Committee to Evaluate Higher Education Programs

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COMMITTEE TO EVALUATE HIGHER EDUCATION PROGRAMS

A.B. 203 – 2003 Session

Voting Members (12)

Senator Warren B. Hardy II, Chairman
Senator Barbara K. Cegavske
Senator Terry J. Care
Assemblyman John Oceguera
Assemblyman Marcus L. Conklin
Assemblyman John Marvel (replacing Assemblyman Joshua Griffin)
Regent Thalia Dondero (replacing Regent Stavros Anthony)
Regent Marcia Bandera
Regent Jill Derby
Dr. George Ann Rice, Associate Superintendent, Clark County School District
Jennifer Satre, Trustee, UNR Foundation
Mickey Stratton, Executive Vice President, Sterling S Development

Non-Voting Members (4)

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I. Report of the Committee to Evaluate Higher Education Programs

Introduction

This report is being submitted in compliance with Assembly Bill 203 (A.B. 203) of the 72nd Session of the Nevada Legislature. A.B. 203 established the Committee to Evaluate Higher Education Programs and appropriated $250,000 to assist in the evaluation. The Committee comprised 12 voting members and four non-voting members.

The goals of the Committee as outlined in A.B. 203 were as follows:

- Examine and evaluate the need for existing and potential higher education programs to ensure economic progress and development within the state to ensure that the educational needs of residents are being met.

- 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.

- Determine whether it is feasible to reallocate existing resources within institutions to meet the critical needs of the state that are not currently being met.

- Determine whether General Fund appropriations and student fee revenues are being efficiently distributed internally at each campus.

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

The Committee established that the scope of its examination would include in priority order, instructional, research and public service functions. Similarly, the examination of state-supported operating budgets was given the highest priority followed by the review of self-supported and grant/contract-funded activities. The Committee met seven times with the first meeting occurring on November 3, 2003 and the final meeting on July 7, 2004. A Subcommittee of the Committee also met one time on December 10, 2003 to formulate recommendations on the selection of a Committee consultant. Summaries of the issues discussed and actions taken at each meeting are included in the "Meeting Summaries" section of this report.

Overview of Evaluation Processes and Discussion Topics

To assist in the evaluation, the Committee selected as consultants a consortium led by the National Center for Higher Education Management Systems (NCHEMS) that included the Western Interstate Compact for Higher Education (WICHE) and the State Higher Education Executive Officers (SHEEO). The assistance of the consortium was

invaluable. The Committee especially appreciates and recognizes the efforts of Mr. Dennis Jones of NCHEMS and Dr. David Longanecker of WICHE.

The Committee was also assisted in its efforts by a working group comprised of professional staff from the University and Community College System of Nevada (UCCSN), the Legislative Counsel Bureau, and the Commission on Economic Development and regional economic development authorities. The Treasurer's Office provided considerable support on matters related to the Millennium Scholarship. The Nevada Policy Research Institute (NPRI) provided suggestions for funding educational reform in Nevada. The Northern Nevada Literacy Council also provided information on adult literacy and adult education.

As a foundation for the Committee's evaluation, work began with a discussion of enrollment and population trends and key statewide demographics; the UCCSN master plan; descriptions of state supported programs and the UCCSN budget; and a discussion of academic programs including new programs and the process for program approval and review. The UCCSN provided an overview of accountability and measures of student success and described the linkage between accountability and performance indicators. The UCCSN demonstrated recent improvements in Nevada's college continuation rates.

The Committee expressed concern with the steady increase in the percentage of recent high school graduates enrolling in at least one UCCSN remedial course. UCCSN reported that beginning in fall 2006, and coinciding with the implementation of phase one of the increased admission standards at the universities, remedial education courses at the universities will be self-supporting. The UCCSN stated that under this policy, it is expected that many students will complete remedial work at a community college prior to entering a university in the fall (either during summer school or as a transfer student).

The Committee engaged in lengthy discussions about articulation and offered examples where articulation policies appeared to have hindered the academic progress of student constituents. The UCCSN defended the system's articulation policies and cited recent improvements including core curriculum credit reductions, development of common course numbering systems and databases which allow for seamless transition between institutions (currently covers 6,000 courses system-wide), policies to improve seamless transitions, and inter-institutional committees that meet to address transition.

Considerable testimony was heard on the shortage of nurses and reports that Nevada has the lowest ratio of nurses to patients in the nation. The UCCSN explained that population growth is outpacing nursing school supply and noted that between 2000 and 2008, 662 nurses per year would be needed. The UCCSN enrolled 683 students and graduated 288 nurses in FY 2003. As a result of the nursing initiative, the UCCSN plans to increase nursing student capacity by 650 students, to a total enrollment of 1333 nursing students by FY 2005.

The UCCSN provided an overview on the shortage of teachers and reported that the number of new K-12 teachers employed in Nevada was expected to increase by

33 percent between 2000 and 2010. Approximately 2,000 teachers are needed per year. In FY 2003, UNLV and UNR conferred approximately 700 Bachelor of Science or Arts degrees in education to prepare undergraduates to enter the teaching profession. The UCCSN described efforts taken to alleviate the teacher shortage including the establishment of collaborative programs between the universities and community colleges (2+2 programs); creation of the Nevada State College; addition of distance education and off-campus sites; and joint initiatives with local school districts.

As described in their proposal, the consultants provided a set of analyses depicting the current status of the state, how Nevada compared to other states, the future of Nevada, and combined what all of that meant for higher education. The consultants also provided analyses regarding the finance of higher education—how much money the institutions had and how that money was being used. The consultants reviewed the policies and procedures used by the system. The consultants traveled throughout the state to meet with community representatives, to determine regional needs versus what higher education was delivering, and to identify the strengths and weaknesses of that connection.

As a cornerstone of their evaluation, the consultants provided data and statistics on various topics including: population; per capita income; poverty; educational attainment and graduation rates; college-going rates; import/export ratios of students and adults; degrees awarded; employment and earnings in various occupations; occupations with large annual projected openings; development report cards; ability to produce, attract and keep graduates; and research and development expenditures. The consultants observed that postsecondary education issues facing Nevada include:

- **Accommodating growth** - the state has a large potential for growth in the age cohort that would be attending college if capacity was available;

- **Getting more students through the education pipeline** – beginning at ninth grade and completion through high school and college;

- **Responding to immediate workforce needs**, with the obvious needs at the moment continuing to be teachers, nurses and other health care professionals;

- **Developing a workforce for the future** – Technology information to workers and adult literacy will affect the economy of the state as the state becomes more diversified, especially considering the population of young people who do not graduate from high school;

- **Diversifying the economy** – increasing capacity and competitiveness in research.

The consultants identified a group of peer institutions for each UCCSN campus and used those peers as benchmarks for various comparison criteria including adequacy of

funding, utilization of existing resources and cost effectiveness. The consultants noted the following:

- Expenditure patterns at Nevada's institutions are very similar to those of its peer institutions;
- With the exception of CCSN, Nevada institutions are comparatively well-staffed, especially regarding clerical and administrative/professional staff;
- Faculty salaries are very competitive, especially at the two universities;
- Faculty are not tenured at abnormally high levels;
- Nevada institutions teach relatively few course sections with low enrollments;
- Nevada institutions award degrees in a wide variety of fields relative to the size of student bodies;
- Of the students enrolling in higher education as freshmen, particularly at the community colleges, relatively low percentages exit with credentials; and
- Nevada receives relatively little federal competitive research funding compared to its peers per FTE faculty.

Summary of Principal Findings and Recommendations

Based upon review of consultant suggestions and independent evaluation, the Committee developed a total of 24 formal recommendations and one Bill Draft Request (BDR). A copy of the BDR and the recommendations in their entirety can be found in the body of the Committee report.

The principal finding of the consultant, and ultimately the Committee, was that Nevada's higher education **institutions are operating efficiently at the institutional level** when compared to their national peers **but the system as a whole is a relatively high-cost enterprise**. As noted by the consultant, with the exception of CCSN which is generally at the lower end of the comparison ranges, UCCSN institutions compare favorably with similar institutions nationally when examining revenue allocations and functional expenditures. The consultant found that none of the UCCSN institutions are spending inordinate amounts on administration.

The consultant pointed out that substantially more than half the FTE undergraduate enrollments are in the two universities and that **only five states have a higher proportion enrolled in their research universities**. Until the opening of the Nevada State College, the state had no lower cost alternative to research universities for students interested in enrolling in baccalaureate programs. The consultant opined 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 consultant also noted that the search for efficiencies is more productively focused at the system level rather than the institutional level.

As noted by the consultant, the key decision is the tradeoff between continuing to funnel large numbers of (not necessarily well-prepared) students into the research universities, especially UNLV, 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.

To accommodate growth, the Committee recommends limiting enrollment at the universities and creating four-year program capacity at baccalaureate institutions for reasons of both cost and responsiveness to the defined needs of the state. The Committee concurred with the consultant that if UNLV 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.

The Committee also agreed with the consultant that Nevada State College should accommodate the bulk of the growth in four-year enrollments and that eventually additional growth should be accommodated with one or more institutions similar to Nevada State College. As suggested by the consultant, the Committee opposes creation of four-year institutions as branches or other organizational extensions of research universities. The Committee also recommends avoiding the creation of four-year programs at community colleges as a general rule, but recognizes there are circumstances where such four-year programs could be justifiably offered by two-year institutions. Some of the conditions that would justify four-year programs at two-year institutions include licensure requirements, expansion of content program needs in the geographic area, lack of logical providers and an inability for another provider to deliver the program on the community college site.

Regarding financing, the Committee concurs with the consultant that 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. The consultant opined that 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.

To address the financing concerns expressed by the consultant, the Committee recommends 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. The financing plan should address multiple issues including: devising a strategy for accommodating growth; creating a performance funding pool to provide incentives to address the leaky K-16 pipeline; establishing minimum funding levels to fulfill institutional missions; evaluating shares of institutional budgets that will be borne by the state and students (e.g. tuition policy); creating

statewide need-based financial aid programs; and examining the capital budgeting process.

Consistent with the language of A.B. 203, the consultant found that additional graduates are needed in the teaching and health care professions. The consultant pointed out that in the matter of teacher education, the issue is more one of creating student interest rather than of expanding production capacity. The consultant reported that steps have been taken to expand nursing capacity, but additional capacity is needed to produce more graduates in the areas of medical lab techs, pharmacy techs, radiologic techs, respiratory therapy, and dental hygiene. The consultants pointed out that the one program not in UCCSN's current inventory for which data and interviews suggest a need is pharmacy.

The Committee did not identify specific internal reallocation recommendations. However, the Committee concurred with the consultant that with the exception of CCSN, there is room for internal reallocation at the UCCSN institutions, assuming continuation of the formula-driven funding mechanisms now in place. The Committee recommended that the UCCSN should develop reallocation recommendations prior to the 2005–2007 Interim for further consideration. Specifically, the UCCSN should address high priority areas such as the health care field. Additionally, more effort should be expended to attract students to the teaching profession where sufficient capacity currently exists. The Committee suggested expanding non-traditional teaching program course offerings – especially nights and weekends.

Recognizing that many of its recommendations will require a significant amount of time to evaluate and/or implement, the committee recommends that the 2005 Legislature establish the Committee to Advance Higher Education in Nevada during the 2005-2007 Interim. To the extent possible, the goal of the Committee was to promulgate recommendations that would result in revenue neutrality through reallocation of existing resources available through current formula allocations. However, to promote opportunities for creative funding alternatives, the Committee encouraged the Chancellor's Office and the Board of Regents to explore all funding options **exclusive of General Fund** when developing a strategic financing plan.

This report is being submitted to the Board of Regents, the Legislative Committee on Education and the Legislative Commission prior to the commencement of the 73rd Session as required by Assembly Bill 203 of the 72nd Session. The Chairman would like to personally thank the Committee members, the consultants, the working group, and all other participants for their efforts in completing this evaluation.

Respectfully submitted,

Senator Warren B. Hardy II, Chairman
Committee to Evaluate
Higher Education Programs

II. Assembly Bill 203 of the 2003 Legislative Session

Assembly Bill No. 203–Assemblymen Perkins, Collins, Horne, Anderson, Parks, Andonov, Arberry, Atkinson, Beers, Brown, Buckley, Carpenter, Chowning, Claborn, Conklin, Geddes, Gibbons, Giunchigliani, Goicoechea, Goldwater, Grady, Griffin, Hettrick, Leslie, Mabey, Manendo, Marvel, McCleary, Mortenson, Oceguera, Pierce, Sherer, Weber and Williams

CHAPTER.....

AN ACT relating to higher education; creating the Committee to Evaluate Higher Education Programs; providing for its organization, powers and duties; making an appropriation; and providing other matters properly relating thereto.

THE PEOPLE OF THE STATE OF NEVADA, REPRESENTED IN SENATE AND ASSEMBLY, DO ENACT AS FOLLOWS:

Section 1. 1. The Committee to Evaluate Higher Education Programs, consisting of 12 voting members and 4 nonvoting members, is hereby created.

2. The following persons shall serve as voting members of the Committee:

(a) Three members of the Senate, appointed by the Majority Leader of the Senate;

(b) Three members of the Assembly, appointed by the Speaker of the Assembly;

(c) Three members of the Board of Regents, appointed by the Chairman of that Board; and

(d) Three members appointed by the Governor.

3. The Governor shall appoint the following persons to serve as the nonvoting members of the Committee:

(a) One person who is employed in the Budget Division of the Department of Administration;

(b) Two persons who are employed by the University and Community College System of Nevada; and

(c) One student who is currently enrolled in an institution within the University and Community College System of Nevada.

4. The Chairman of the Legislative Commission shall designate one of the members as Chairman of the Committee.

5. The Director of the Legislative Counsel Bureau shall provide the necessary professional staff and a secretary for the Committee.

6. For each day or portion of a day during which they attend a meeting of the Committee or are otherwise engaged in the business

of the Committee:

(a) The voting members of the Committee who are Legislators are entitled to receive the compensation provided for a majority of the members of the Legislature during the first 60 days of the preceding regular session plus the per diem allowance provided for state officers and employees generally and the travel expenses provided pursuant to NRS 218.2207.

(b) The voting members of the Committee who are members of the Board of Regents are entitled to receive travel expenses and a per diem allowance at the rates established in NRS 396.070.

(c) The voting members of the Committee appointed by the Governor are entitled to receive the per diem allowance and travel expenses provided for state officers and employees generally.

Sec. 2. The Committee shall:

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 and 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.

Sec. 3. The Committee may hold public hearings at such times and places as it deems necessary to afford the general public and representatives of governmental agencies and of organizations interested in higher education an opportunity to present relevant information and recommendations.

Sec. 4. The Committee may employ such educational and financial consultants as it deems necessary for this study.

Sec. 5. The Committee may accept and use all gifts and grants which it receives to further its work.

Sec. 6. 1. There is hereby appropriated from the State General Fund to the Legislative Commission the sum of $250,000 for the purpose of conducting an evaluation of higher education programs as provided in this act.

2. Any remaining balance of the appropriation made

by subsection 1 must not be committed for expenditure after December 31, 2004, and reverts to the State General Fund as soon as all payments of money committed have been made.

Sec. 7. The Committee shall submit to the Board of Regents, Legislative Committee on Education and Legislative Commission a report of its findings and any recommendations for legislation before the commencement of the 73rd Session of the Legislature.

Sec. 8. This act becomes effective on July 1, 2003, and expires by limitation on February 1, 2005.

III. Committee Goals

A. Examine and evaluate the need for existing and potential higher education programs to ensure economic progress and development within the state to ensure that the educational needs of residents are being met.

B. 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.

C. Determine whether it is feasible to reallocate existing resources within institutions to meet the critical needs of the state that are not currently being met.

D. Determine whether General Fund appropriations and student fee revenues are being efficiently distributed internally at each campus.

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

IV. Committee Recommendations

The Committee adopted a majority of the recommendations promulgated by the consultant. The Committee also developed numerous recommendations based upon independent discussion and evaluation. The final recommendations of the Committee are listed below in bold. Much of the background supporting these recommendations can be found in the consultant report. Additional background is provided in this recommendation section as necessary to provide clarification. At the request of the Committee, notations are included to identify the committee members who did not concur with the final recommendations.

1. **The Committee recognizes that many of its recommendations will require a significant amount of time to evaluate and/or implement. During the presentation of their final report, the consultant remarked that the issues faced by Nevada cannot be solved in a two to four-year period. Rather, Nevada must embark on a 20-year journey to make significant improvements. With this in mind, the committee recommends that the 2005 Legislature establish the Committee to Advance Higher Education in Nevada during the 2005-2007 interim to evaluate plans developed in response to the Committee's current recommendations. The evaluation should include an examination of the costs and funding sources associated with the plans. It is recommended that the membership of the new committee be similar to the membership of the current committee. When developing and evaluating plans, the Committee recommends that all bodies (Regents, Chancellor's Office, Interim Committee, etc.) should seek input from as many stakeholders as possible and ensure that students have a strong voice in matters under consideration.**

   The BDR prepared by LCB Legal Counsel is included in this report.

   This recommendation was unanimously supported by the committee members present for the vote.

2. **The consultant report stated that while there will continue to be requirements to add new programs, funding at most of the UCCSN institutions is currently sufficient to allow funding through internal reallocation. To the extent possible, the goal of the Committee was to promulgate recommendations that would result in revenue neutrality through reallocation of existing resources. However, to promote opportunities for creative funding alternatives, the Committee encourages the Chancellor's Office and the Board of Regents to explore all funding options exclusive of General Fund when developing a strategic financing plan.**

   This recommendation was unanimously supported by the committee members present for the vote.

   Background: This recommendation assumes that the current formula funding methodology would continue to be used in the UCCSN budgeting process.

3. **The Board of Regents and the Legislature should develop and agree upon a plan for accommodating growth including the following:**

   a. **Limit enrollment at the universities and create four-year program capacity at baccalaureate teaching institutions for reasons of both cost and responsiveness to the defined needs of the state.**

   b. **If UNLV 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.**

   c. **Growth in Nevada, especially Clark County, will drive demand for many more openings at both the two- and four-year levels. The Committee recommends the following:**

      - **Nevada State College should accommodate the bulk of the growth in four-year enrollments. Eventually accommodate additional growth with one or more institutions similar to Nevada State College.**

      - **Do not create four-year institutions as branches or other organizational extensions of research universities. This solution is more cost-effective and serves to keep the focus of the research universities on their unique contributions to state needs.**

      - **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.**

   This recommendation was unanimously supported by the committee members present for the vote.

   During deliberations, the Committee noted that university entrance qualification Grade Point Average (GPA) requirements are being increased from 2.5 to 2.75 in fall 2006 and to 3.0 in fall 2010 (in the core approved by the Board of Regents). Further, the Committee acknowledged that the UCCSN plans to shift remedial education from the universities to the community colleges effective fall 2006.

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

The financing plan should:

a. Reflect the strategy for dealing with the growth accommodations described above.

b. 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 percent over this level, a process for rectifying this condition should be indicated.

c. Create a performance funding pool from existing formula funding to improve educational output, and to address the leaky K-16 pipeline noted by the consultant.

d. 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.

e. 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.

f. 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.

g. 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. In addition, the role of the private sector (or other sources such as local contributions) in the funding of campus facilities should be reviewed at the policy level. It is recommended that the plan examine provisions under which the institutions would be funded at (on a one-time basis) a level that would allow them to target two percent of the replacement value of their facilities to plant renewal and renovation each year. The plan should also explain how the renewal and renovation efforts would be funded. At this point the capital budget process would become concerned solely with the addition of new facilities.

Recommendations 4a-4f were unanimously supported by the committee members present for the vote. Senator Cegavske did not concur with recommendation 4g.

5. Led by the Board of Regents and Chancellor's Office, discussions of programmatic needs should be raised to the strategic level.

a. Address the role of higher education in assisting the public schools to graduate a higher proportion of their students and ensuring that those who successfully complete high school are prepared to enter college. Some P-16 initiatives are in place, but a more concerted effort is clearly needed.

b. Address the identification of the areas of research competence to be fostered at UNR, UNLV, and DRI.

- **Focused in a few areas—synergies among researchers are important.**
- **Sustained over a period of years.**
- **Of high quality—the faculty involved must be fully capable of competing at the national level.**

Have a panel of experts from leading universities around the country review plans and existing capacities.

This recommendation was unanimously supported by the committee members present for the vote.

6. The Committee concurs with the consultant that with the exception of CCSN, there is room for internal reallocation at the UCCSN institutions. UCCSN should develop reallocation recommendations prior to the 2005-2007 Interim for further consideration. Specifically, the UCCSN should address high priority areas such as the health care field. The UCCSN should also examine programs with small enrollments. Additionally, more effort should be expended to attract students to the teaching profession where sufficient capacity currently exists. The Committee suggests expanding non-traditional teaching program course offerings – especially nights and weekends.

This recommendation was unanimously supported by the committee members present for the vote.

Background: The consultant responded to committee goal number 3 when he determined that, ". . . it is feasible to reallocate within the framework of their existing missions, but only if done skillfully . . . driven by strategic planning." The consultant also noted that, "If reallocations are needed to meet the critical needs of the state, much more effort must be expended to forge a consensus about what those needs really are." Finally, the consultant concluded that, "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."

The consultant indicated that with very few exceptions, 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 existing programs." The consultant also pointed out that in the matter of teacher education, the issue is more one of creating student interest rather than of expanding production capacity. The consultant reported that steps have been taken to expand nursing capacity, but additional capacity is needed to produce more graduates in the areas of medical lab techs, pharmacy techs, radiological techs, respiratory therapy, and dental hygiene. The consultant pointed out that the one program not in UCCSN's current inventory for which data and interviews suggest a need is pharmacy.

The consultant noted that at each institution, reallocation is possible with only CCSN operating at a subsistence level. Each campus has an inventory of small programs that can be reviewed. While there is extensive recognition of the capacity for institutional reallocation, the consultant provided no definitive recommendation on the topic.

This recommendation assumes that the current formula funding methodology would continue to be used in the UCCSN budgeting process.

7. **The Board of Regents and Legislature should accept prior decisions relative to the creation of the Nevada State College and the Dental School and focus energy and attention on the state's future.**

Senators Cegavske and Care did not concur with this recommendation. The other committee members present for the vote supported the recommendation.

8. **The Board of Regents and Chancellor's Office should take proactive leadership in conducting a thorough assessment of the state's needs for pharmacists. If a need is identified, recommend a response that is cost-effective (with effectiveness being defined in terms of the broader needs of the state). In making this recommendation, private partnerships and independent private operations, outside the state as well a within the state should be investigated as should solutions that involve clinical, but not classroom work at sites in Nevada.**

Regent Bandera did not concur with this recommendation. The other committee members present for the vote supported the recommendation.

9. **The Treasurer's Office should report Millennium Scholarship revenue and expenditure estimates to the Interim Finance Committee in advance of the September 2004 meeting. The report should include a contingency plan in the event that revenues fall short of program needs.** Note: The next meeting of the Interim Finance Committee was September 15, 2004. The Fiscal Division

due date for meeting packet information submittal was August 20, 2004. The Millennium Scholarship Executive Director indicated the requested estimates could be provided by the noted deadlines.

This recommendation was unanimously supported by the committee members present for the vote.

Background: During the 2003 Session, based upon the recommendations of the Treasurer's Office, the Legislature made several statutory changes relative to Millennium Scholarship program eligibility. The changes were made at least in part in an attempt to ensure program expenditures would not exceed anticipated revenues. The Committee expressed concern over dwindling tobacco settlement revenues and asked the Treasurer's Office to provide program expenditure and revenue estimates. However, the projections were not available prior to the conclusion of the Committee's business.

10. Continue efforts to improve the articulation and 2+2 processes to provide seamless transitions for transferring students and to reduce costs to the student and the system. The UCCSN should consider including transfer courses when calculating the overall grade point average at the universities.

This recommendation was unanimously supported by the committee members present for the vote.

Background: The Committee engaged in lengthy discussions about articulation and offered several examples where articulation policies appeared to have hindered the academic progress of student constituents. The UCCSN defended the system's articulation policies and provided a number of examples of recent improvements including core curriculum credit reductions, development of common course numbering systems and databases which allow for seamless transition between institutions (currently covers 6,000 courses system-wide), development of policies to improve seamless transitions, and inter-institutional committees that meet to address transition.

11. Encourage the UCCSN and K-12 to continue efforts to improve public and private facility utilization partnerships. The Board of Regents and the Legislature should seek ways to encourage more private-public partnerships to build research space that can be used by UCCSN institutions.

This recommendation was unanimously supported by the committee members present for the vote.

12. Avoid the creation of four-year programs at Community Colleges as a general rule, but recognize there are circumstances where four-year programs could be justifiably offered by two-year institutions. As noted by the consultant, once the door is opened by placing a four-year program in a two-year institution, it is almost inevitable that pressure will build for more and more such programs. Further, the consultant noted that when four-year programs are offered by an institution, it is hard to sustain an emphasis on occupational programs, especially those in the blue-collar skilled trades (auto mechanics, construction trades, etc.). Over time, emphasis on such programs diminishes and they may be phased out completely. The committee also recommended that all UCCSN institutions, not just the community colleges, should operate within defined missions.

