identification of the areas of research competence to be fostered at UN-R, UN-LV, and DRI. The state needs to diversify its economy and is depending heavily on the universities, through their research efforts, to lead the way in this arena. There is no guarantee that this strategy will work—research, especially research that results in job creation, is an uncertain proposition. If it is to have a chance to be successful, however, certain requirements must be met. It must be:
 - Focused in a few areas—synergies among researches are important.
 - Sustained over a period of years.
 - Of high quality—the faculty involved must be fully capable of competing at the national level.

Nevada is a small state with a research capacity that is very much in the developmental stages. Even working collectively, researchers in the disciplines at the three sites are less numerous than those in the same disciplines in a single department in the leading research universities. This calls for identifying a limited number of focus areas where synergistic capacity can be developed across the institutions. Before proceeding down the paths being identified, it is recommended that a panel of experts from leading universities around the country be brought to Nevada to review plans and existing capacities and help to judge the feasibility of planned investments paying off in the ways anticipated.

- D.** That the Board of Regents and the Legislature, under the leadership of the Chancellor's Office, develop and reach agreement on a strategic-level financing plan for the higher education system of Nevada.

If UCCSN and its institutions are to serve Nevada in the ways intended, a means of financing the development and maintenance of the necessary academic capacity must be put in place. It is recognized that there are too many uncertainties to guarantee that all aspects of a financing plan can be implemented in the way initially envisioned. But the fiscal environment facing the state, combined with the demand that will be pressing on the higher education system, requires that a plan be in place that presents a strategy for financing the students and institutions of the state in ways that lead to achievement of desired results.

At the very least, this financing plan should:

1. Reflect the strategy for dealing with growth result from B above.
2. Indicate the minimum level of funding required to allow each institution to fulfill its mission at high levels of performance. To the extent that institutions are **below** this level of funding, the plan should indicate a process for eliminating the deficiency. To the extent that institutions are more than 10% over this level, a process for rectifying this condition should be indicated.
3. Include provisions for one or more investment funds, the resources in which should be systematically allocated in furtherance of the limited number of state priorities—economic development K-12 improvement, etc. This should be a permanent feature of the budget, not a fair weather fund.
4. Include recommendations regarding shares of each institution's budget that will be borne by the state and by students. This requires specific attention to both tuition policy and institutional practices regarding waivers of tuition and fees.
5. Provide for the creation of a need-based financial aid program to ensure continued affordability of a college education to the most economically needy of Nevada's citizens.
6. Include the capital budget component as an integrated part of the overall finance plan. Mechanisms for investments in new facilities should continue to be linked to the bonding capacity of the state, but current limits as to the higher education share should be revisited. It is recommended that the plan create provisions under which the institutions would be funded at (on a one-time basis) a level that would allow them to devote 2% of the replacement value of their facilities to plant renewal and renovation each year. At this point the capital budget process would be concerned solely with the addition of new facilities.

A paper describing some of the ideas underlying these recommendations is attached as Appendix D.

- E.** Establish a time-line within which recommendations must be presented to the Legislature.
- F.** Assign to the Chancellor's Office the responsibility for providing the leadership in each of these areas.

This means that the Chancellor's Office must:

- Develop the analytic and information resources necessary to support formulation of these policies.
- Provide the venues that ensure that all necessary parties are included in the process and that work be continued until consensus is reached.

- Take the leadership in developing the plans, financing mechanisms, and accountability procedures that are consistent with the programmatic and financing plans.

III. SUPPORTING INFORMATION

In various sections of this report—especially Section III, Findings and Observations—references are made to supporting materials. These materials consist almost solely of data displayed as tables, charts, and graphs. These data displays are compiled in this section for ease of reference.