This recommendation was unanimously supported by the committee members present for the vote.

Background: In their April 15, 2004 memo, the committee consultant indicated that as a general rule, the creation of four-year programs at community colleges should be avoided. The consultant noted that the situation creates a set of internal institutional dynamics that erode the community college mission and foster expectations that the institution as a whole move to full four-year status (see p. B-8 in the consultant report).

The consultant noted that faculty who teach baccalaureate programs almost always have different teaching loads than faculty who teach at the two-year level—four courses versus five being typical. The consultant continued that it is very difficult to maintain two classes of faculty within the same institution—and the pressure will always be toward the teaching loads typical of a four-year institution. In the end this means that the cost per FTE student increases by approximately 15-25 percent (see pp B-8 & B-9, bullet #3 in the consultant report).

The consultant indicated that conditions under which adding four-year programs at a two-year institution may be justified include those in which either requirements of licensure or the sheer expansion of content to be covered necessitates the change from associate to baccalaureate level. Cited as examples were allied health professions in which licensure that once was offered to graduates of associate programs becomes restricted to graduates of baccalaureate programs, e.g., nursing and physical therapy assistants in some states (see p. B-9, paragraph #1 in the consultant report).

The consultant provided other examples wherein baccalaureate programs could justifiably be offered by a two-year institution including: There is a compelling need for graduates of the program in the geographic area of the college; there is no other logical provider of the program in the region; and it is not feasible to have another institution in the state system deliver the program on the community college site (made a more valid option as a result of distance education capacity).

13. The UCCSN should address inadequacies related to information/data systems. Also, systems capabilities should be improved to provide longitudinal tracking of students' progress. Tracking should include all stages of a student's or graduate's progress including educational (K-12 and UCCSN) and employment (by specific occupation).

This recommendation was unanimously supported by the committee members present for the vote.

Background: The consultant observed that Nevada has outdated policies and capacities related to information/data systems. The consultant stated that the data systems at the UCCSN are inadequate to the task of determining costs associated with UCCSN programs and the actual savings that could be made available for reallocation.

The consultant also pointed out that, "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. The data systems are established to support institutional functioning. However, the basic data required for system functioning are not readily available; they can be obtained only by making special requests of each institution and compiling the results. Data available in most system offices—for example, the numbers and characteristics of students transferring from institution to institution within the system—are not available at UCCSN."

14. The Committee supports the following recommendations prepared by the Commission on Economic Development in consultation with the regional economic development authorities:

a. The research and development and the industry partnering roles of the UCCSN should be focused on the economic development strategies of the state and its regional development authorities.

b. The model of the state of Georgia's Research Alliance should be emulated. This strong partnership between the research entities at UCCSN and private industry will have profound long-term economic benefit to the state. Georgia has moved to the forefront of growth in technology employment and technology business creation by linking companies to the state-of-the art resources at Georgia research universities.

c. The core competencies analysis of UNR, UNLV and DRI should be undertaken with the intent to identify the synergies among the researchers to develop high quality projects worthy of national recognition. Incentives for program cooperation within UCCSN should be considered.

d. Entrepreneurial education and training at UCCSN to include the development of more incubation services and programs should be expanded. The investment in a start-up oriented technology transfer system should be emphasized.

e. Internships and cooperative programs across UCCSN with particular relevancy to technology industries should also be expanded.

This recommendation was unanimously supported by the committee members present for the vote.

15. The Board of Regents should examine the following recommendations to address space shortfalls (especially research space) prepared by Dr. James Richardson. The Board should report its findings for consideration by the Committee:

a. The Board of Regents and the Legislature should establish research space as a high priority, and should work with the Governor to give research space needs reasonable primacy in the allocation of funds available to the state for capital projects.

b. The Board of Regents and the Legislature should work together with the Governor's Office to find new ways to fund more capital construction that will directly benefit the research space needs of UCCSN institutions.

c. The Board of Regents and the Legislature should find more ways to encourage partnerships between UCCSN institutions and private entities in start-up companies that attempt to develop products and processes that have market potential. Particularly there is a need for "gap funding" which can be used to prove up a concept, develop prototypes, and do pilot and feasibility studies to encourage the incubation of start-up companies built around novel technologies that have been invented or developed within UCCSN institutions.

d. The Legislature should expand the Applied Research Initiative that has been helpful and productive of research grants for UCCSN institutions, as well as helping establish relationships between UCCSN institutions and some incubator companies.

Regent Bandera did not concur with this recommendation. The other committee members present for the vote supported the recommendation.

The Committee <u>did not</u> support forwarding the following recommendations to the Board of Regents:

- **Ideas could include legislation establishing a state matching pool for construction that would guarantee a state dollar-for-dollar match of private or other funds raised for specific research space projects. Also, there might be consideration for a special bonding initiative to be submitted to the voters specifically to fund needed research projects. Other ideas could include adding a few cents (outside the $3.64 cap) to the property tax for research capital needs, justified as needed to help develop economic diversification.**

- **The Legislature could approve the long-standing request of the Board of Regents to allow the two universities to retain the 25 percent of Indirect Cost Recovery that is now sent to the State General Fund.**

Dr. Rice, Senator Care, Senator Cegavske, Senator Hardy and Assemblyman Marvel voted to not forward the recommendations to the Board of Regents. The other committee members present voted to forward the recommendations.

16. **The UCCSN should expend additional effort in partnering with K-12, especially grades 6-12, to encourage eventual participation in higher education.**

This recommendation was unanimously supported by the committee members present for the vote.

17. **The UCCSN should improve the effectiveness of its teaching programs to avoid the need to retrain teachers upon completion of their formal education. The UCCSN should develop a program evaluation process to ensure that students in the teacher education program are learning the required subject matter.**

This recommendation was unanimously supported by the committee members present for the vote.

18. **Exit interviews should be conducted with teachers who leave the teaching profession. The exit interviews would enable school districts and the UCCSN to proactively address barriers to retaining qualified teachers. To the extent possible, the results of the exit interviews should be made available as public documents. Additionally, graduates with education degrees should be periodically tracked to determine whether they entered the teaching profession.**

This recommendation was unanimously supported by the committee members present for the vote.

19. **The UCCSN should establish performance measurement criteria for programs designed to fast track teachers.**

This recommendation was unanimously supported by the committee members present for the vote.

20. **The Board of Regents and Chancellor's Office should examine the role of higher education in addressing adult literacy, especially the basic literacy skills of young adults.**

This recommendation was unanimously supported by the committee members present for the vote.

21. **The Legislature should appoint from among its members a committee to work with the Board of Regents to develop the Public Agenda for Nevada—that list of priorities that will guide strategic decision making about higher education in the State of Nevada. The Board of Regents and Chancellor's Office should provide the leadership for the process of developing the Public Agenda.**

This recommendation was unanimously supported by the committee members present for the vote.

22. **The Legislature should require the Board of Regents and the Chancellor's Office to propose to the Legislature within a specified timeframe an accountability plan consistent with monitoring progress toward achieving the Public Agenda.**

This recommendation was unanimously supported by the committee members present for the vote.

23. **The Board of Regents and Chancellor's Office should develop written compacts with each institution indicating the expected nature of their development over the next five years and the kinds of support to be provided by the Board of Regents in furtherance of the agreed-upon developmental objectives.**

This recommendation was unanimously supported by the committee members present for the vote.

24. **The Board of Regents and Chancellor's Office should develop the protocols and incentive mechanisms for ensuring that all resources of the system can be utilized to service needs in all parts of Nevada.**

This recommendation was unanimously supported by the committee members present for the vote.

Other Noted Issues

Independent of Dr. Richardson's recommendations, the Committee discussed the retention of Indirect Cost Recovery (ICR) revenues at length but took no action on this issue. The Chairman instead suggested that this issue be considered by the money committees during the legislative session.

Background & History: OMB Circular A-21 defines indirect costs as those incurred for common or joint objectives and, therefore, cannot be identified readily and specifically with a particular sponsored project, an instructional activity, or any other institutional activity. Examples of indirect costs include general administration, accounting and personnel services, depreciation or use allowances on buildings and equipment, and the costs of operating and maintaining facilities.

The UCCSN has generated substantial sums of money through the ICR charged to grantor or contracting agencies. The state has traditionally kept portions of the ICR revenues generated. The retention has been viewed as partial reimbursement for state funding provided to create and maintain the infrastructure necessary to generate UCCSN contracts and grants and subsequently, ICR revenues.

Before 1985, ICR funds were allocated 75 percent to finance the state-supported budget and 25 percent for use by the universities. During the 1985 Session, the Legislature modified the ICR funding to allow an even 50/50 percent split between the state-supported budgets and university use. The 1989 Legislature allowed the UCCSN to retain all ICR funds generated in excess of the amount budgeted only during the 1989-91 biennium. Each subsequent biennium, ICR funds would be re-projected and allocated 50 percent to the state-supported budget and 50 percent for use by UCCSN.

The 1995 Legislature made further changes to the distribution of ICR revenues. ICR revenues deposited to state-supported operating budgets remained at levels authorized in FY 1990-91 unless total ICR revenues reached certain levels. For each campus budget, once ICR revenues increased to a level that resulted in 25 percent of total collections exceeding the amount budgeted in FY 1990-91, ICR revenues would be allocated 25 percent to the state-supported budget and 75 percent to the appropriate campus. However, the state-supported operating budget would not receive less than was budgeted in FY 1990-91 from ICR revenue. For ICR revenues in excess of legislatively approved levels, the additional revenues attributable to the 25 percent portion allocated to the state supported operating budget revert to the state General Fund at the close of the fiscal year.

The Committee consultant reported that most states allow their institutions to retain 100 percent of the Indirect Cost Recovery revenues generated (Consultant Memo, Page B-6). The UCCSN seeks to retain the remaining 25 percent ICR allocation currently retained by the state. The UCCSN has previously pointed out that Nevada's current policy puts the UCCSN at a competitive disadvantage with public research universities in other states. If allowed to fully retain the ICR revenues, UCCSN institutions indicated the allocations would be used to supplement competitive research activities. The State General Fund cost to implement UCCSN's ICR proposal would be approximately $10 million for the 2005-2007 biennium.

V. Bill Draft Request

LEGAL DRAFT

SUMMARY—Creates Committee to Advance Higher Education in Nevada. (BDR S-182)

FISCAL NOTE: Effect on Local Government: No.

Effect on the State: No.

AN ACT relating to higher education; expressing the sense of the Nevada Legislature regarding the importance of higher education and the need to develop a public agenda concerning higher education; creating the Committee to Advance Higher Education in Nevada and providing for its organization, powers and duties; and providing other matters properly relating thereto.

Proposed Digest: Creates the Committee to Advance Higher Education in Nevada.

THE PEOPLE OF THE STATE OF NEVADA, REPRESENTED IN SENATE AND ASSEMBLY, DO ENACT AS FOLLOWS:

Section 1. The Legislature hereby finds and declares that:

1. Matters relating to higher education are vitally important to the future of the State of Nevada, its economy and the general welfare of its residents. In light of the growing enrollments in Nevada's public system of higher education, it is important that the Nevada Legislature, Board

of Regents and the Executive Branch of the State Government work together as partners in developing a needed public agenda to advance higher education in this State.

2. Implementation of the recommendations made by the Committee to Evaluate Higher Education Programs created pursuant to Assembly Bill No. 203 of the 72nd Session of the Nevada Legislature must be evaluated, and such evaluation should include, without limitation, an examination of the costs and sources of funding associated with the implementation of those recommendations.

3. Many of the recommendations made by the Committee to Evaluate Higher Education Programs created pursuant to Assembly Bill No. 203 of the 72nd Session of the Nevada Legislature may take a significant period of time to evaluate and implement.

4. The development of the agenda to advance higher education should be carried out with a view toward seeking input from all parties who have a stake in the advancement of higher education in this State, including, without limitation, the students who participate in Nevada's public system of higher education.

5. The Board of Regents was created by the Nevada Constitution and empowered to control and manage the affairs of the University and Community College System of Nevada.

Sec. 2. 1. The Committee to Advance Higher Education in Nevada, consisting of 14 voting members and 4 nonvoting members, is hereby created.

2. The following persons shall serve as voting members of the Committee:

(a) Five members of the Board of Regents, appointed by the Chairman of that Board;

(b) Six members of the Legislature, three each from the Senate and the Assembly, appointed by the Chairman of the Legislative Commission; and

(c) Three members appointed by the Governor with appropriate regard for their experience with and knowledge of matters relating to higher education.

3. The Governor shall appoint the following persons to serve as the nonvoting members of the Committee:

(a) One person who is employed in the Budget Division of the Department of Administration;

(b) Two persons who are employed by the University and Community College System of Nevada; and

(c) One student who is currently enrolled in an institution within the University and Community College System of Nevada.

4. The Chairman of the Board of Regents, the Chairman of the Legislative Commission and the Governor shall each appoint two alternate voting members to attend a scheduled meeting of the Committee if a regular member is unable to attend. If any regular member of the Committee is unable to attend a scheduled meeting of the Committee, and notifies the Chairman of the Committee, the Chairman or his designee shall notify the proper alternate member. Such alternate member may then replace the regular member at that meeting only with all the duties, rights and privileges of the replaced member.

5. The Chairman of the Legislative Commission shall designate one of the members as Chairman of the Committee.

6. A vacancy on the Committee must be filled in the same manner as the initial appointment.

7. The Director of the Legislative Counsel Bureau shall provide the necessary professional staff and a secretary for the Committee.

8. For each day or portion of a day during which they attend a meeting of the Committee or are otherwise engaged in the business of the Committee:

(a) The voting members of the Committee who are Legislators are entitled to receive the compensation provided for a majority of the members of the Legislature during the first 60 days of the preceding regular session plus the per diem allowance provided for state officers and employees generally and the travel expenses provided pursuant to NRS 218.2207.

(b) The voting members of the Committee who are members of the Board of Regents are entitled to receive travel expenses and a per diem allowance at the rates established in NRS 396.070.

(c) The voting members of the Committee appointed by the Governor are entitled to receive the per diem allowance and travel expenses provided for state officers and employees generally.

9. Any member who is absent from two consecutive meetings of the Committee:

(a) Forfeits his membership on the Committee; and

(b) Must be replaced as provided in this section for the filling of a vacancy.

Sec. 3. The Committee shall:

1. Continue to examine and evaluate the need in this State for existing and potential higher education programs to ensure:

(a) Economic progress and development within the State of Nevada; and

(b) That the educational needs of the residents of this State are being met.

2. Assist in the development of a plan for accommodating growth within Nevada's public system of higher education. The plan should include, without limitation:

(a) Methods by which enrollment at Nevada's universities may be limited and 4-year program capacity created at Nevada's baccalaureate teaching institutions.

(b) The development of university admission standards to select only students who are prepared for and can take advantage of academic institutions focused on research.

(c) Accommodation by Nevada State College of the majority of growth in enrollment of students into 4-year programs.

(d) Avoidance of the creation of 4-year institutions as branch campuses or organizational extensions of research universities.

3. Assist in the development of a plan to elevate the programmatic needs of Nevada's public system of higher education to the strategic level. The plan should include, without limitation:

(a) Addressing the role of higher education in assisting the public schools of this State to graduate a higher proportion of their pupils.

(b) Measures to ensure that pupils who graduate from the public schools of this State are prepared to enter a college or university.

(c) Identification of areas of expertise in research to be fostered, respectively, at the University of Nevada, Las Vegas, the University of Nevada, Reno, and the Desert Research Institute.

(d) Input from experts from a selection of leading universities within the United States to review plans and capacities relating to Nevada's public system of higher education.

4. Assist in the development of a plan for examining the role of higher education in promoting adult literacy, especially the basic literacy skills of young adults.

5. Assist in the development of a strategic-level financing plan for the public system of higher education in Nevada. The plan should include, without limitation:

(a) Recognition of the effect of any measures proposed to accommodate growth, as described in the plan developed pursuant to subsection 2.

(b) An assessment, for each institution, of the minimum level of funding that is necessary to allow Nevada's institutions of higher education to fulfill their missions at a high level of performance. The assessment described in this paragraph should include strategies for addressing shortfalls and surfeits of funding.

(c) Creation of a pool of funding from existing formula funding that may be used as a performance incentive to improve educational output at Nevada's institutions of higher education.

(d) Provision for one or more permanent investment funds to allocate stable financial resources toward this State's high priority of paying for public and higher education.

(e) Recommendations concerning, for each of Nevada's institutions of higher education, the relative percentages of the institutional budget that will be paid for by the State and by students.

(f) The creation of a need-based financial aid system to ensure that higher education remains affordable for even the most economically needy of Nevada's residents.

(g) The integration of budgetary items related to capital improvements with the overall plan to finance Nevada's public system of higher education.

(h) An examination of proposals to allow Nevada's institutions of higher education to finance the construction and replacement of campus facilities in innovative ways and to establish budgetary levels, exclusive of additional general fund appropriations, that will allow those institutions to renew and renovate campus facilities on an ongoing basis.

6. 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.

Sec. 4. The Committee may hold public hearings at such times and places as it deems necessary to afford the general public and representatives of governmental agencies and of organizations interested in higher education an opportunity to present relevant information and recommendations.

Sec. 5. The Committee may employ such educational and financial consultants as it deems necessary for this study.

Sec. 6. The Committee may accept and use all gifts and grants which it receives to further its work.

Sec. 7. The Committee shall submit to the Board of Regents, Legislative Committee on Education and Legislative Commission a report of its findings and any recommendations for legislation before the commencement of the 74th Session of the Legislature.

Sec. 8. This act becomes effective on July 1, 2005, and expires by limitation on February 1, 2007.

VI. Meeting Summaries

Committee Meeting #1, November 3, 2003

- The Chairman provided the Committee with a brief overview of the mission, objectives and the budget of the Committee.

- A working group comprised of professional staff from the University and Community College System of Nevada (UCCSN), economic development authorities and the Legislative Counsel Bureau was assigned to assist the Committee.

- The Committee agreed to use a consultant to assist with the higher education program evaluation. The Committee identified the criteria to be used in selecting the consultant and identified potential tasks and deliverables to be included in the contract. The Committee approved project timelines and milestones and appointed a subcommittee comprising of Senator Hardy (chairman), Regent Derby and Dr. Rice to review and recommend potential consultants to the Committee.

- The committee established the scope of the examination to include in priority order, instructional, research and public service functions. Similarly, the examination of state-supported operating budgets was given the highest priority followed by the review of self-supported and grant/contract-funded activities.

Subcommittee Meeting #1, December 10, 2003

- On November 7, 2003, the Committee wrote to solicit bids from eight national educational organizations identified as potential committee consultants by the UCCSN.

- Two proposals were received – one from a consortium lead by the National Center for Higher Education Management Systems (NCHEMS) and the other from Meridian Business Advisors, a local firm added to the original list of potential consultants.

- The subcommittee evaluated the proposals and developed a consultant recommendation for consideration of the full committee. The subcommittee was impressed with the quality of the two proposals but ultimately recommended the NCHEMS consortium (NCHEMS, the Western Interstate Compact for Higher Education – WICHE and the State Higher Education Executive Officers – SHEEO) to serve as the committee consultant.

- Subsequent to the December 10, 2003 subcommittee meeting, Meridian Business Advisors asked to be withdrawn from consideration.

Committee Meeting #2, December 15, 2003

- The Committee concurred with the subcommittee's recommendation and selected the NCHEMS consortium (NCHEMS, WICHE and SHEEO) to serve as the committee consultant.

- To provide a foundation for committee discussion, Chancellor Nichols provided an overview of the UCCSN. The overview included a description of the eight UCCSN institutions; a discussion of enrollment and population trends and key statewide demographics; descriptions of state-supported programs and the UCCSN budget; and a discussion of academic programs including new programs and the process for program approval and review.

- Tyler Trevor, Associate Vice Chancellor for Academic and Student Affairs, described the UCCSN master plan and provided an overview of accountability and measures of student achievement. Mr. Trevor described the linkage between accountability and performance indicators. The UCCSN presentation included charts reflecting recent improvements in Nevada's college continuation rates. Conversely, the charts also reflected a steady increase in the percentage of recent high school graduates enrolling in at least one UCCSN remedial course.

- Chancellor Nichols provided an overview on the shortage of nurses and reported that Nevada had the lowest ratio of nurses to patients in the nation. Chancellor Nichols explained that population growth is outpacing nursing school supply and noted that between 2000 and 2008, 662 nurses per year would be needed while the UCCSN graduated only 288 nurses in FY 2003. As a result of the nursing initiative, by FY 2005, the UCCSN plans to increase nursing student capacity by 650 students.

- Chancellor Nichols provided an overview on the shortage of teachers and reported that the number of new K-12 teachers employed in Nevada was expected to increase by 33 percent between 2000 and 2010. Dr. Nichols indicated that approximately 2,000 teachers are needed per year while UNR and UNLV currently prepare approximately 700 undergraduates to enter the teaching profession. Dr. Nichols described efforts taken by the UCCSN to alleviate the teacher shortage including the establishment of collaborative programs between the universities and community colleges (2+2 programs); creation of the Nevada State College; addition of distance education and off-campus sites; and joint initiatives with local school districts.

- The Committee requested additional information be provided at the next meeting on the following topics:

  - Resident and non-resident enrollments and fees;
  - Comparisons of Nevada's fees and tuitions with comparable institutions in other states;
  - Fee increases associated with the proposed UNLV student union and recreation center facilities;
  - Points of concentration in the UCCSN master plan;
  - Florida's early high school graduation program;
  - Millennium Scholarship trends and descriptions of the effect of program changes implemented by the 2003 Legislature;
  - Forms used to evaluate UCCSN instructors;
  - The effect of No Child Left Behind legislation on teacher shortages in Nevada;
  - Resident and non-resident nursing enrollments;
  - Partnerships between CCSN and Las Vegas area high schools to accelerate progression toward nursing and teaching degrees;
  - Overviews on the missions of the Nevada State College and the Dental School;
  - Descriptions of UCCSN's criteria and processes used for eliminating programs;
  - Copies of the 1,026-page UCCSN investigative report; and
  - Actual and projected need-based financial aid for fiscal years 2001 through 2005.

Committee Meeting #3, February 3, 2004

- Written responses to committee questions from the December meeting were included in the February meeting packet. The UCCSN provided additional verbal clarification as necessary.

- The NCHEMS consortium appeared before the Committee for the first time. In outlining the process for the consultants' work on the study, NCHEMS President Dennis Jones indicated the consultants would provide a set of analyses driven by data which showed the current status of the state, how the state compared to other states, the future of the state, and combined what all of that meant for higher education. Mr. Jones indicated that NCHEMS would provide analyses regarding the finance of higher education – how much money the institutions had, how that money was being used, etc. at the next committee meeting.

- Mr. Jones indicated the consultants would review the policies and procedures used by the systems and institutions both from the Legislature and the Board of Regents. The consultants will look for consistency and incentives, in addition to other analyses. Thereafter, the consultants would be traveling throughout the state to ask questions regarding the policy environment, what was happening in

the region with students, and identify inconsistencies. Meetings would also take place with community representatives, school superintendents and principals, health care providers in the region, manufacturers, employers and others to determine regional needs versus what higher education was delivering, and identifying the strengths and weaknesses of that connection.

- NCHEMS' presentation entitled, "Selected Data for Nevada Higher Education," provided data and statistics on various topics including: population; per capita income; poverty; educational attainment and graduate rates; college-going rates; import/export ratios of students and adults; degrees awarded; employment and earnings in various occupations; occupations with large annual projected openings; development report cards; ability to produce, attract and keep graduates; and research and development expenditures.

- NCHEMS concluded with observations that postsecondary education issues facing Nevada include:

  - Accommodating growth - the state has a large potential for growth in the age cohort that would be attending college if capacity was available;
  - Getting more students through the education pipeline – beginning at ninth grade and completion through high school and college;
  - Responding to immediate workforce needs, with the obvious needs at the moment continuing to be teachers, nurses and other health care professionals;
  - Developing a workforce for the future – Issues of technology information to workers and adult literacy will affect the economy of the state as the state becomes more diversified, especially considering the population of young people who do not graduate from high school;
  - Diversifying the economy – increasing capacity and competitiveness in research.

- The Committee requested that additional information be provided at the next meeting on the following topics:

  - Comparisons on health services fees at UNR and UNLV;
  - Funding supporting student government activities;
  - Comparisons of retention rates for Millennium Scholars and the general student population; and
  - Pledges and cash donations received by the Nevada State College toward the $10 million goal for the academic and student services building.

Committee Meeting #4, March 24, 2004

- Written responses to committee questions from the February meeting were included in the March meeting packet. Additional verbal clarification was provided as necessary.

- The consultant provided clarification on statements made during the February meeting regarding the effect of the Millennium Scholarship on college continuation rates. The consultant indicated that regardless of how the college continuation rate was calculated, the results show a jump between 1998 and 2000. Since the Millennium Scholarship took effect in this period, the consultant indicated one can argue that the scholarships had an effect on the continuation rate. However, the consultant also noted that a substantial increase occurred during the 1992-98 time period when the Millennium Scholarship did not exist.

- The consultant provided a revision to the per capita dentist employment data provided during the February meeting. At the February meeting, NCHEMS reported that based upon Bureau of Labor Statistics reports, Nevada had 41.5 dentists per 100,000 residents which was more than the national average of 32 per 100,00. At the March meeting, NCHEMS indicated it would be more accurate to use data acquired by the UCCSN from the Health Resources and Services Administration which indicate the ratio of dentists to 100,000 residents is 39.2 - much lower than the national ratio of 60.7.

- In their second appearance before the Committee, the NCHEMS consortium provided comparative information on the adequacy of funding, utilization of existing resources and cost effectiveness. The consultant recommended a group of peer institutions for each UCCSN campus and used those peers as benchmarks for the various comparison criteria. The committee directed the UCCSN to provide written feedback to the consultant regarding potential modifications to the selected peer listings.

- A summary of NCHEMS' observations is as follows:

    - Expenditure patterns at Nevada's institutions are very similar to those of its peer institutions;
    - With the exception of CCSN, Nevada institutions are comparatively well-staffed, especially regarding clerical and administrative/professional staff;
    - Faculty salaries are very competitive, especially at the two universities;
    - Faculty are not tenured at abnormally high levels;
    - Nevada institutions teach relatively few course sections with low enrollments, with explainable exceptions being graduate level courses at UNR and UNLV and upper division courses at Great Basin and Nevada State colleges;
    - Nevada institutions award degrees in a wide variety of fields relative to the size of student bodies;
    - Of the students enrolling in higher education as freshmen, particularly at the community colleges, relatively low percentages exited with credentials; and

- Nevada receives relatively little federal competitive research funding compared to its peers per FTE faculty;

- The Committee requested that additional information be provided at the next meeting on the following topics:

  - Measures employed by the UCCSN campuses to ensure Millennium Scholars retain their eligibility;
  - Reports on the percentages of Millennium Scholars losing their eligibility each year and the impact on retention resulting from increasing the college GPA requirement from 2.0 to 2.6;
  - Feedback on the peers recommended by the consultant;
  - Reports on the average Pell Grant amounts received by Pell Grant recipients for fiscal years 1998 through present and a description of the effect, if any, that Millennium Scholarship awards have on Pell Grant calculations;
  - Report on the provision of distance education courses using adjunct faculty who reside and teach courses outside of the state of Nevada;
  - Report on the articulation process, core credit requirements and various problems associated with the transfer and acceptance of courses taken at the community colleges; and
  - Remedial enrollment reports including comprehensive remedial costs, credit hours and student data.

Committee Meeting #5, April 29, 2004

- Written responses to committee questions from the March meeting were included in the April meeting packet. Additional verbal clarification was provided as necessary.

- Subsequent to the March meeting, UNLV was the only UCCSN institution that suggested modifications to the original list of peers recommended by the consultant. The consultant complied with UNLV's written request to remove the University of Missouri at St. Louis and Idaho State from the final recommended peer list. The consultant also complied with UNLV's request to add Georgia State, Central Florida and the University of Houston-University Park to the final list of recommended peers. However, UNLV's request to add the University of Louisville was denied. Other changes to the final peer list include the removals of CSU Fresno, Eastern Michigan and San Diego State University. As noted during the March Committee meeting, Fresno State and Eastern Michigan are ranked at a lower level than UNLV on the Carnegie Classification guide.

- During the March meeting, there was considerable discussion regarding articulation, core credit requirements, and various problems associated with the transfer and acceptance of courses taken at the community colleges. The UCCSN provided copies of the Board of Regents' policy regarding articulation

and provided a PowerPoint presentation that addressed concerns of the Committee.

- During the March meeting, the Committee asked the UCCSN to provide information on remedial program costs and student enrollment data. The Committee also requested clarification on recent policy changes that will shift remedial education from the universities to the community colleges. In response, the UCCSN submitted a copy of the *Report on Remedial/Developmental Enrollments*, dated February 2004. The report focuses on summer and fall 2003 remedial enrollments of recent Nevada graduates only. UCCSN notes that as included in the report, the total cost of remediation for recent Nevada graduates for summer and fall 2003 is estimated to be $2.8 million. The UCCSN extrapolated the report figures to all students for a full year (including spring) bringing the estimated total cost of delivering remedial courses to $15.3 million.

  UCCSN reported that beginning in fall 2006, and coinciding with the implementation of phase one of the increased admission standards at the universities, remedial education courses at the universities will be self-supporting. UCCSN states that under this policy, it is expected that many students will complete remedial work at a community college prior to entering a university in the fall.

- The Committee invited the Nevada Policy Research Institute (NPRI) to present, "Funding Educational Reform in Nevada." According to charts provided by Dr. Robert Schmidt, the purpose of the presentation was to initiate dialogue on Nevada's educational system; to begin to critically examine alternatives by providing contrasting views; and to review recent studies of Nevada's education system. Dr. Schmidt's presentation concluded with proposals to reduce UCCSN funds by $100 million and to increase tuition by $2,500 per student; to increase means-tested grants; to eliminate the university college at UNLV; to limit growth and to restructure the 3-tier system; and to increase accountability.

- Economic development authorities throughout the state provided overviews on economic diversification efforts and described partnerships with the various institutions within the UCCSN. Representatives from the Nevada Development Authority (NDA), the Northern Nevada Development Authority (NNDA), the Nevada Commission on Economic Development, the Economic Development Authority of Western Nevada (EDAWN), and the Elko County Economic Diversification Authority (ECEDA) made brief presentations.

- As requested by the Chairman, NCHEMS completed an evaluation of UCCSN space utilization reports and found the following:

  - There are shortfalls of classroom and class laboratory space at CCSN and NSCH;

- There are significant needs for research laboratory space at UNR and UNLV. NCHEMS' report noted that the shortage of research space is not unusual in other institutions.
- The community colleges show a need for additional office space which is likely a consequence of accommodating full-time faculty without adequate accommodation of their part-time counterparts. NCHEMS' report noted that this occurrence is not uncommon nationally.
- Almost all of the institutions show a deficiency in library space.

NCHEMS suggested that Nevada's budgeting process be modified to confine the capital budget to construction of new facilities. Further, NCHEMS recommended institutions be given a one-time enhancement, and thereafter annually invest depreciation amounts (two percent of replacement value) in renewal and renovations. This investment would provide institutions with the capacity to renovate or convert space to meet emerging needs and create a requirement that priority facilities needs be attended to every year.

- As requested by the Committee, NCHEMS provided a report on other states' practices regarding the retention of indirect cost recovery (ICR) revenues. Nevada has traditionally retained a portion of the institutions' ICR to reimburse the state for its funding of infrastructure associated with grants and contracts. Nevada's retention percentages have varied throughout the years. The state currently retains 25 percent of ICR revenues, with the institutions keeping 75 percent.

  NCHEMS reported that SHEEO surveyed 31 states and found that 25 allow the institutions to retain 100 percent of the ICR revenues and 3 others allow the institutions to retain 100 percent but put constraints on its expenditure. According to SHEEO, only Texas, Nevada and Nebraska return a portion of the ICR recoveries to the state.

- NCHEMS provided status reports on the progress of regional meetings and policy audits. The consultant also provided an outline and overview of the final report. The committee concurred with NCHEMS' suggestion to schedule one additional meeting beyond the June meeting to provide a more thorough review of the final report. The final meetings were scheduled for June 17, 2004 and July 7, 2004 – both in Las Vegas with video-conferencing to the Legislative Building in Carson City.

Committee Meeting #6, June 17, 2004

- Written responses to committee questions from the April meeting were included in the June meeting packet. Additional verbal clarification was provided as necessary on the following topics: Economic Development; Millennium Scholarships; Library Space Utilization at UNLV; the Computer Automated Virtual Environment (CAVE) Facility; Capital Budgeting and Facility Replacement Value;

Space Utilization and Facility Needs; Board Guidelines for Establishing 4-Year Programs at Community Colleges; and Background Information on the 4-Year Programs Established at Great Basin College.

- Crystal McGee and Tyler Trevor from the UCCSN provided an overview on the need for distance education courses and discussed responses to committee distance education questions from the April 29, 2004 meeting.

- The Committee briefly discussed Millennium Scholarship revenues and expenditures. The Treasurer's Office indicated that projections could be provided to the Interim Finance Committee for the September 2004 meeting. The Committee suggested that the Treasurer also provide a contingency plan in the event that revenues fall short of program needs.

- The consultant provided a high-level summary of his draft report. The consultant noted that the key issues facing the state are: accommodating growth; diversifying the economy; improving graduation and continuation rates; enhancing research capacity; and serving students at all levels in a cost-effective manner. The consultant mentioned the need to restrict growth at UNLV and UNR, to expand the Nevada State College and to limit four-year programs at community colleges.

  During the presentation of their final report, the consultant remarked that the issues faced by Nevada cannot be solved in a two to four year period. Rather, Nevada must embark on a 20-year journey to make significant improvements. With this in mind, the Committee recommended that the 2005 Legislature re-establish the Committee to Evaluate Higher Education Programs during the 2005-2007 Interim to evaluate plans developed in response to the Committee's current recommendations. The Committee recommended that the membership of the new committee be similar to the membership of the current committee.

- The Committee began the process of making final recommendations with a majority of the consultant recommendations adopted by the Committee – some with minor modifications. The Committee deferred several consultant recommendations and all of the non-consultant recommendations to the July 7, 2004 meeting.

Committee Meeting #7, July 7, 2004

- The Committee completed its discussion and development of Final Committee Recommendations.

- The Committee approved one BDR to re-establish the Committee during the 2005-2007 Interim.

- The Committee approved the consultant report and suggested to the extent that the consultant agreed with the Committee's recommendation changes, those changes should be included in the consultant's final report.

- The Committee approved the report format and items to be included in the final Committee report.

NOTE: Copies of the presentation materials mentioned in this report are available upon request to the Legislative Counsel Bureau, Research Library, 401 S. Carson St., Carson City, Nevada.

VII. Consultant Report

Report to the Nevada Committee to Evaluate Higher Education Programs

National Center for Higher Education Management Systems (NCHEMS)

State Higher Education Executive Officers (SHEEO)

Western Interstate Commission for Higher Education (WICHE)

July 14, 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. 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 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 IV Recommendations to the legislature and to the University and Community College System of Nevada (UCCSN).

Section V 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 projections—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 Nevada Revised Statutes (Section 396) dealing with higher education
- *Building Nevada's Future: A Master Plan for Higher Education in Nevada*, adopted in April 2002, and summaries of institutional strategic/master plans
- The UCCSN report on Performance Indicators (April 2004)
- Results of others studies, especially:
  - Report of the Committee to Study the Funding of Higher Education (Legislative Counsel 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)
- The Battelle Memorial Institute study entitled, "A Technology Strategy for Nevada," December 2000
- Minutes of meetings of the UCCSN Board of Regents meetings for 2003-04
- The MGT of America 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 resources—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 (or removal of disincentives for such efficient use of resources).

    - Provisions for making targeted investments (or rewarding performance) related to agreed-upon state priorities.

    - 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 agencies. 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 included the:

- 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 conditions under which community colleges might be authorized to offer baccalaureate programs

The memoranda responding 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 Section IV 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) Clark and Washoe counties (see Figures 1 and 2 in the Supporting Information).

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. This number is somewhat deceptive, however, since the denominator in the calculation is small because of low high school completion rates. 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, about 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 state 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). Among the health care professions with the greatest needs, only pharmacy is a field for which there is no academic program in Nevada. The needs in some fields, as has been the case in nursing, is to expand production of programs already in place. In other cases, the need is to expand capacity of the System to deliver programs at sites where the host institution does not have the faculty or other resources to offer the program.

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. Data from the Corporation for Enterprise Development show 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. Despite the mandate to produce more nursing graduates, serious barriers remain in implementation because of shortage of nursing faculty and available clinical facilities. In the matter of teacher education, the issue was often presented as one of creating more student interest in the program than of expanding production capacity. As someone noted, "There are no waiting lists for entry into teacher education programs." However, we believe that part of the problem is the failure of the system to adapt its approach to service delivery to meet the needs of students who could be attracted to non-traditional forms of delivery. Among these potential groups of students are mothers who are not working outside the home while raising young children and professionals in other fields seeking a career change. Programs delivered at places and times that accommodate the needs of these individuals should be considered (for example, in public school facilities while children are in school, nights and weekends). Other areas in which capacity is needed to produce more graduates include:

    - Medical lab technologist
    - Pharmacy technologist
    - Radiologic technologist
    - Respiratory therapy
    - Dental hygiene

2. The one program that is not in the current program inventory of UCCSN for which data and interviews suggest a need is pharmacy.

3. Adult literacy/basic workplace skills is a "program" which needs and deserves much more attention. The community colleges are extensively involved in providing adult literacy/workplace skills services—including ESL. All these programs must be funded by contracts, grants or fees. There is no explicit state recognition of this role. The programs that focus on this topic are housed in the State Department of

Education and treat the community colleges as providers, not as central elements of the solution.

4. Graduate education and research—particularly in those areas tied to the economic development priorities of the state—also represent "programs" requiring considerably greater development.

5. Interviews with employers emphasized the high priority and great value of rapid response workforce development through the community colleges. In many cases, the needs are not for new degree programs but customized training programs for specific needs. As demand can be demonstrated, some of these programs can be developed as formal degree programs.

6. A consistent message from employers is the need for managers and increased availability of management training for existing employees.

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. Ultimately the capacity of an institution to reallocate resources will depend on:

1. Effective strategic planning linked to strategic decisions regarding resource allocations (strategic budgeting).

2. Clear directions from the state and Board of Regents regarding public agenda and specific agreements about institutional missions and willingness to back institutional leaders who are making often difficult reallocation decisions.

There is substantial campus-to-campus variation in the extent to which these conditions are present.

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 explicitly not investigated.

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), and the University of Nevada-Las Vegas (UNLV) and Western Nevada 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 (UNR), 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 UNR 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 or below 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 UNR 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 UNLV.

- 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 UNR.

- 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 UNLV.

- 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 UNR.

- 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:

    - UNR 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 71-83). 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 UNLV 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. There is a very purposeful and well-designed reallocation process framed by strategic planning under way at UNR. Reallocation activities were found at the other institutions as well.

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 UNR and WNCC have notably high tenure rates. All of these conditions create circumstances in which the institutions have some "wiggle 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. If reallocations are needed to meet the critical needs of the state, much more effort must be expended to forge a consensus about what those needs really are.

4. 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, through processes designed to fit the cultures of each institution, and driven by strategic planning that is backed by firm system priorities and willingness to back campus decisions.

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 UNR and UNLV as well as that portion contained within the SSOB.

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

	UNRENO		UN–LAS VEGAS	
	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 UNR and $95 million at UNLV. 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

	UNRENO		UN–LAS VEGAS	
	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	—	-1.0	—	-1.6
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.

Similar analyses were conducted for the community colleges. The results were the same. The colleges are raising funds to augment those provided through the SSOB. To a very large extent these funds are being used to provide additional support for instruction and for student services. Not only are SSOB funds allocated to student-oriented functions, but the additional funds are targeted in these areas as well.

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, data developed in direct response to the questions posed in AB203 were 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 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
UNReno	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 Counsel Bureau

These figures include all programs (including, for example, the Medical School, Cooperative Extension, etc. at UNR and the Dentistry and Law Schools at UNLV). Even if the SSOB amount of $8,813/FTE student at the UNLV 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 UNLV instead of CCSN, the cost to the SSOB is 1,000 x (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 UNLV 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 Regents and the Legislature to make research a more important part of the UNLV 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 UNR and UNLV).

   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 UNLV are (12,521 – 10,202 =) $2,319/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/FTE student. Being **very** conservative in the calculation, it can be estimated that the additional cost of increasing the research mission of UNLV 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. The state has great difficulty in tailoring policy to accommodate the very different needs of different parts of the state. The differences in the "three Nevadas" is illustrated by the data in Table 5.

TABLE 5
Regional Variations in Nevada

	Carson/ Reno	Las Vegas	Balance of State	State
Per Capita Income	24,160	21,785	21,186	21,989
18-24 with Less than High School	27.9	29.0	36.0	29.3
25-64 with Baccalaureate or Higher	23.9	18.1	13.5	18.9
College Participation	59.1	45.8	40.3	48.3
Living in Poverty	12.9	15.2	11.1	14.2
Management and Prof. Employment	29.9	24.4	24.5	25.7

6. 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 too rarely encountered during the course of the project. To be fair, examples did emerge—the offering of education programs by NSC at the WNCC campus, for example—and more are planned. GBC's offering the baccalaureate program in surveying across the state is in the works. In the northwest part of the state, with the arrival of new institutional leadership, collaboration between institutions and with regional leaders (K-12, economic development, etc.) is recognized as a high priority and is increasingly being accomplished.

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 B. 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 issue of whether new baccalaureate institutions/campuses should be appended to research universities. We would strongly recommend that new entities such as NSC **not** be made "branches" of the research universities. The reason for this observation is that—for reasons of mission and costs (e.g., the capacity of Nevada to accommodate growth)—it is essential that new baccalaureate capacity be developed in a manner that is not linked to the academic culture and cost structure of research universities.

c. The continuing uncertainty about the correctness of establishing a School of Dentistry at UNLV. 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.

d. This orientation toward serving needs through joint action is being demonstrated through the upper-division components of baccalaureate programs beings offered by NSC on the WNCC and CCSN campuses. Similar collaborative arrangements are being developed with GBC. 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 institutions (in this case, the community colleges) see sufficient benefit for their collaboration in serving needs of 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 both statewide and regionally 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.

7. 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 6-8 illustrate the point. Table 6 reflects the current distribution and the general level of SSOB support with two exceptions:

   - The figure for UNLV has been increased 1,500 to reflect the increased research mission.

   - The figure for CCSN has been increased to overcome current underfunding.

   Tables 6 and 7 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 6 and 7 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, where NSC is assumed to grow to 4,000 students). In Scenario 2 (Table 8), 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 6
Base

	Cost Per Student	Number of Students	Cost (In Thousands)
UNReno	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	2,100	15,750
		51,200	437,870

* The 10,300 for UNLV includes the estimated 1,500 per student additional funding required to reflect agreed-upon mission changes.

TABLE 7
Scenario 1

	Cost Per Student	Number of Students	Cost (In Thousands)
UNReno	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	3,300	24,750
		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 UNLV and CCSN equally

(4) 10,200 in North distributed according to current shares

UNR	.60 x 10,200 =	6,150
TMCC	.28 x 10,200 =	2,850
WNCC	.12 x 10,200 =	1,200
		10,200

TABLE 8
Scenario 2

	Cost Per Student	Number of Students	Cost (In Thousands)
UNReno	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	3,300	24,750
		105,000	848,040

(1) Growth in community colleges same as in Scenario 1
(2) Only modest growth at UNR and UNLV
(3) Balance goes to NSC-type institutions

8. 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 containing further observations on this program is included in Appendix B. Table 9 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 UNR. Nevada has no statewide need-based student financial aid program, although institutions allocate some of their resources to this purpose.

TABLE 9
Millennium Scholarships as a Proportion of UCCSN Funds in SSOB, 2002

	Millennium Scholarships	UCCSN Funds in SSOB	Percent
UNReno (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 Counsel 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 B. 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 create the dental school) 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.

9. 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 many 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. There are several clear exceptions to this observation, including the restriction on carryover of state funds, cumbersome capital development processes, and outdated policies and capacities related to information/data systems.

   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).

   - The plan and related indicators give inadequate attention to significant regional differences.

   - 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, including links of higher education with K-12 and regional economic development.

- 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 UNR, UNLV 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, UNLV, 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 NSC, and the need for the state to confront the significantly increased funding to move UNLV from a typical AASCU institution to a major metropolitan research university.

  - 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 an 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 if fully funded.

  - 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 UNR and UNLV). Indeed, the current approach to capital financing is fundamentally flawed. 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. The dependence on private capital to provide basic institutional capacity is skewing investments from what is needed to what can be funded. A major failure of capital financing is the launching of a needed institution and saddling it with the requirement that its inaugural building be supported by private funds.

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.

10. 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 UNR, UNLV, 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. The data systems are established to support institutional functioning. However, the basic data required for System functioning are not readily available; they can be obtained only by making special requests of each institution and compiling the results. Data available in most System offices—for example, the numbers and characteristics of students transferring from institution to institution within the System—are not available at UCCSN.

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.

IV. 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 should accept prior decisions relative to the creation of Nevada State College and the Dental School and 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 UNLV. 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 UNLV, 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 UNLV 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 educating an ever-increasing number 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. Further, we recommend that these institutions not be created as branches or other organizational extensions of research universities. 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. It also serves to keep the focus of the research universities on their unique contributions to state needs.

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 to 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. Other workforce needs are being addressed through continuing education programs and other vehicles at the institutions, particularly at the community colleges. In all the communities we visited, employers gave high marks to the colleges for their responsiveness to local needs. Central as these activities are to the workforce development needs of the different regions of the state, there is no recognition of these activities in either policy formulation (especially finance policy) or the distribution of kudos. In many cases economic development is as dependent on the effective functioning of these activities as on new ideas spun out of research projects.

4. The identification of the areas of research competence to be fostered at UNR, UNLV, 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 researchers are important.
   - Sustained over a period of years.
   - Of high quality—the faculty involved must be fully capable of competing at the national level.

   The reality is that the economies of North and South Nevada are substantially different. This means that there is a need to align research capacities with regional

requirements. At the same time it must be acknowledged that 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 the growth that results 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. Create a performance funding pool from existing formula funding to improve educational output and to address the leaky K-16 pipeline noted by the consultant.

4. 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.

5. 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.

6. 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.

7. 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. In addition, the role of the private sector (or other sources such as local contributions) in the funding of campus facilities should be reviewed at the policy level. It is recommended that the plan create provisions under which the institutions would be funded at (on a one-time basis) at a level that would allow them to devote 2% of the replacement value of their facilities to plant renewal and renovation each year. The plan should also explain how the renewal and renovation efforts would be funded. At this point the capital budget process would become concerned solely with the addition of new facilities.

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

To be more explicit about our recommendations to the Legislature and Board of Regents, the following are directed at the parties individually.

The Legislature

We recommend that the Legislature take the following actions:

1. Appoint from among its members a committee to work with the Board of Regents to develop the Public Agenda for Nevada—that list of priorities that will guide strategic decisionmaking about higher education in the State of Nevada. Establish a time certain for the accomplishment of this task. Assign to the Chancellor's Office the responsibility for leading this endeavor.

2. Require the Board of Regents and the Chancellor's Office to propose to the Legislature:

    - A fiscally feasible plan for accommodating growth in the UCCSN.

    - Those areas of research expertise to be developed and supported at each of the three research entities, with these recommendations cast in the context of the economic development needs of the state.

    - A financing plan that has the components indicated under D above.

    - An accountability plan consistent with monitoring progress toward achieving the Public Agenda noted in 1 above.

    In making this assignment, a time frame for completion of each element should be specified.

3. Assign policy leadership for dealing with the burgeoning adult literacy problems in the state to the Board of Regents.

The Board of Regents and Chancellor's Office

The higher education leadership of the state should:

1. Provide the leadership for the process of developing the Public Agenda.

2. Fulfill the responsibilities assigned by the Legislature under item 2 above.

3. Take proactive leadership in conducting a thorough assessment of the state's needs for pharmacists. If a need is identified, recommend a response that is cost-effective (with effectiveness being defined in terms of the broader needs of the state). In making this recommendation, private partnerships and independent private operations outside the state as well a within the state should be investigated as should solutions that involve clinical, but not classroom work at sites in Nevada.

4. Develop written "compacts" with each institution indicating the expected nature of their development over the next five years and the kinds of support to be provided by the Board of Regents in furtherance of the agreed-upon developmental objectives.

5. Develop the protocols and incentive mechanisms for ensuring that all resources of the System can be utilized to service needs in all parts of Nevada.

6. Consider creating the position of Vice Chancellor (or Director) of Economic Development to lead the System's efforts for being an engine for economic growth and diversification within the state. This activity should focus not only on research and its spin-offs but also on ensuring that the System can (and does) respond quickly to the needs of employers seeking to either come to Nevada or expand their operations in the state.

7. Address inadequacies related to information/data systems at the UCCSN System Office. The System's information capabilities should be improved to:

    a. Provide information about the demography, economy, and workforce of Nevada (such as that provided by NCHEM for use by the committee) on an ongoing basis.

    b. Allow comparisons of funding adequacy and performance of Nevada institutions relative to a set of peer institutions.

    c. Include the capacity for longitudinal tracking of student progress. Tracking should include all stages of a student's or graduate's progress from K-12, into higher education, and from there into the workplace (including information about employment, by specific occupation).

V. 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.

Committee to Evaluate Higher Education Programs in Nevada

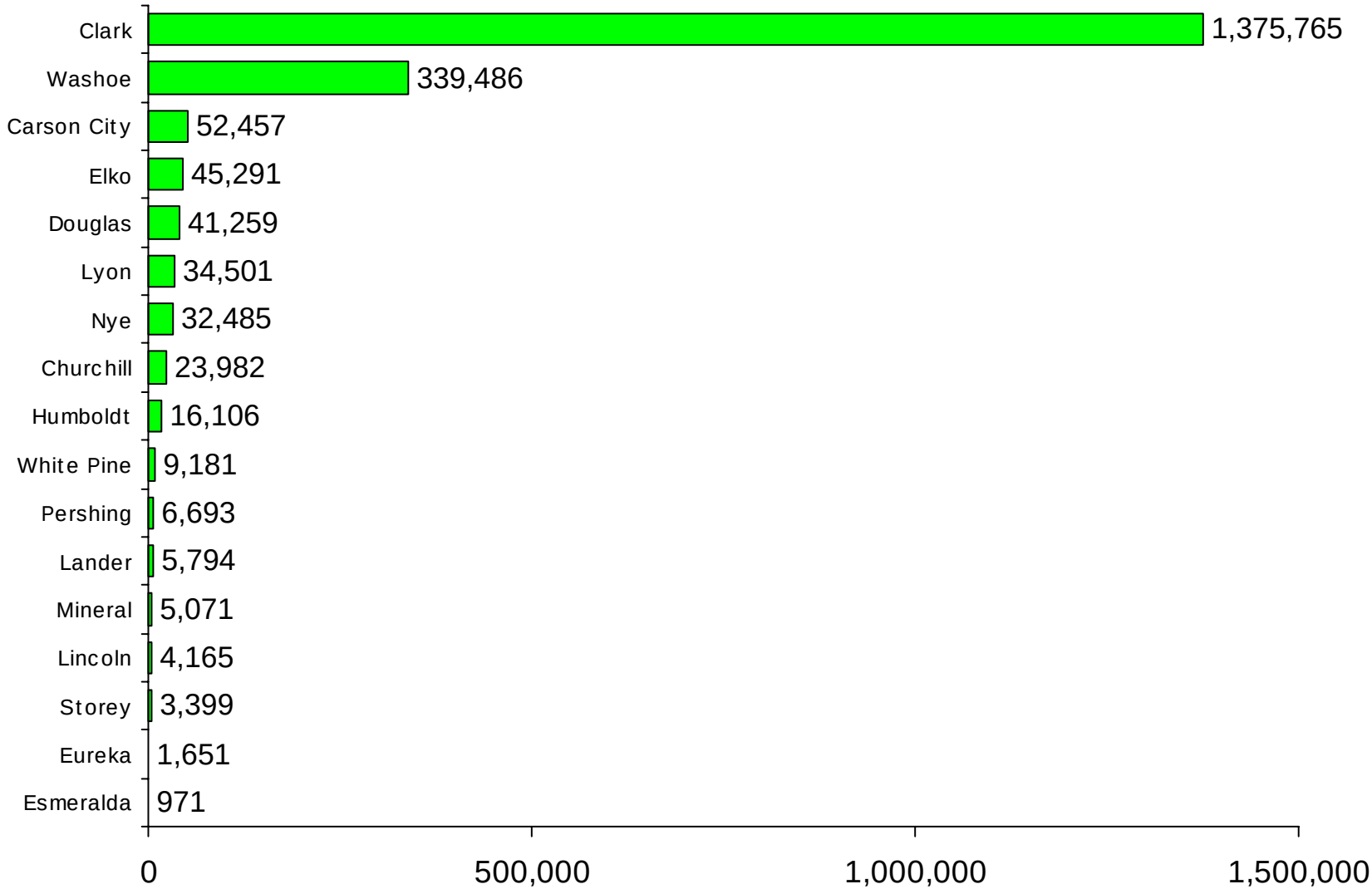
SECTION V
Supporting Information

National Center for Higher Education Management Systems
P.O. Box 9752 Boulder, Colorado 80301-9752 (303) 497-0301

NCHEMS

FIGURE 1

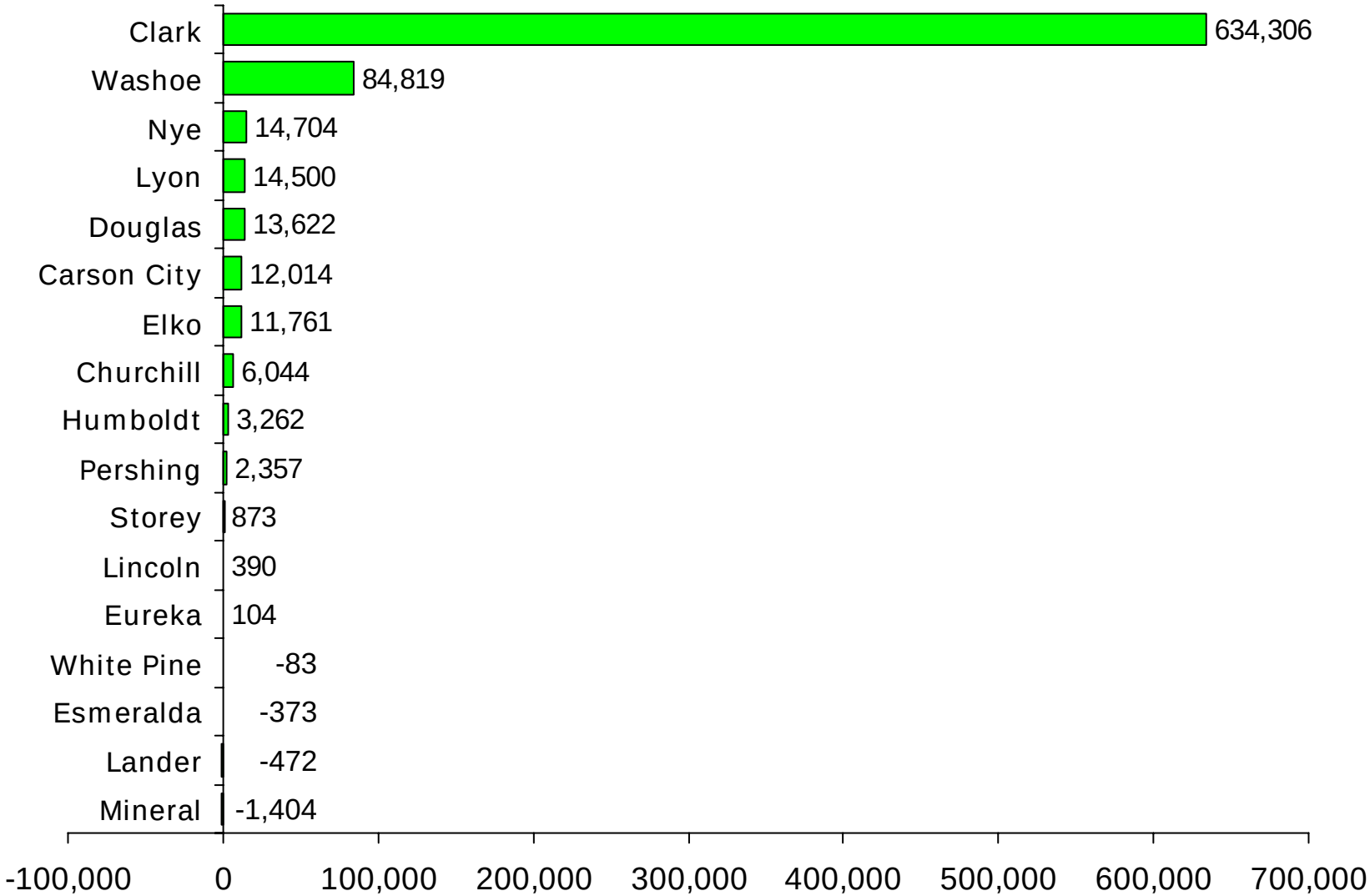
Nevada Population by County, 2000



Source: U.S. Census Bureau, 2000 Census

FIGURE 2

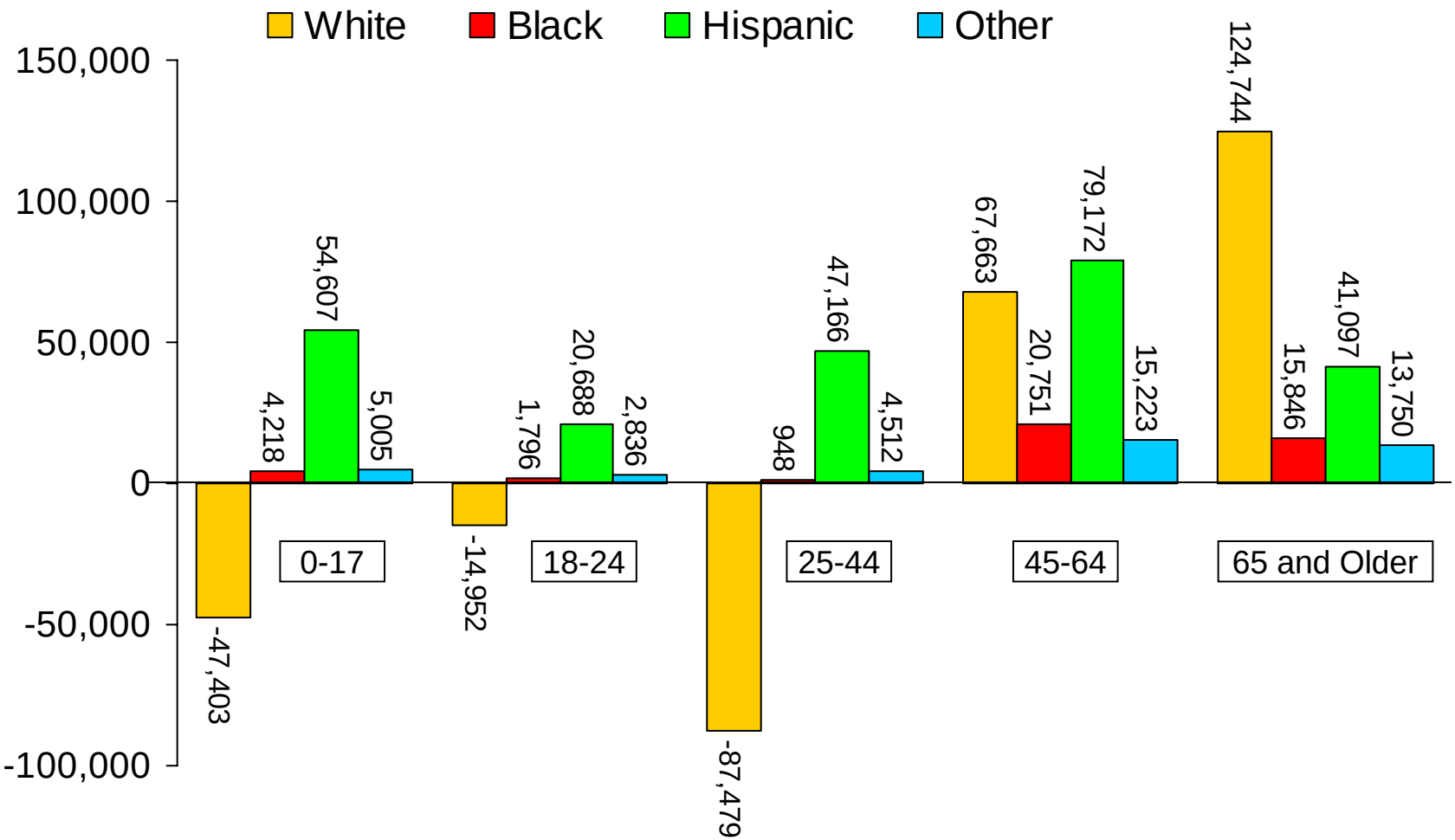
Nevada Population Change by County, 1990-2000



Source: U.S. Census Bureau, 1990 and 2000 Census

FIGURE 3

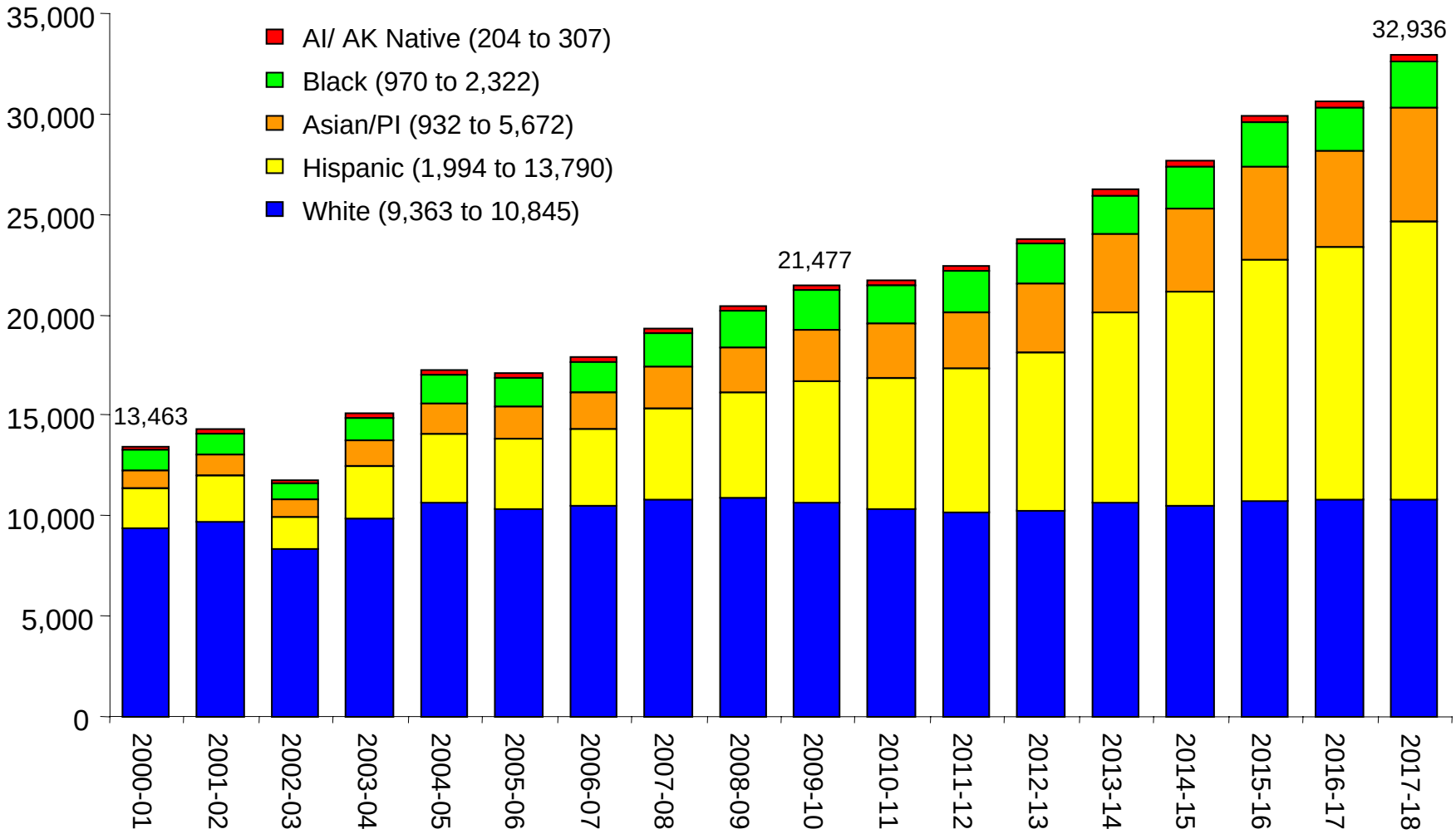
Projected Population Change 2000-20, By Age and Race



Source: U.S. Census Bureau

FIGURE 4

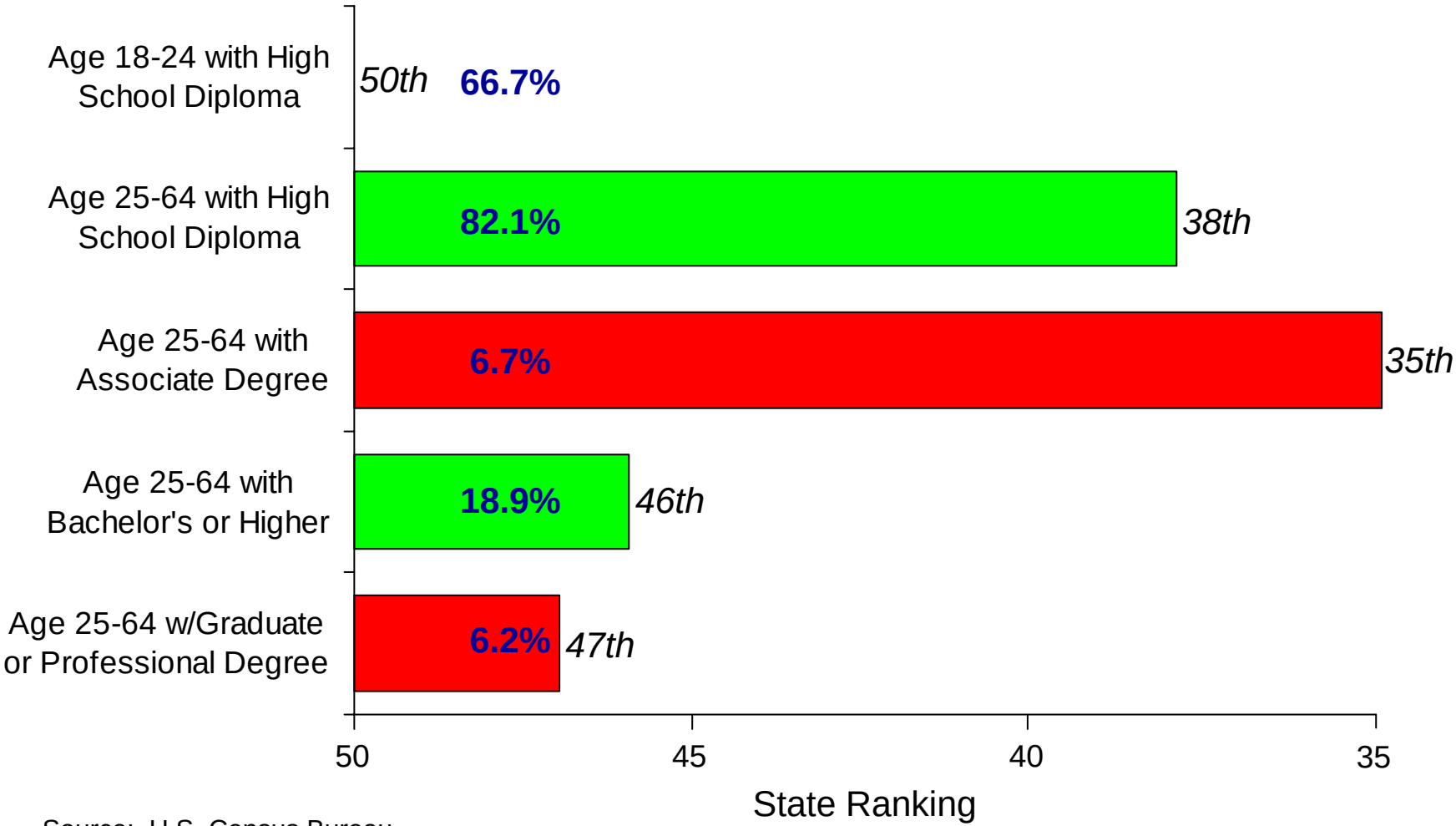
Projections of Nevada High School Graduates by Race/Ethnicity



Source: WICHE, 2003

FIGURE 5

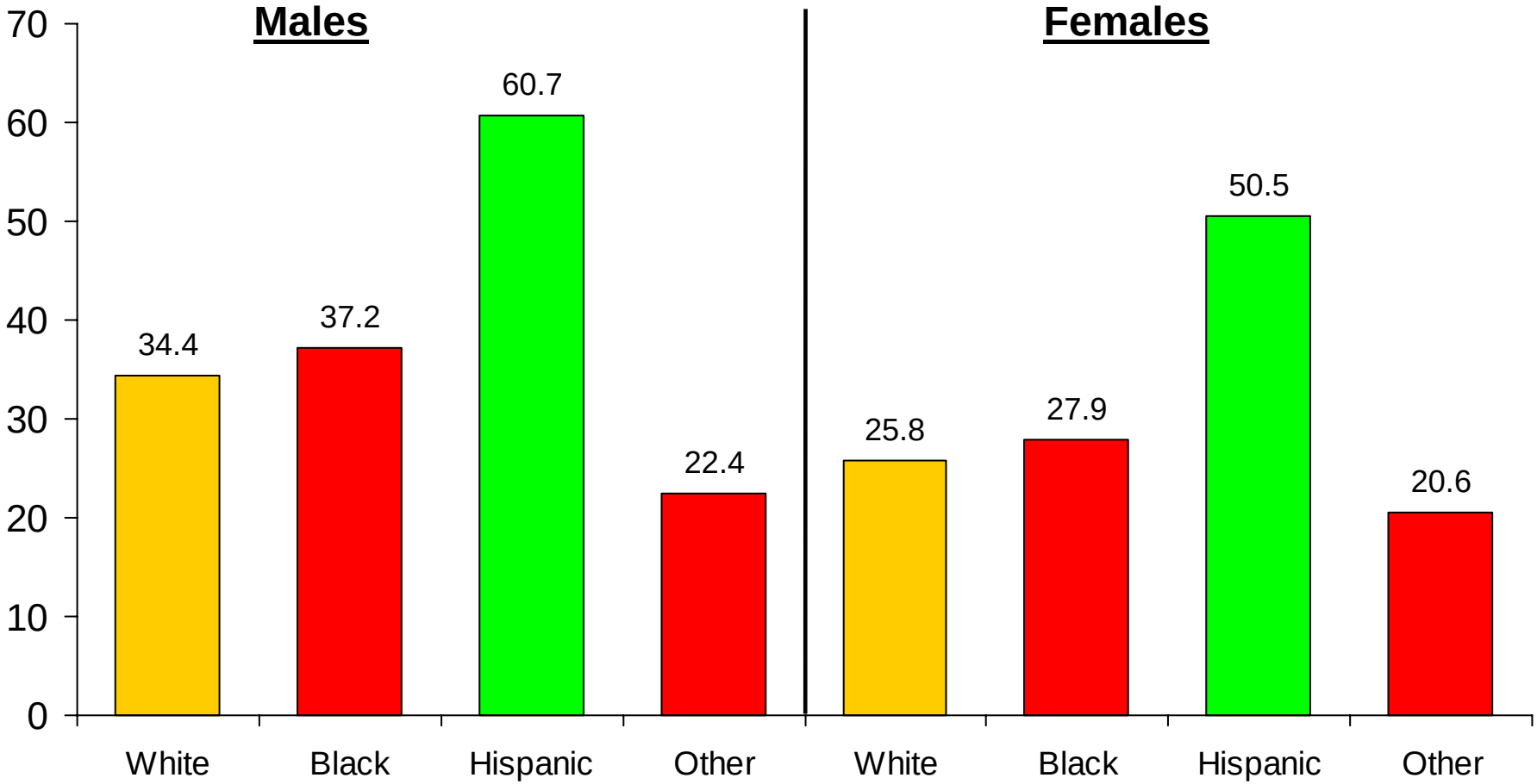
Nevada Educational Attainment and U.S. Rank, 2000



Source: U.S. Census Bureau

FIGURE 6

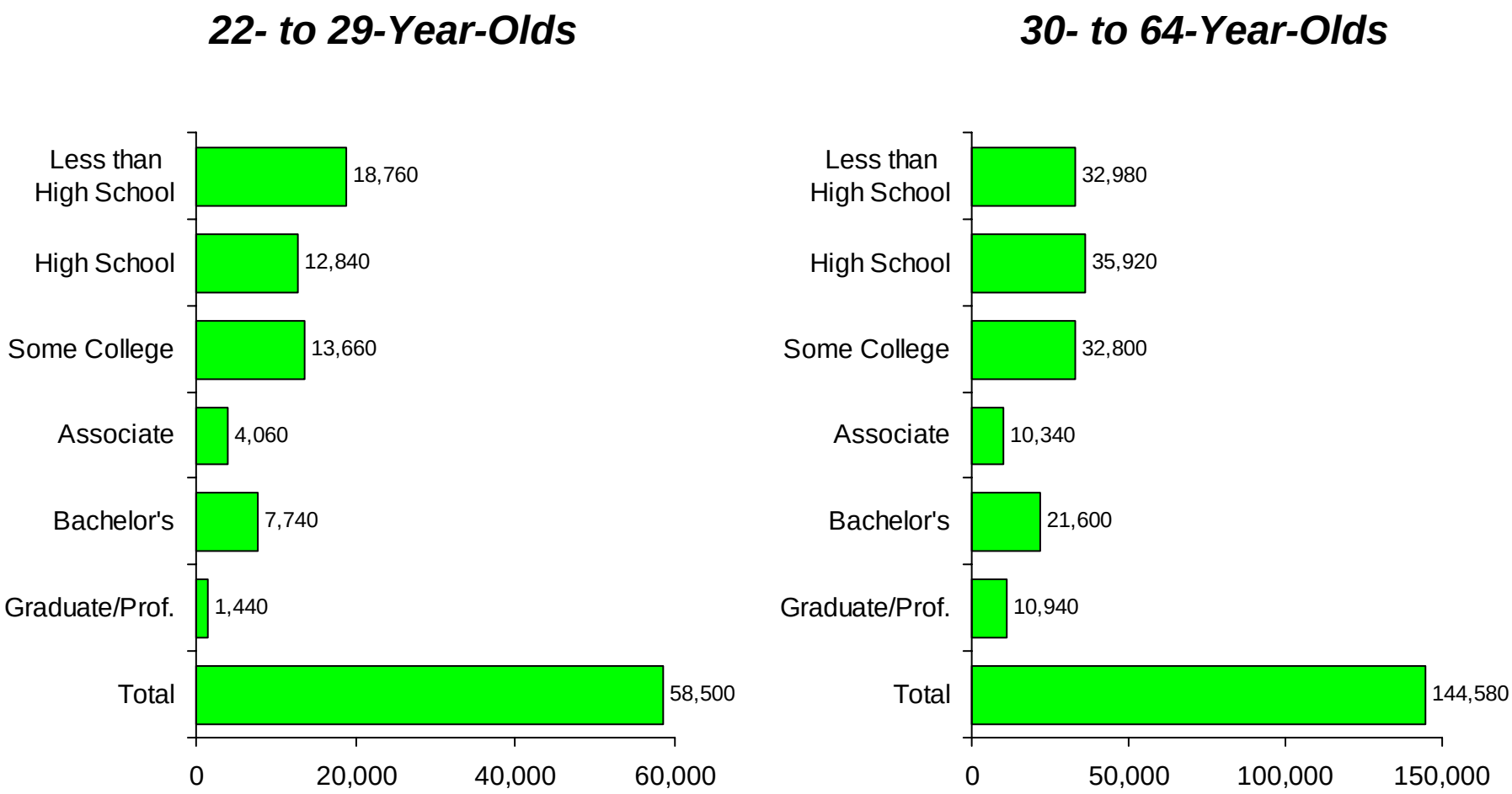
Percentage of Population 18-24 with Less than a High School Diploma—By Race and Gender, 2000



Source: U.S. Census Bureau

FIGURE 7

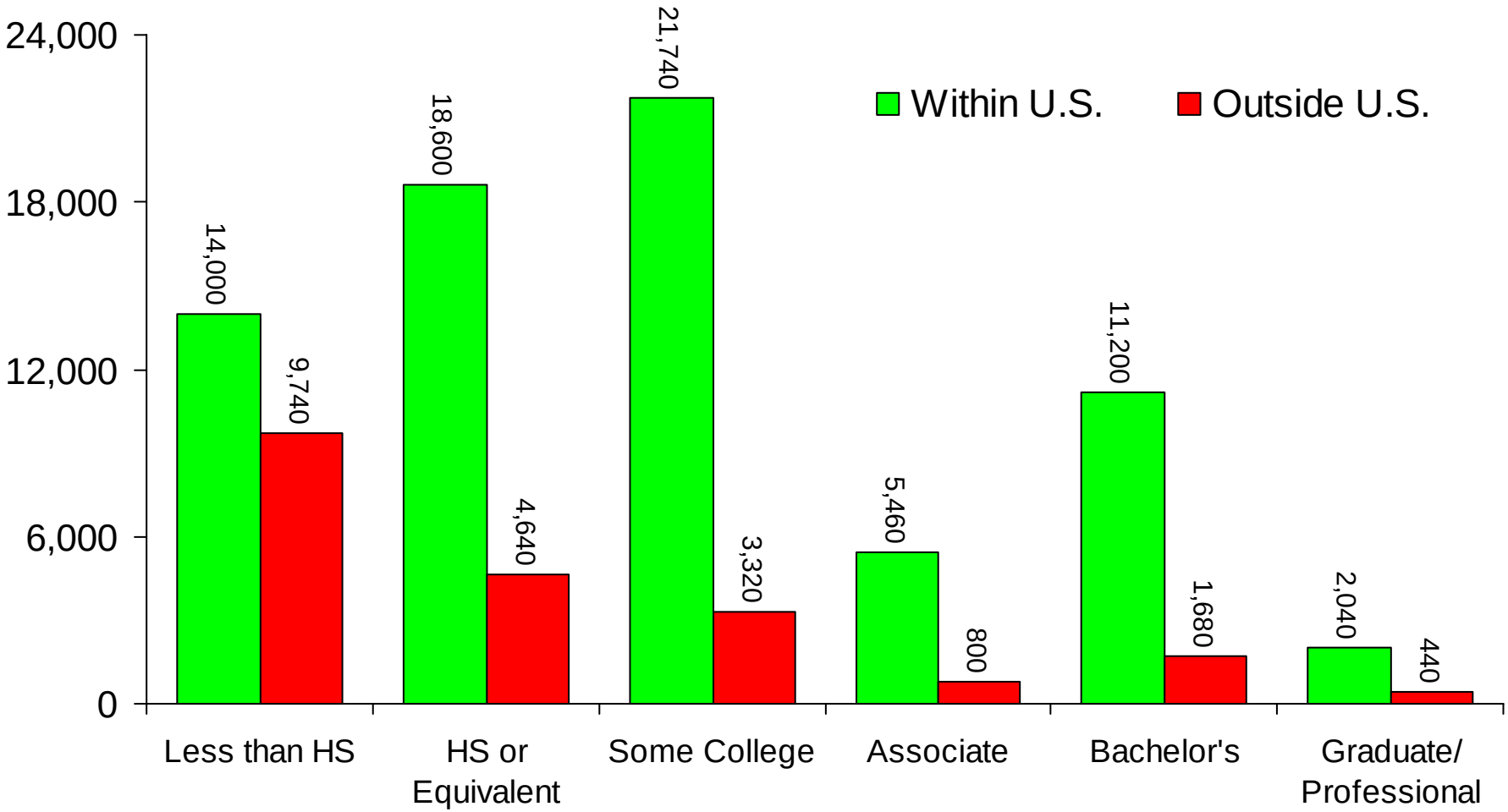
Nevada Net In-Migration by Degree Level and Age Group, 1995-2000



Source: U.S. Census, Public Use Microdata Samples, 2000

FIGURE 8

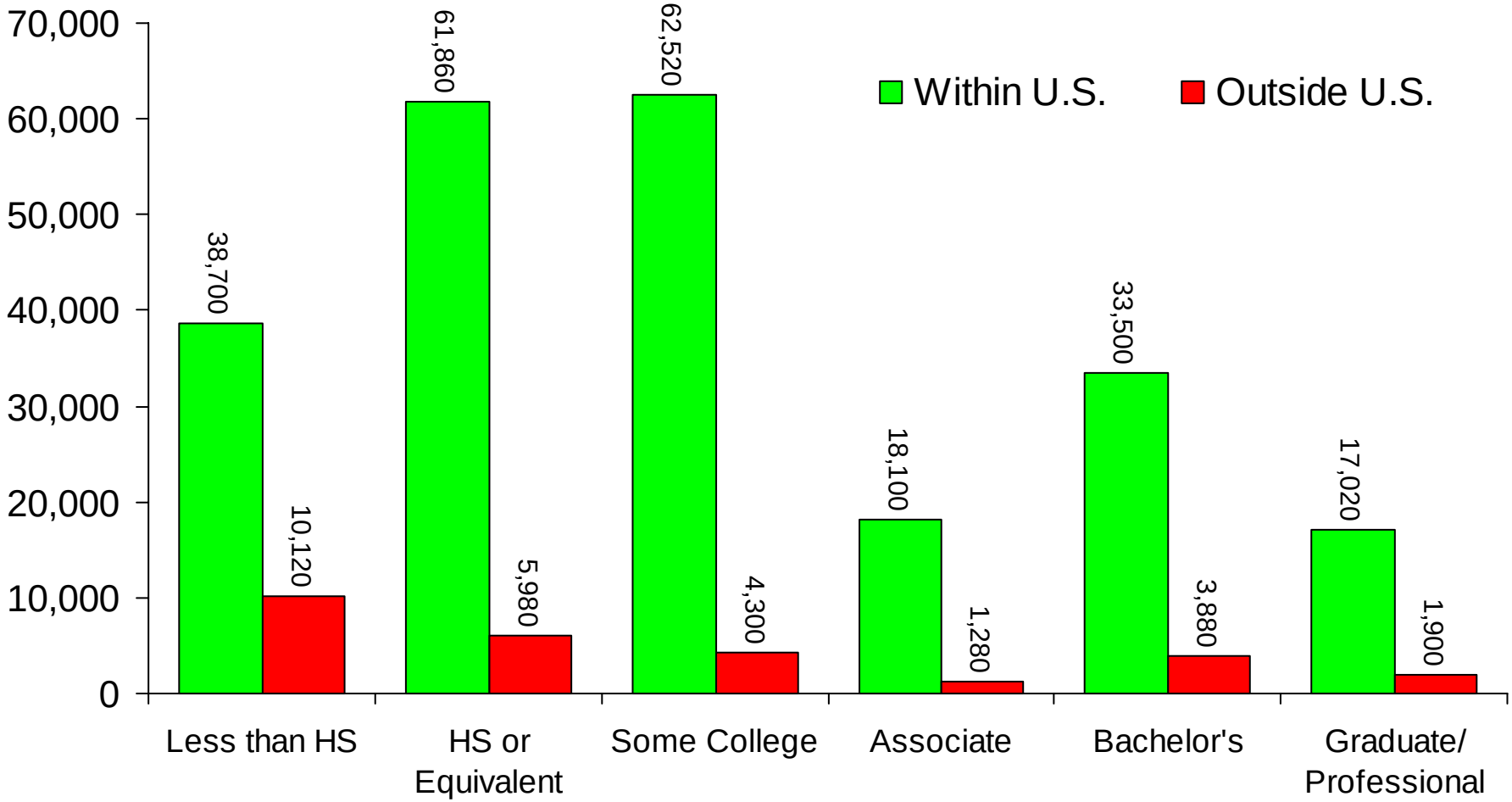
Number of In-Migrants Age 22-29 by Educational Attainment Level, 1995-2000—Inside vs. Outside U.S.



Source: U.S. Census Bureau's Public Use Micro Data Samples, 2000

FIGURE 9

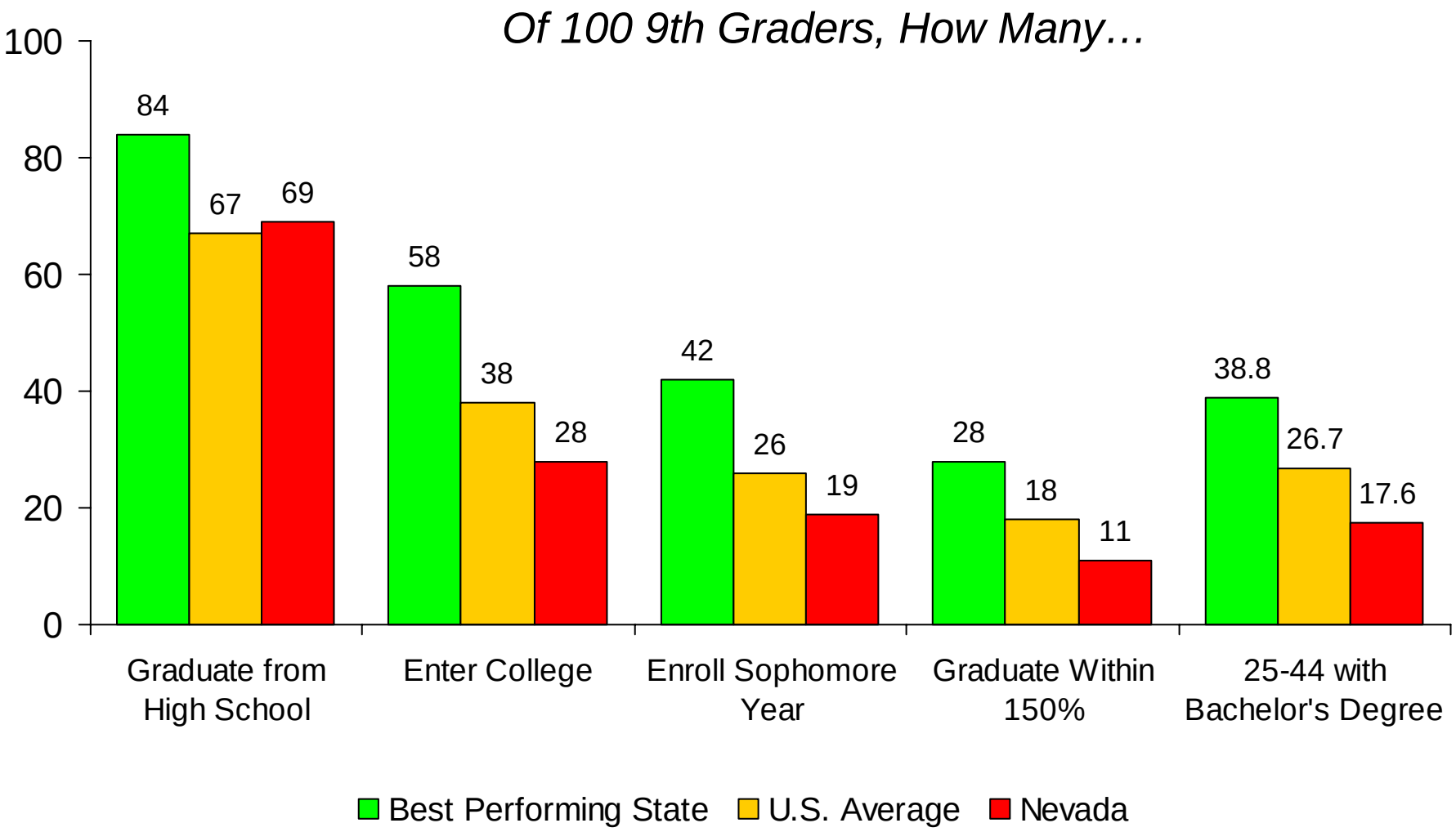
Number of In-Migrants Age 30-64 by Educational Attainment Level, 1995-2000—Inside vs. Outside U.S.



Source: U.S. Census Bureau's Public Use Micro Data Samples, 2000

FIGURE 10

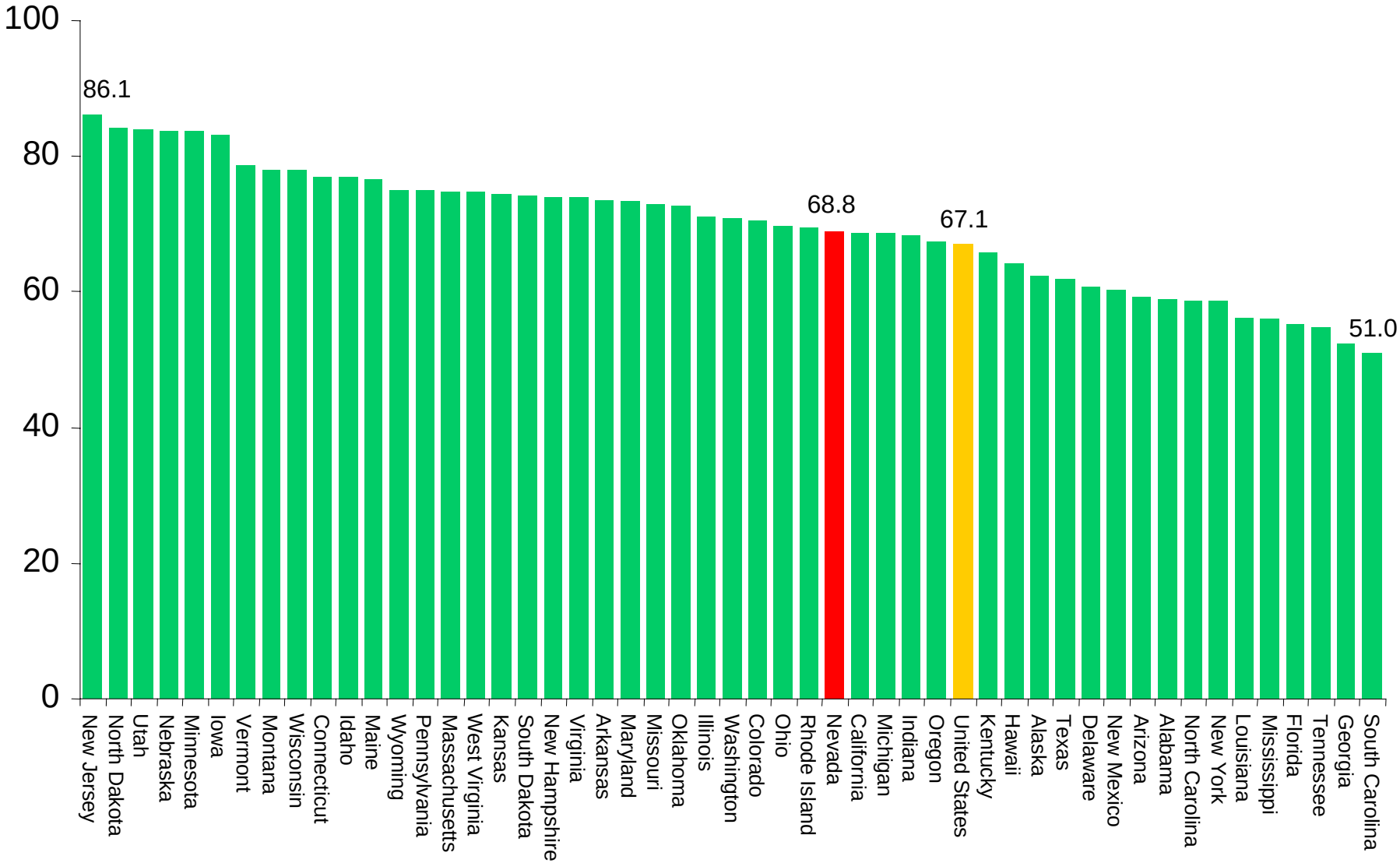
Student Pipeline



Source: Tom Mortenson, ACT, NCES-IPEDS Graduation Rate Survey, U.S. Census Bureau

FIGURE 11

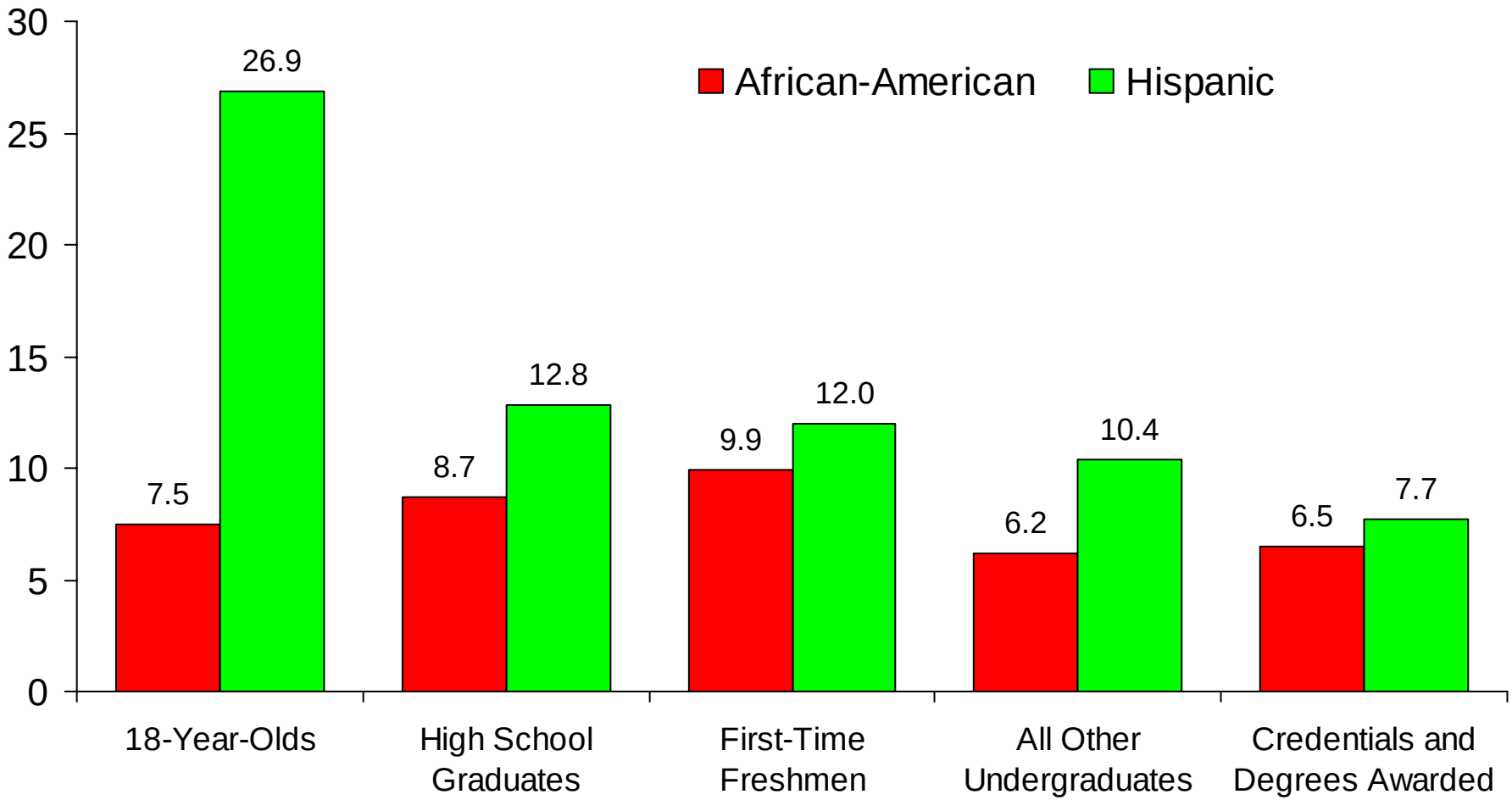
High School Graduation Rates—Public High School Graduates as a Percent of 9th Graders Four Years Earlier, 2000



Source: Tom Mortenson, Postsecondary Opportunity

FIGURE 12

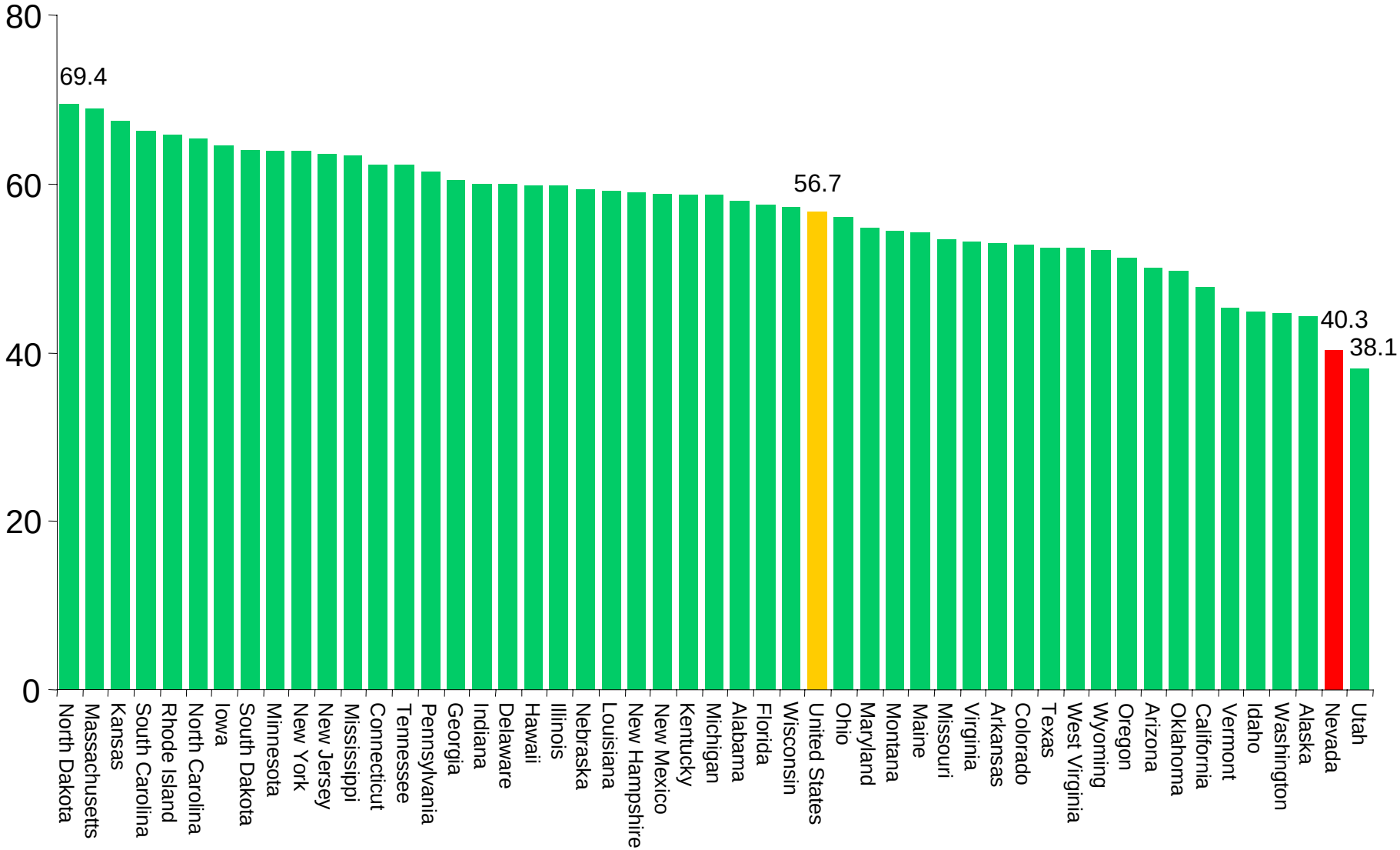
Percent of African-Americans and Hispanics at Each Stage of Education Pipeline, 2000



Source: U.S. Census Bureau, NCES-Common Core Data, NCES-IPEDS Enrollment and Completions Surveys

FIGURE 13

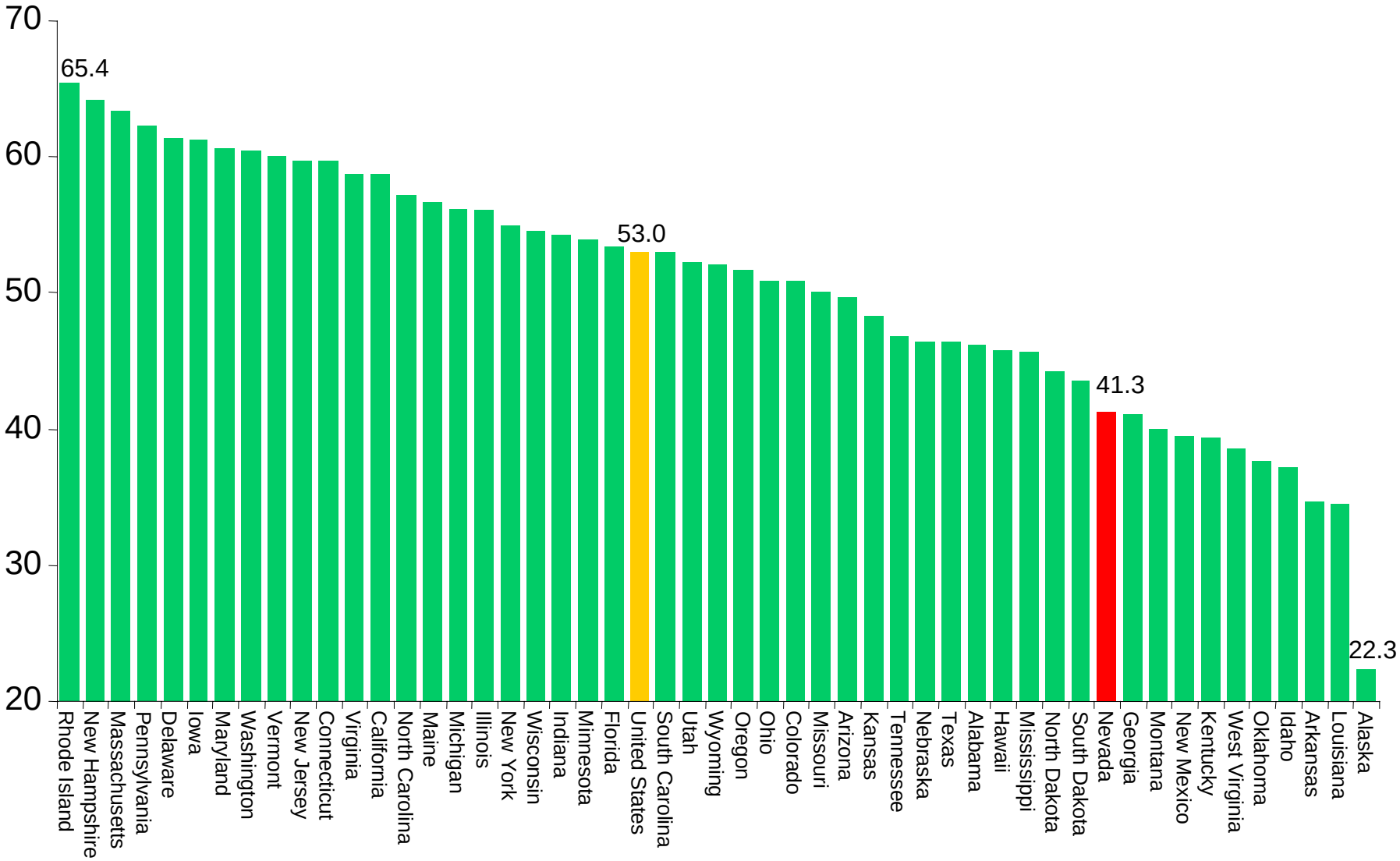
College Going Rates—First-Time Freshmen Directly Out of High School as a Percent of Recent High School Graduates, 2000



Source: Tom Mortenson, Postsecondary Opportunity

FIGURE 14

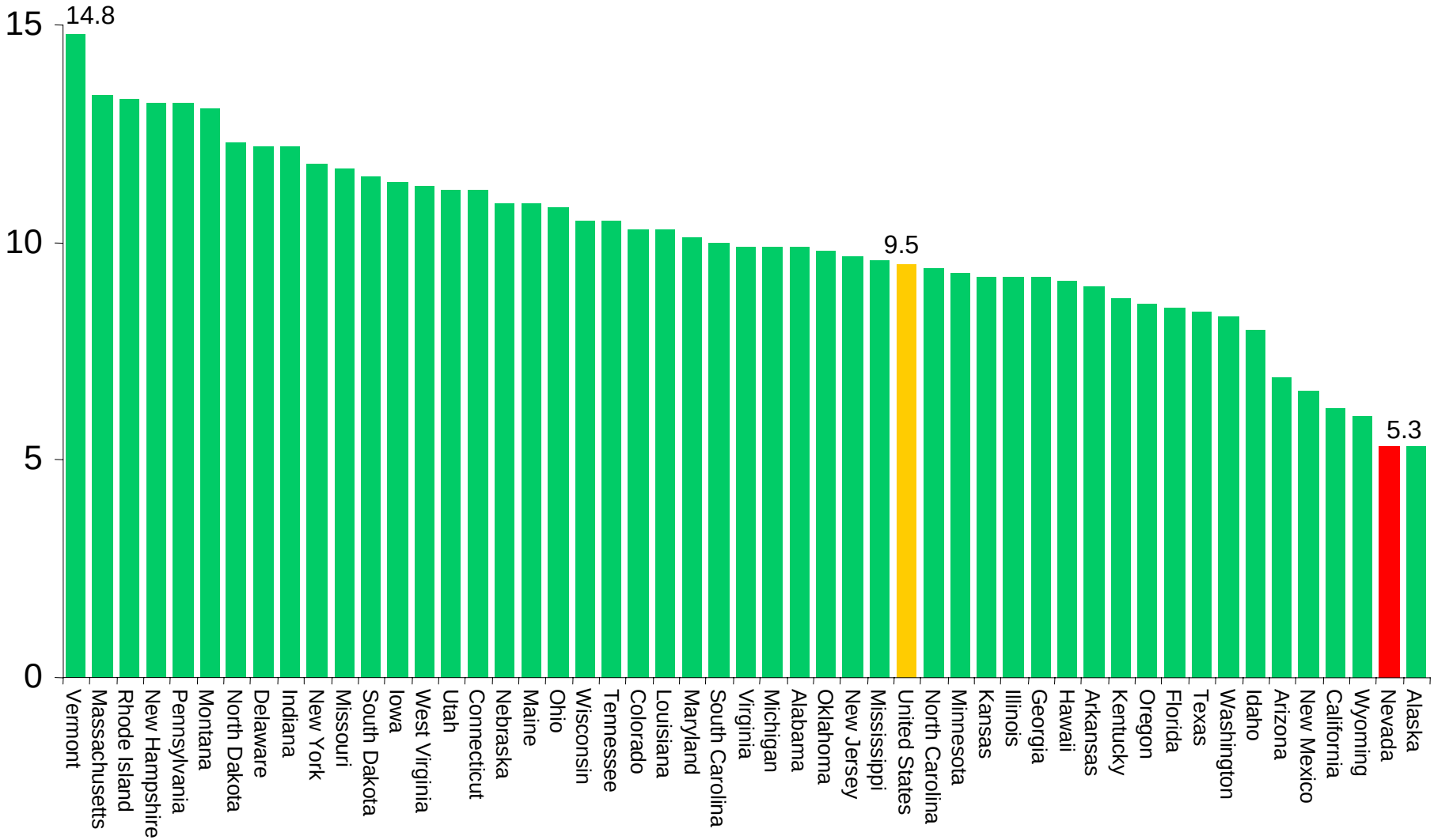
Graduation Rates—Percent of Bachelor's Students Graduating Within Six Years, 2000



Source: NCES-IPEDS, Graduation Rate Survey

FIGURE 15

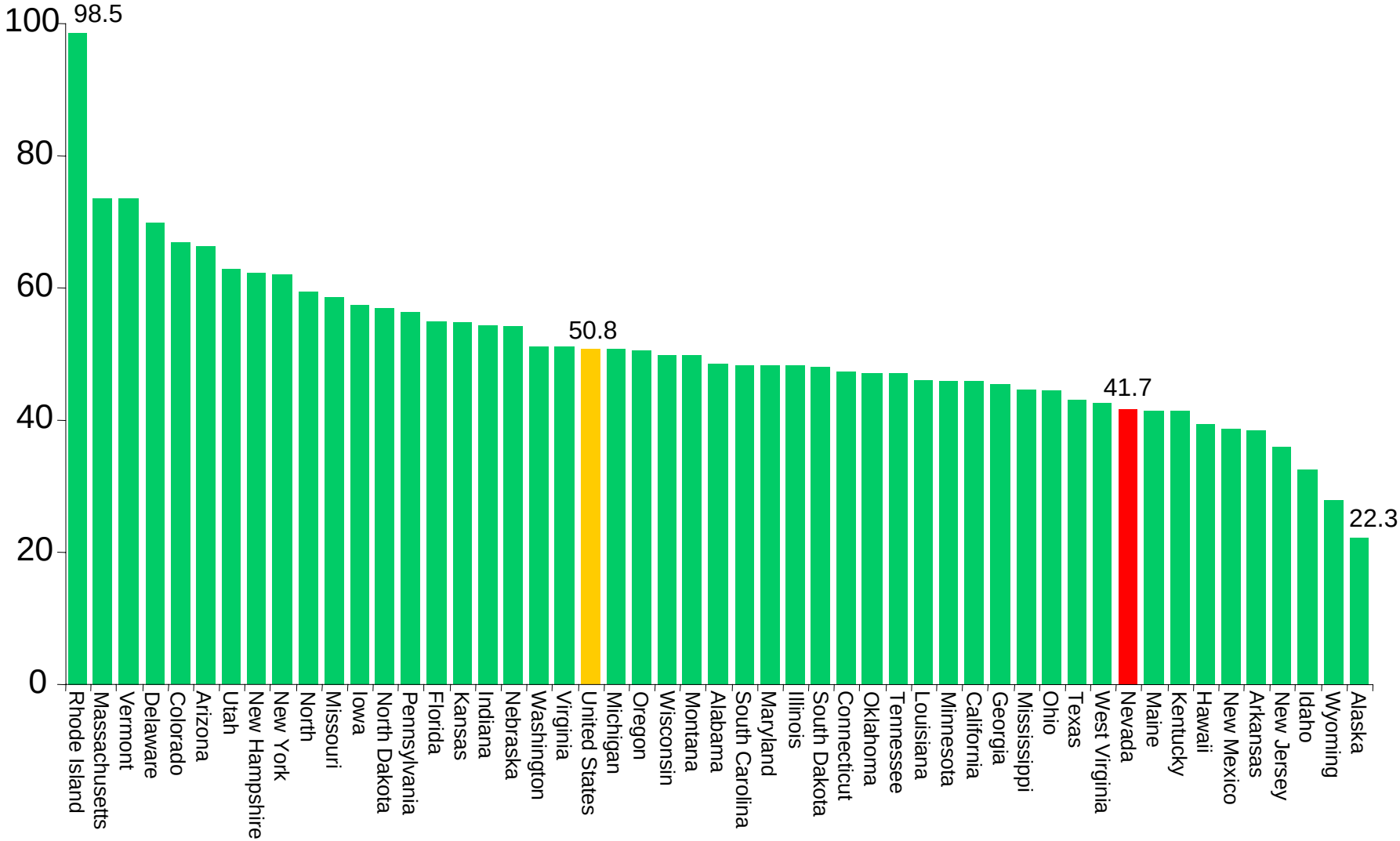
Bachelor's Degrees Awarded as a Percent of All Undergraduates, 2002



Source: NCES-IPEDS Completions Survey, Enrollment Survey

FIGURE 16

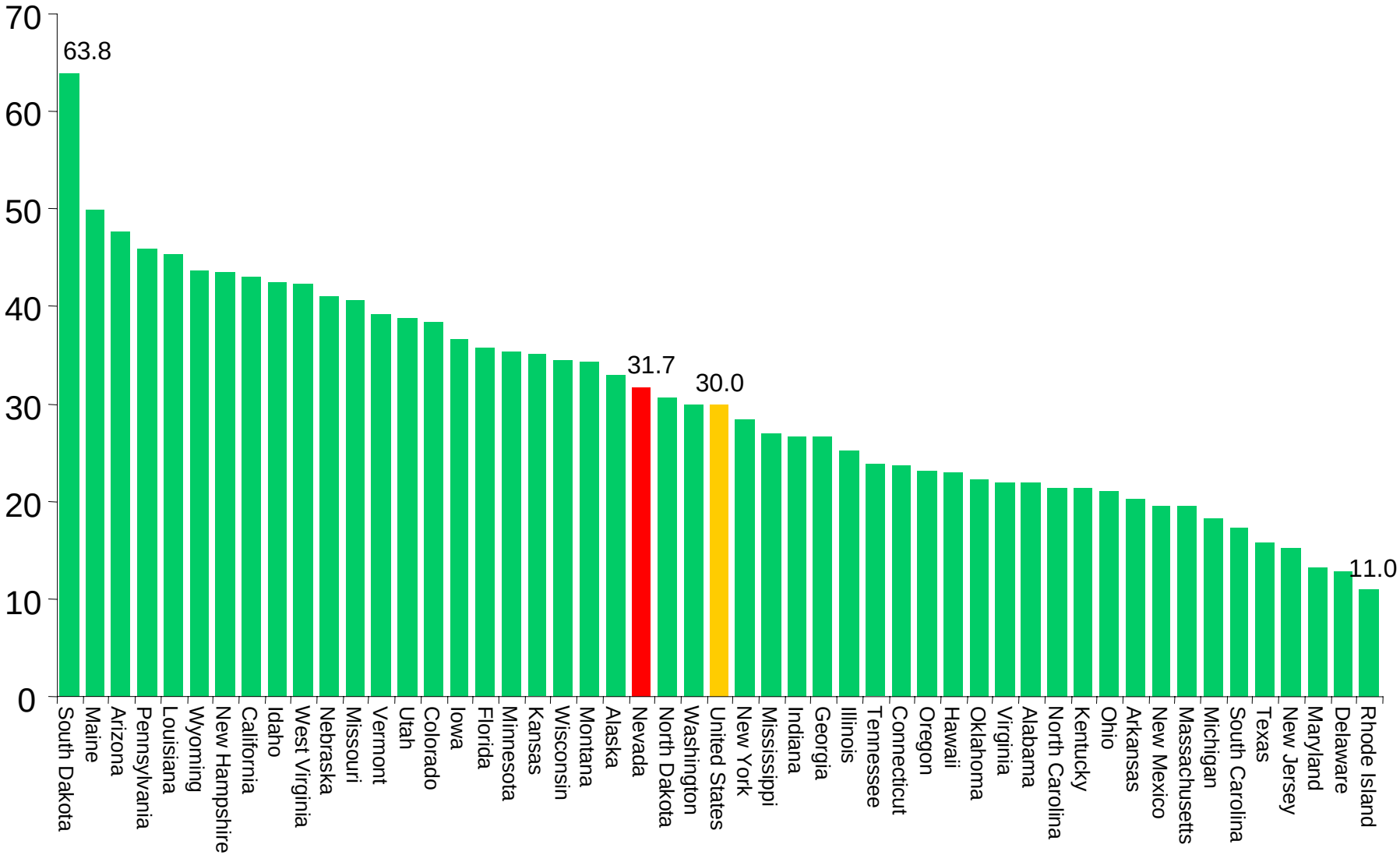
Bachelor's Degrees Awarded per 100 High School Graduates Six Years Earlier, 2002



Source: NCES-IPEDS Completions Survey, WICHE

FIGURE 17

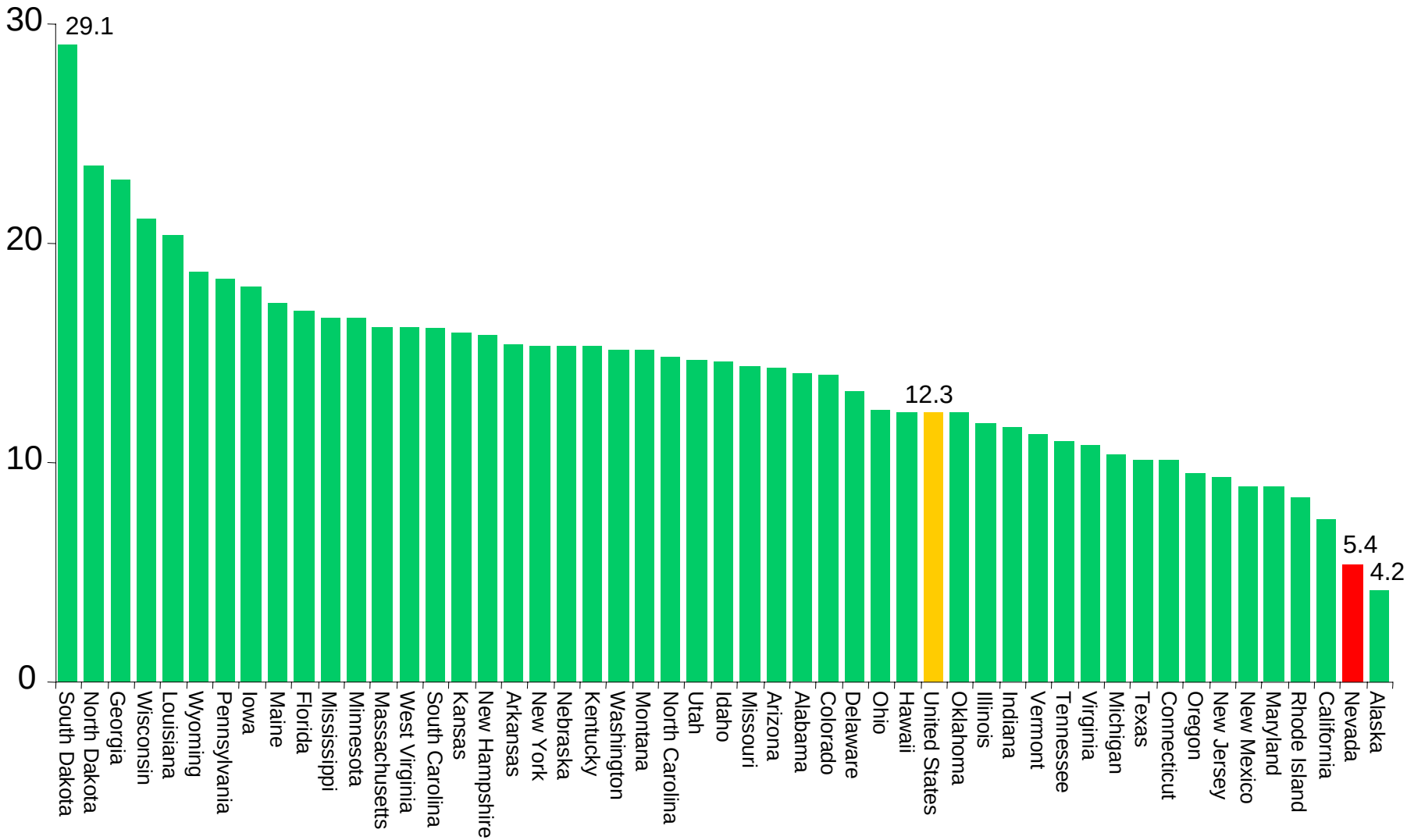
Graduation Rates—Percent of Associate Students at Two-Year Colleges Graduating Within Three Years, 2000



Source: NCES-IPEDS, Graduation Rate Survey

FIGURE 18

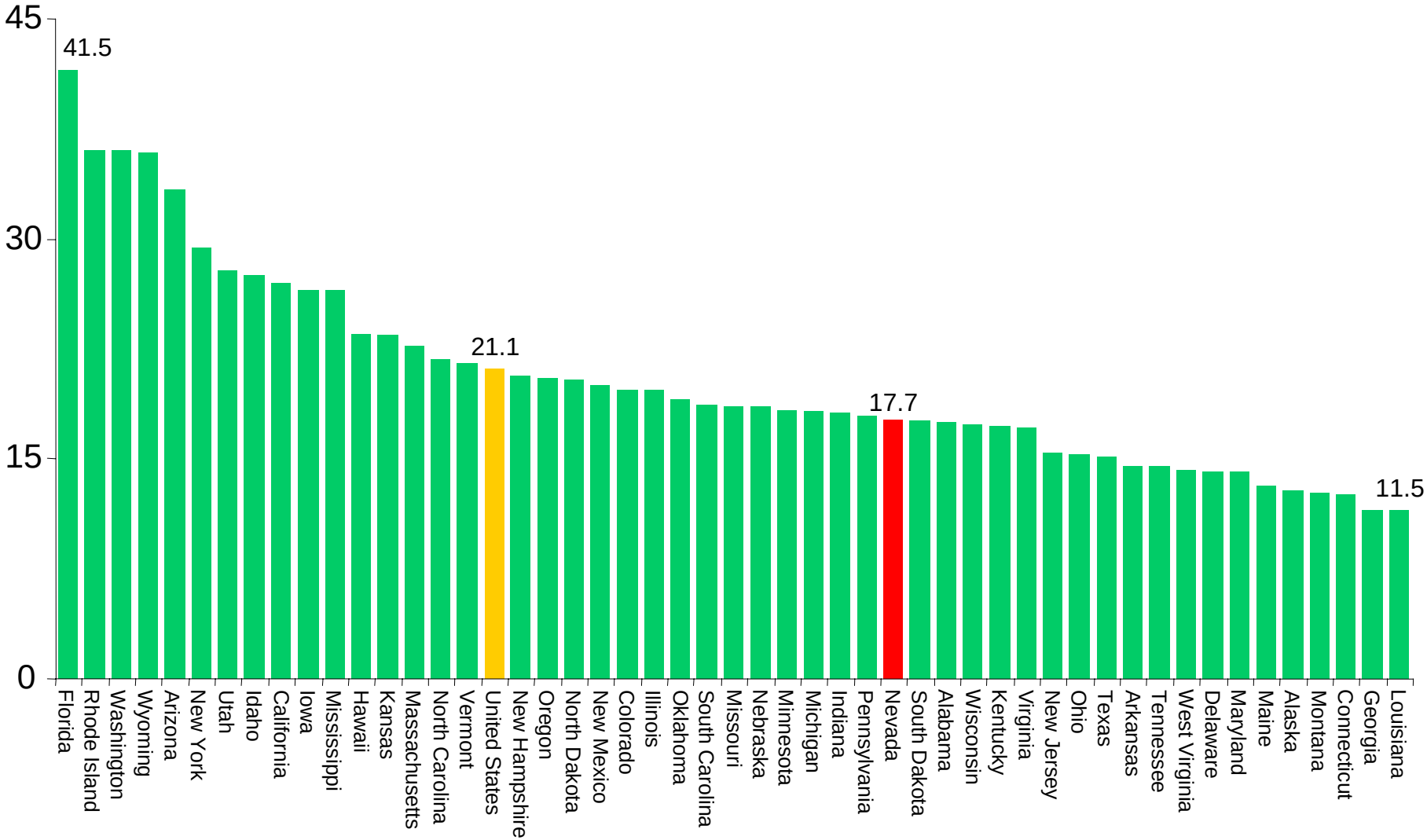
All Credentials Awarded (2-Year and Less) at Two-Year Colleges as a Percent of Enrollment in Two-Year Colleges, 2002



Source: NCES-IPEDS Completions Survey, Enrollment Survey

FIGURE 19

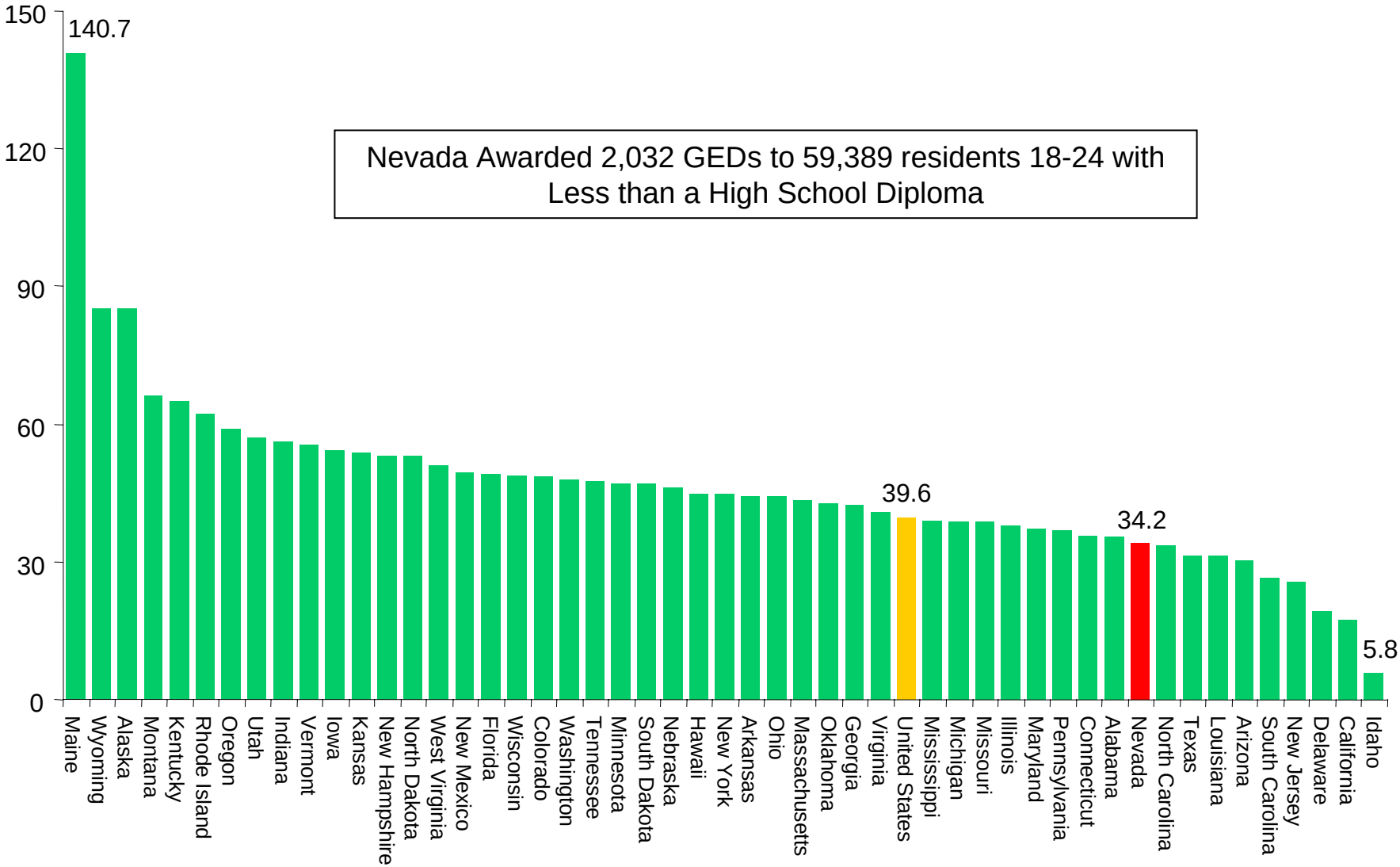
Associate Degrees Awarded per 100 High School Graduates Three Years Earlier, 2002



Source: NCES-IPEDS Completions Survey, WICHE

FIGURE 20

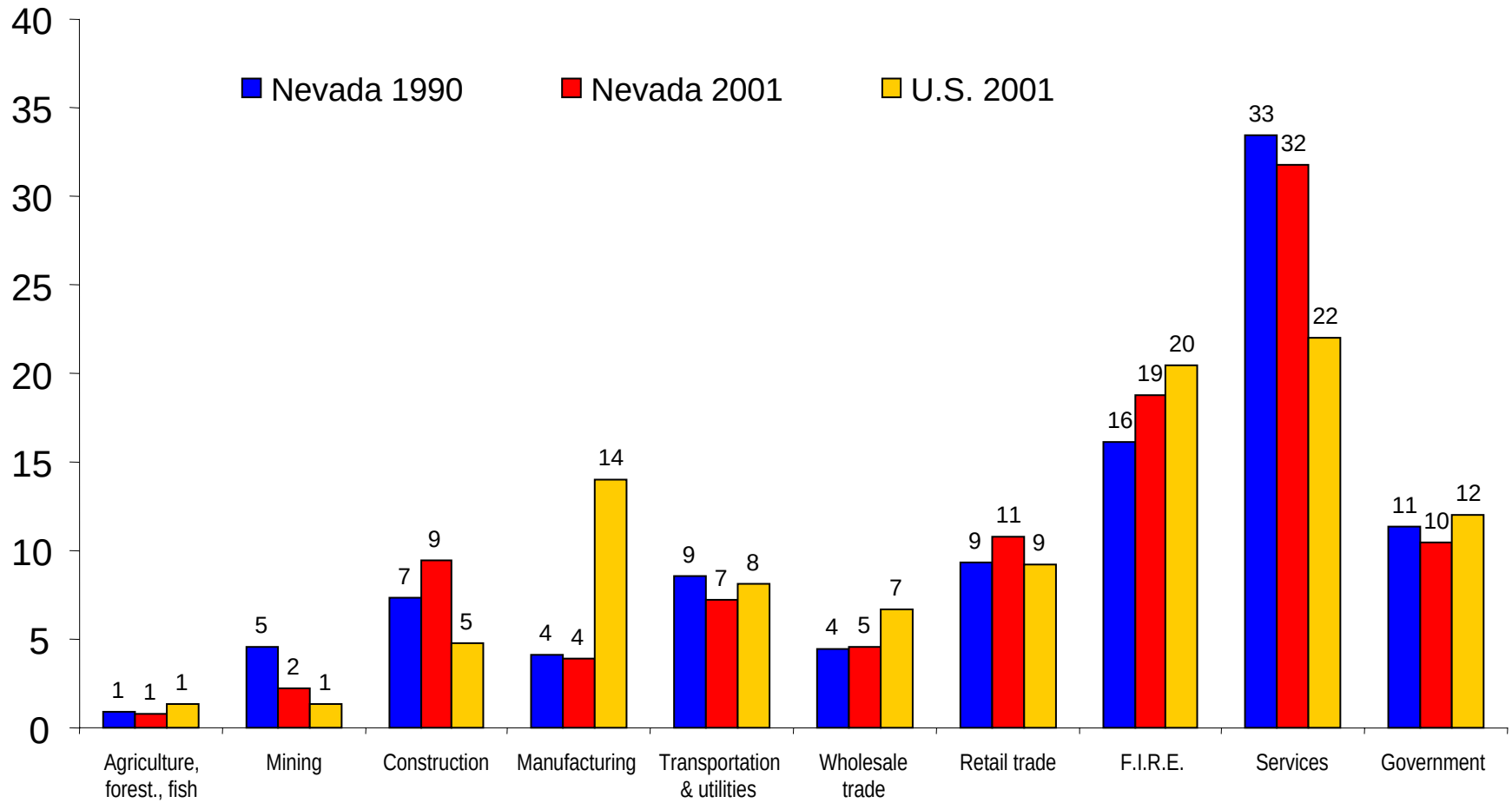
GEDs Awarded to 18- to 24-Year-Olds per 1,000 18- to 24-Year-Olds with Less than a High School Diploma, 2000



Source: GED Testing Service, U.S. Census Bureau

FIGURE 21

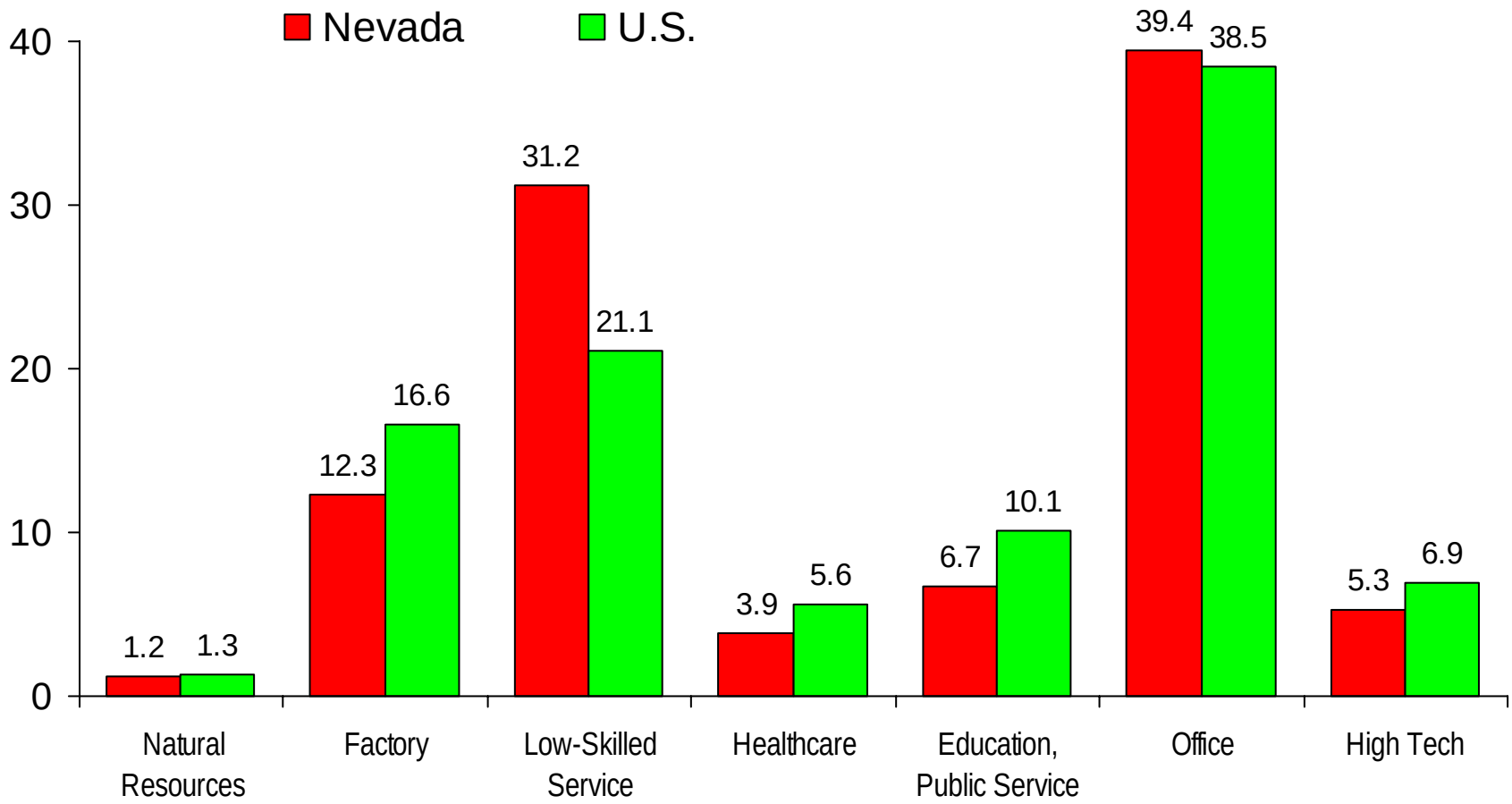
Nevada Change in Gross State Product by Industry and Comparison to U.S. (Percent)



Source: U.S. Bureau of Economic Analysis

FIGURE 22

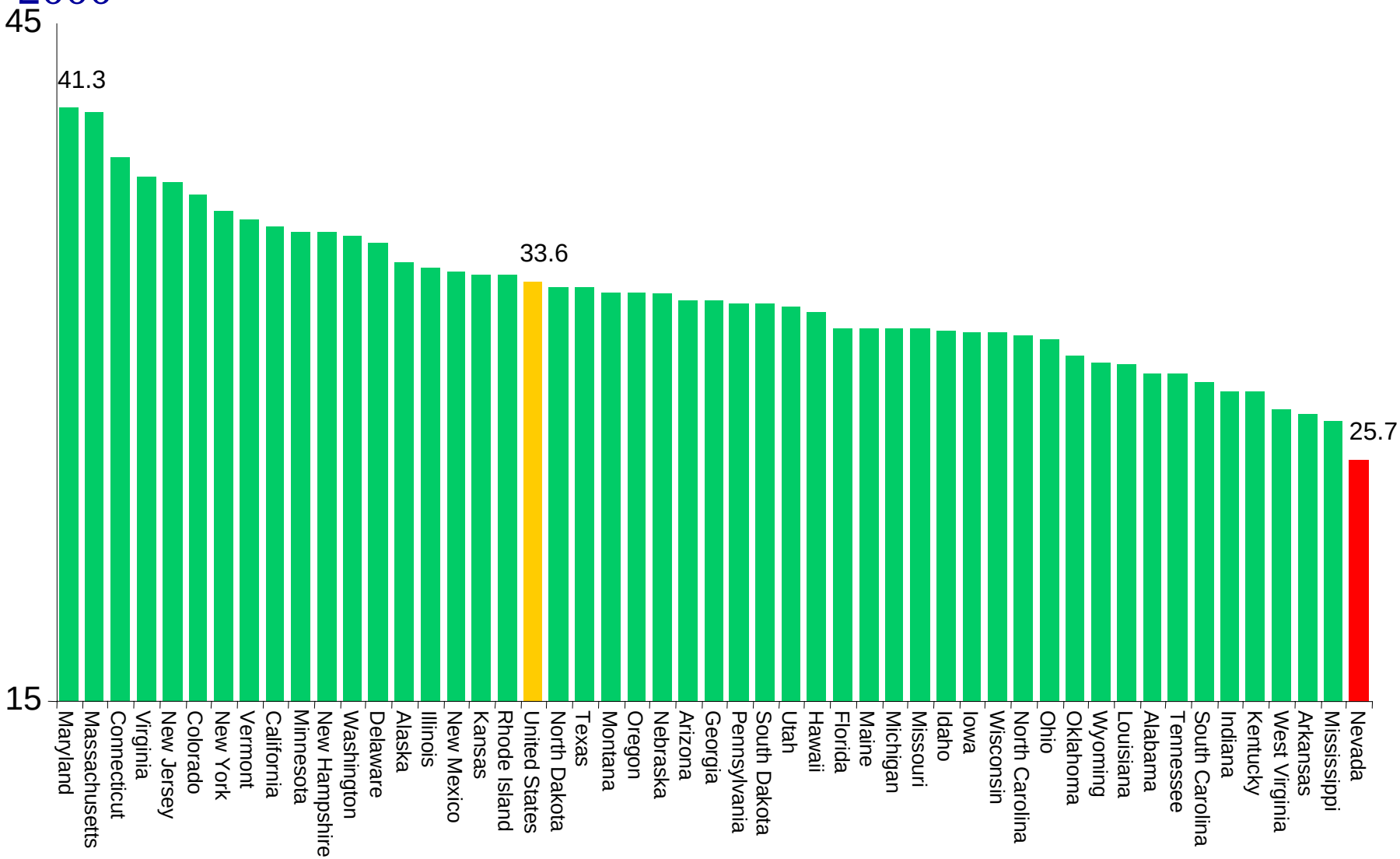
Employment by Job Type, 1998-2001 (Percent)



Source: Tony Carnevale, Donna Deroschers (ETS)

FIGURE 23

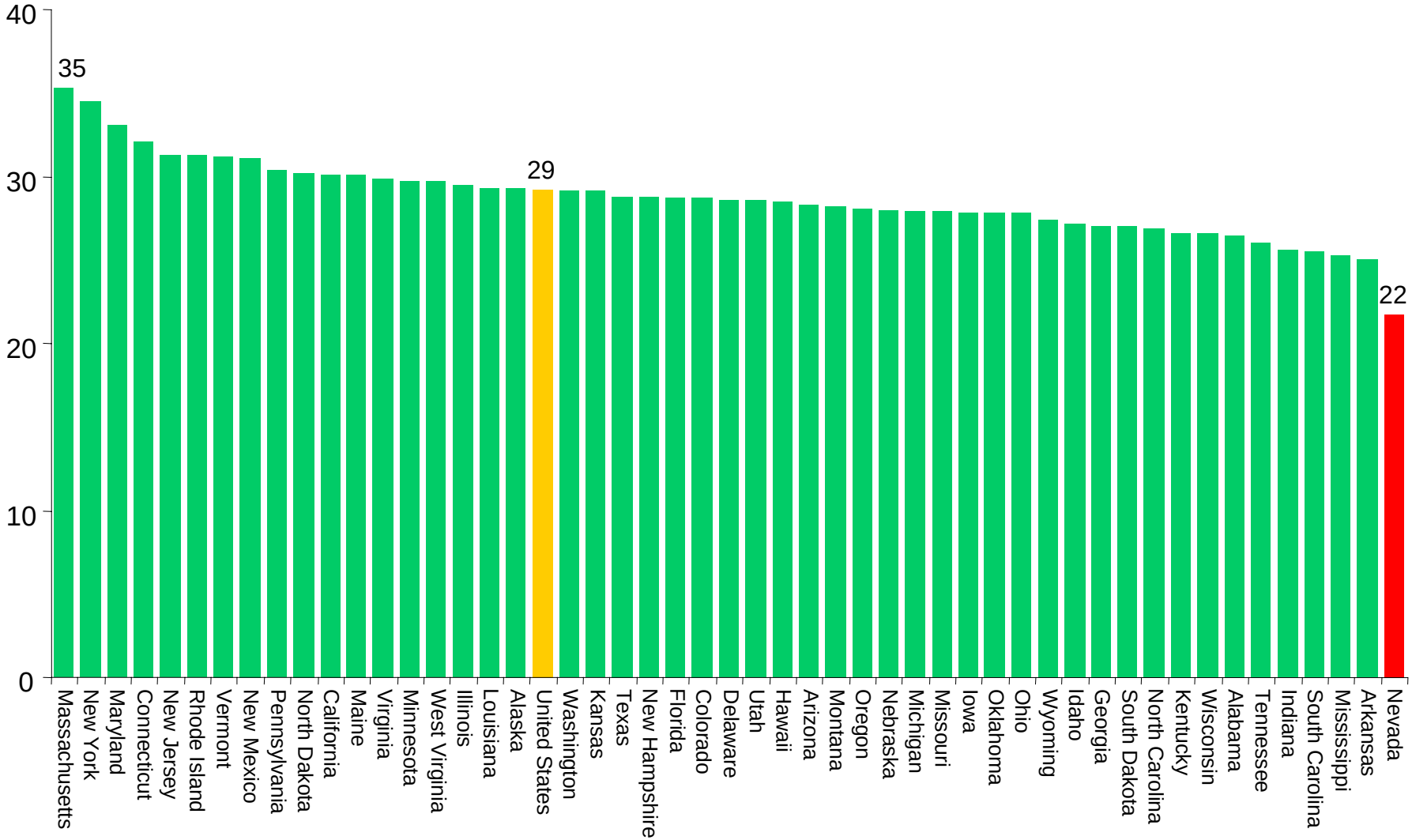
Percent Employment in Professional and Management Occupations, 2000



Source: U.S. Census Bureau

FIGURE 24

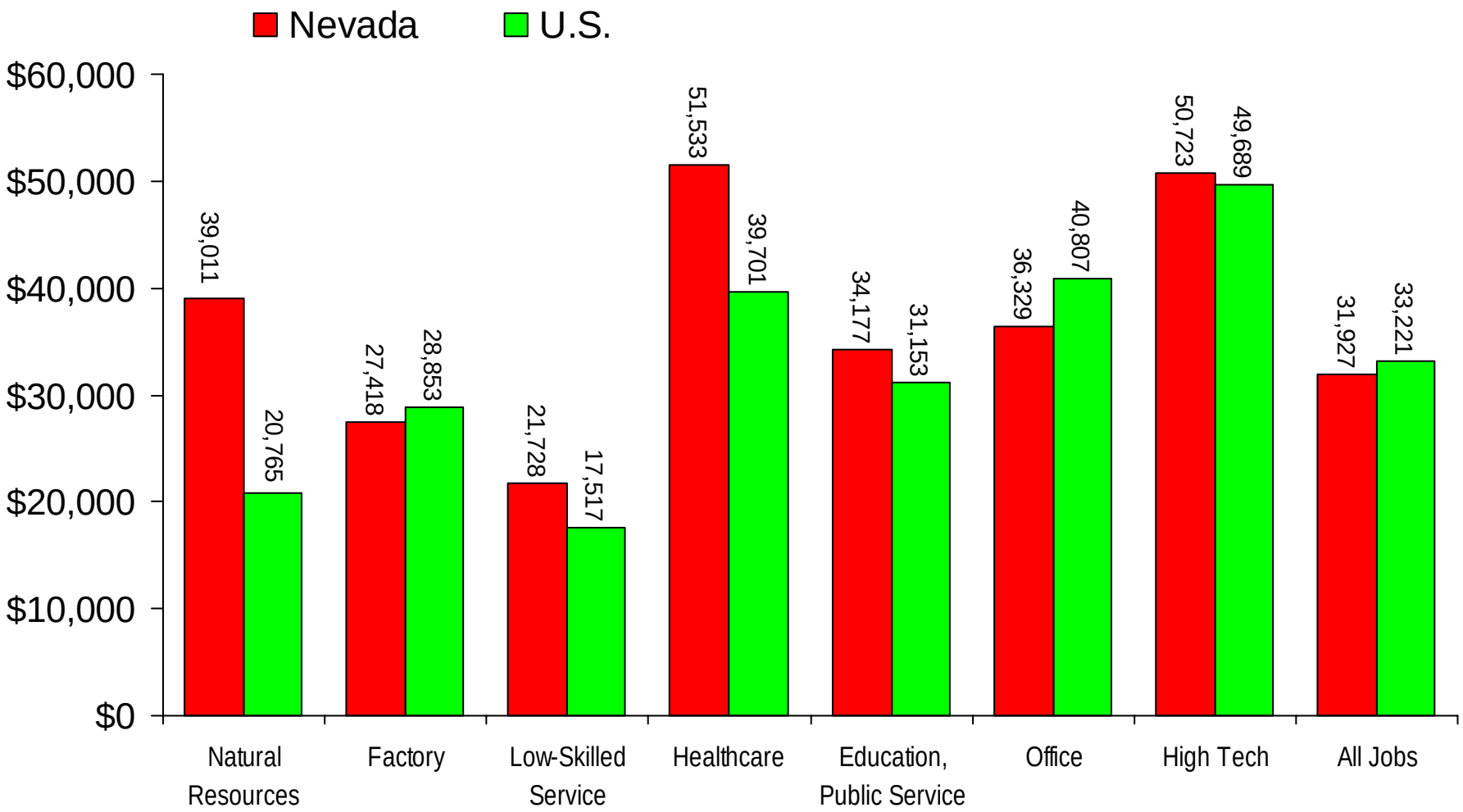
Percent Employment in Professional, Education, Health, and Social Service Industries, 2000



Source: U.S. Census Bureau

FIGURE 25

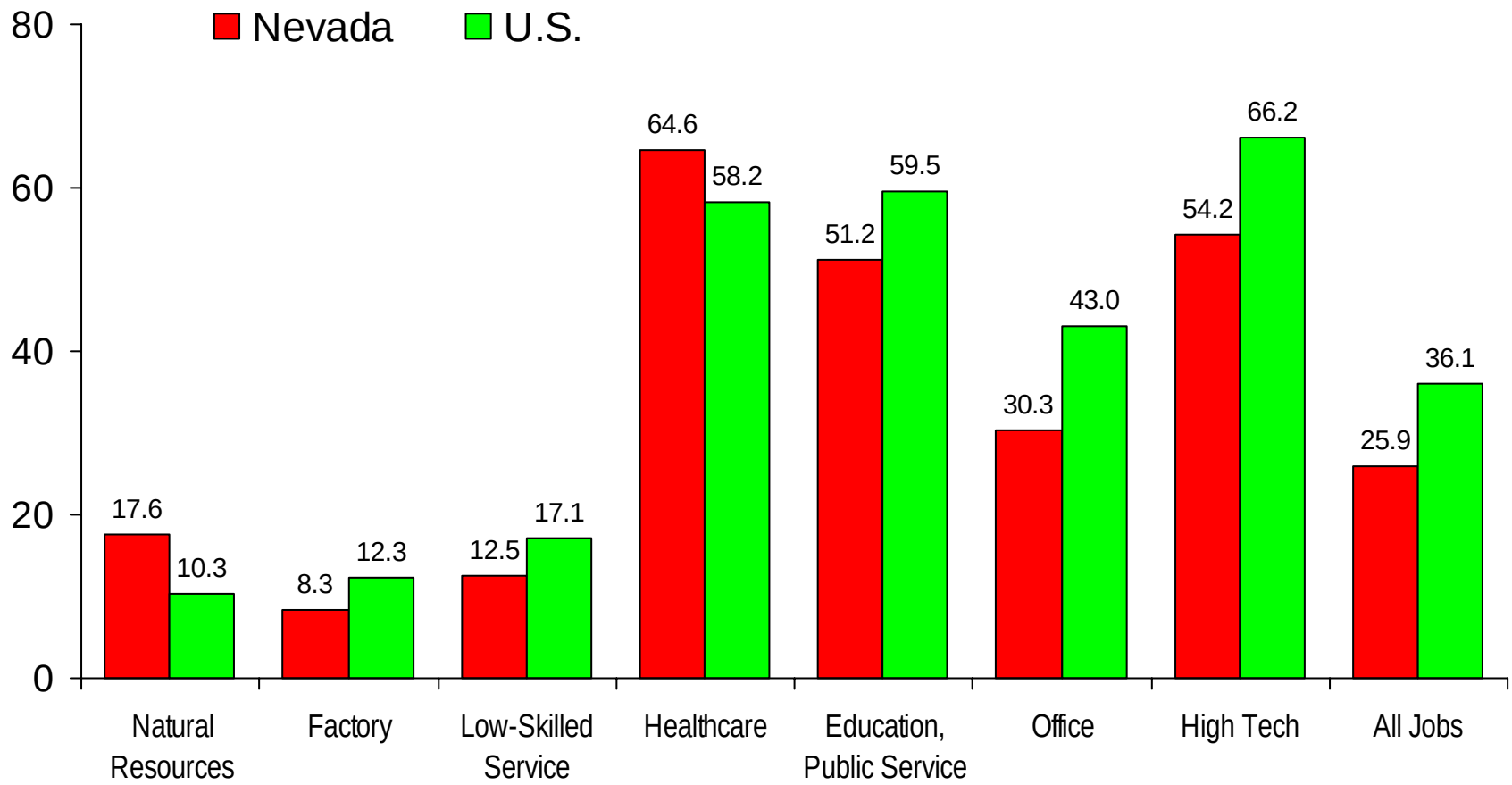
Earnings by Job Type, 1998-2001



Source: Tony Carnevale, Donna Deroschers (ETS)

FIGURE 26

Percent of Employees with a College Degree by Job Type, 1998-2001

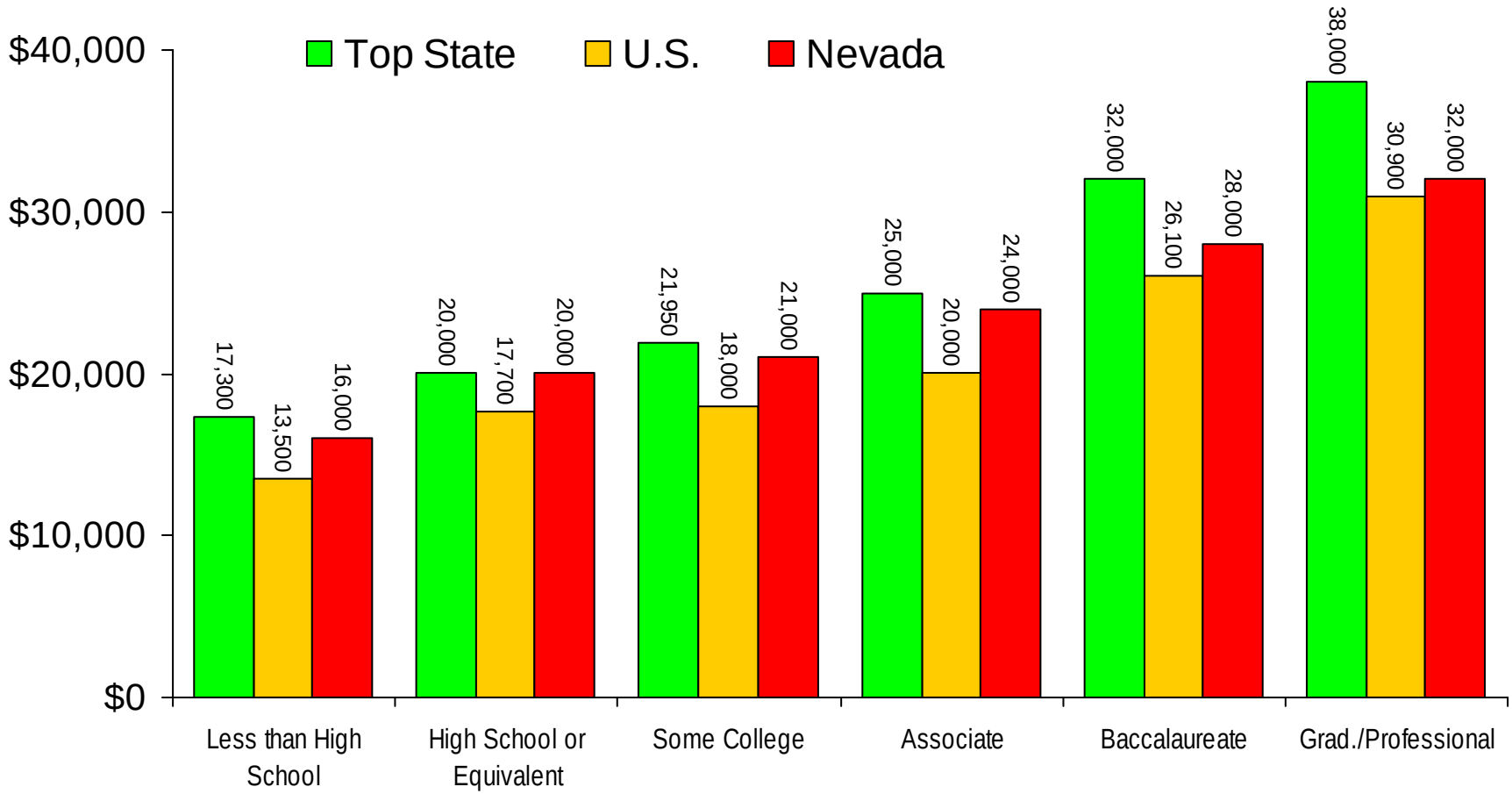


Source: Tony Carnevale, Donna Deroschers (ETS)

FIGURE 27

Median Earnings by Degree Level, 2000

22- to 29-Year-Olds with Earnings

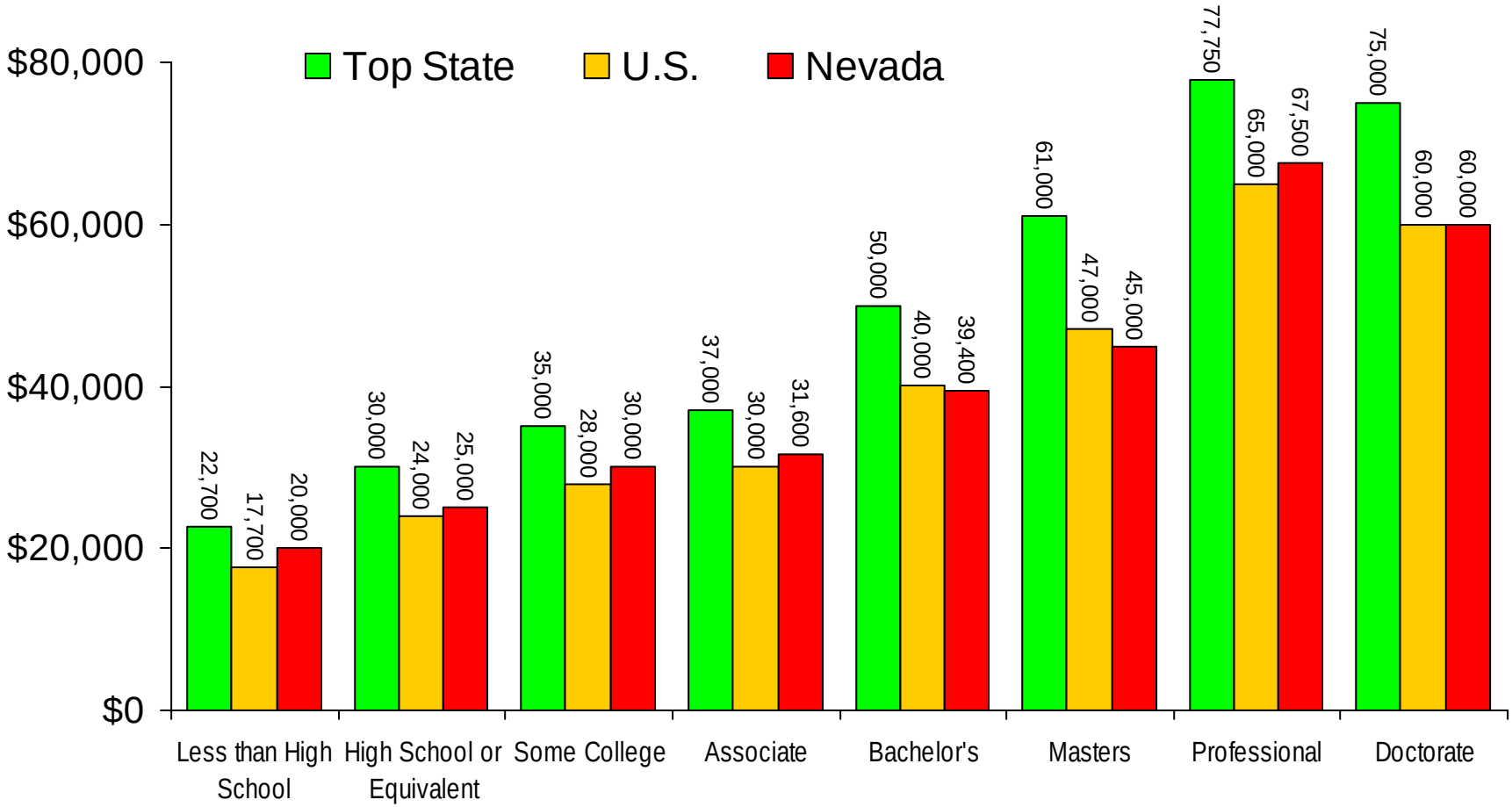


Source: U.S. Census Bureau, Public Use Microdata Samples, 2000

FIGURE 28

Median Earnings by Degree Level, 2000

30- to 64-Year-Olds with Earnings

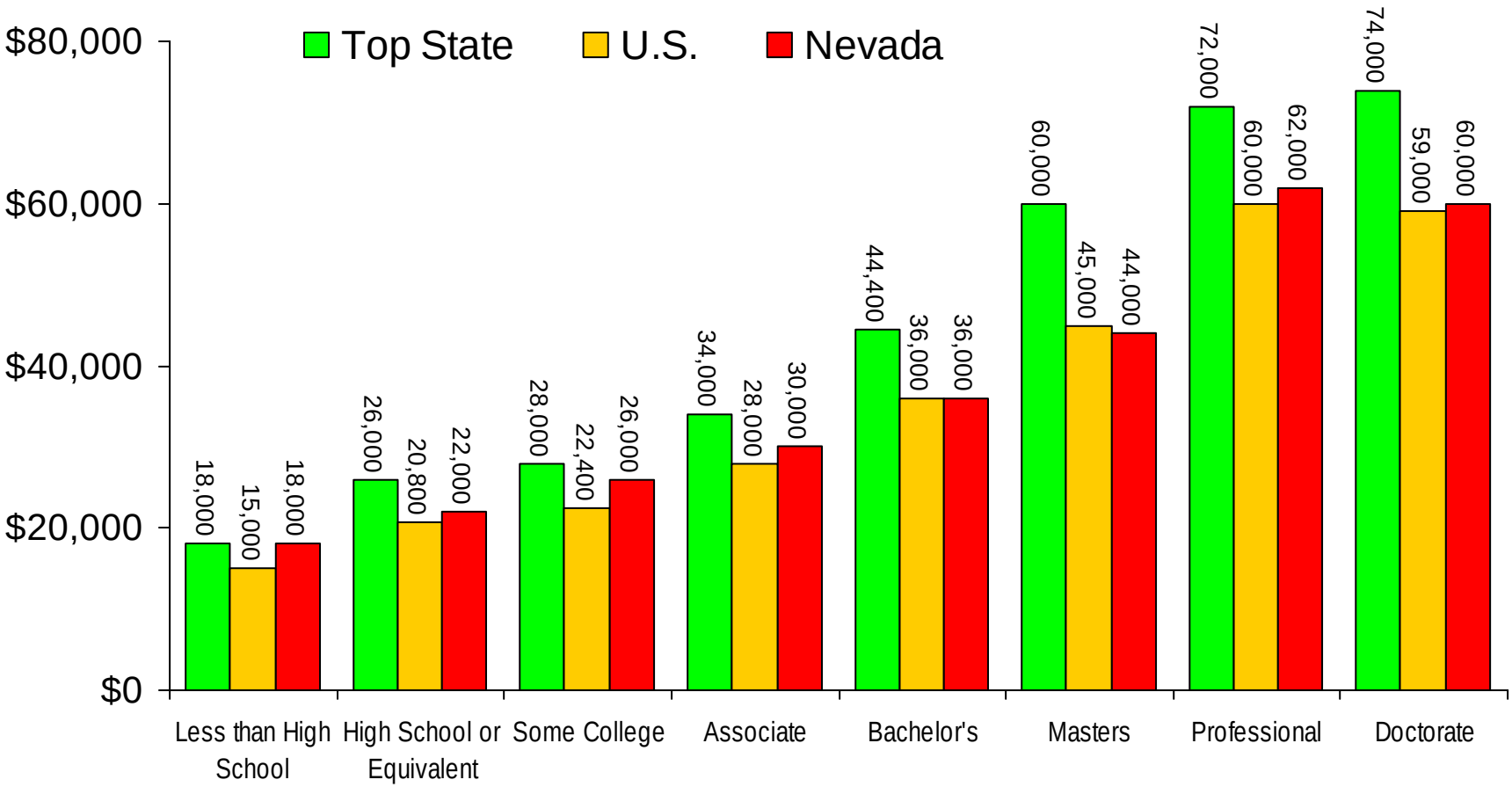


Source: U.S. Census Bureau, Public Use Microdata Samples, 2000

FIGURE 29

Median Earnings by Degree Level, 2000

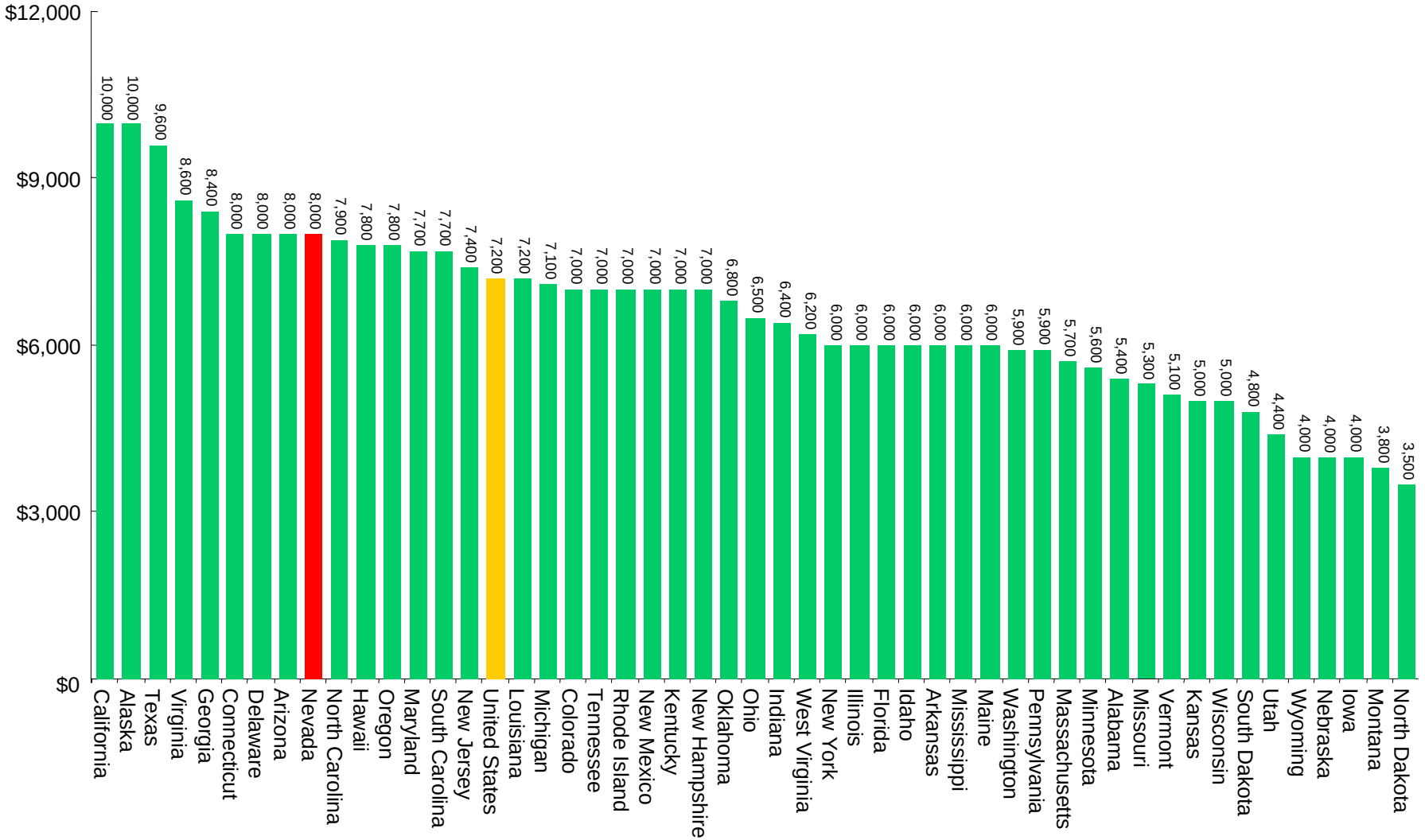
18- to 64-Year-Olds with Earnings



Source: U.S. Census Bureau, Public Use Microdata Samples, 2000

FIGURE 30

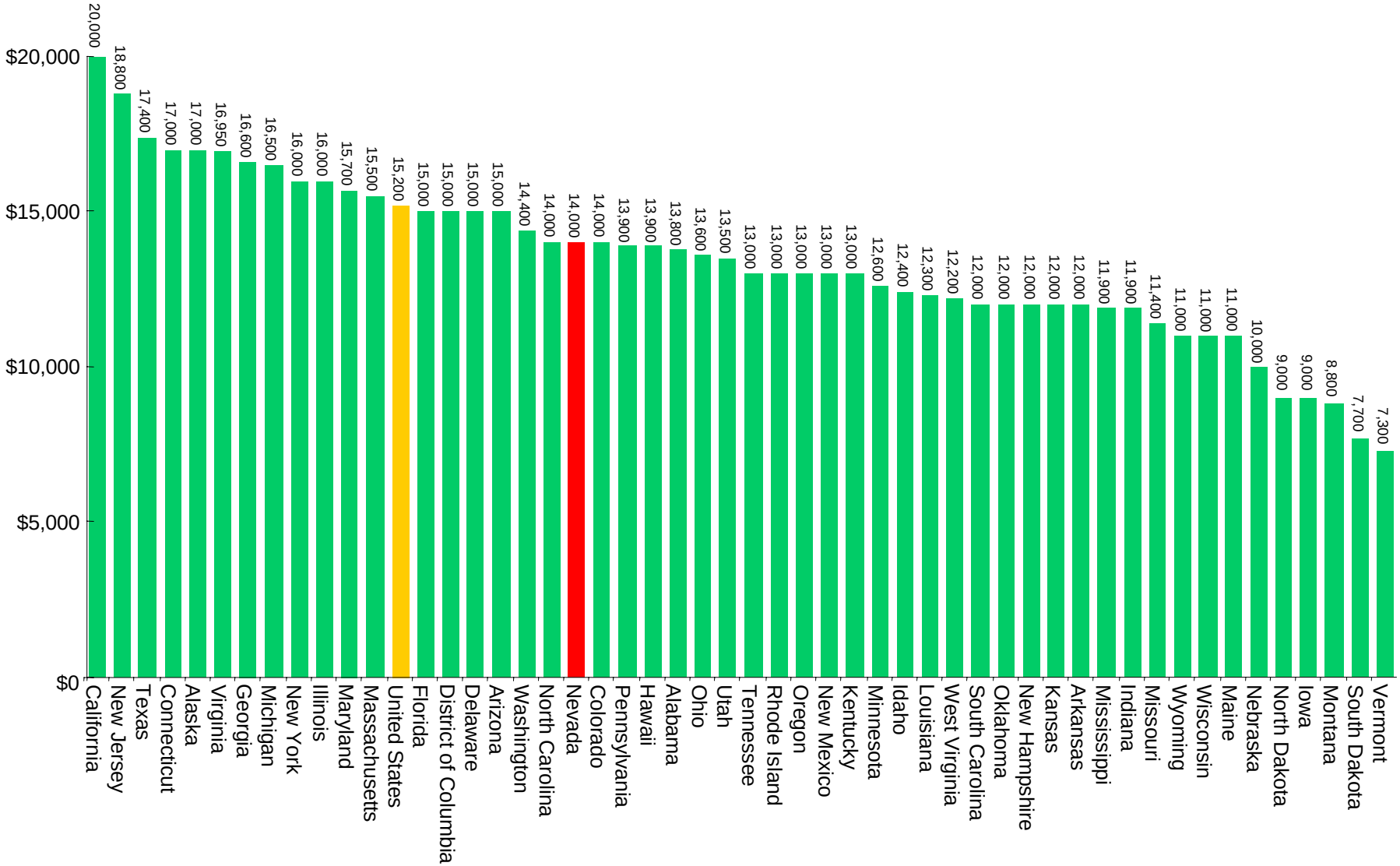
Difference in Median Earnings Between a High School Diploma and an Associate Degree, 2000



Source: U.S. Census Bureau, Public Use Microdata Samples, 2000

FIGURE 31

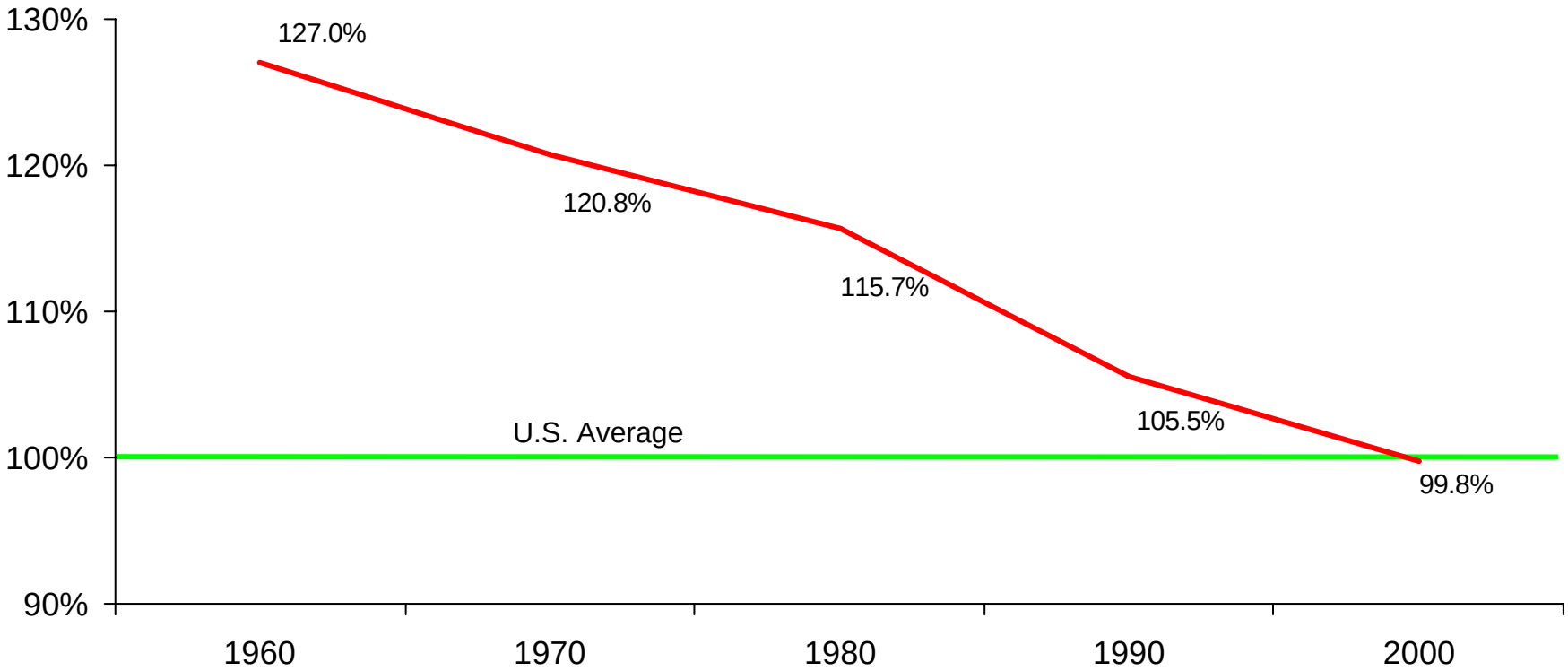
Difference in Median Earnings Between a High School Diploma and a Bachelor's Degree



Source: U.S. Census Bureau, Public Use Microdata Samples, 2000

FIGURE 32

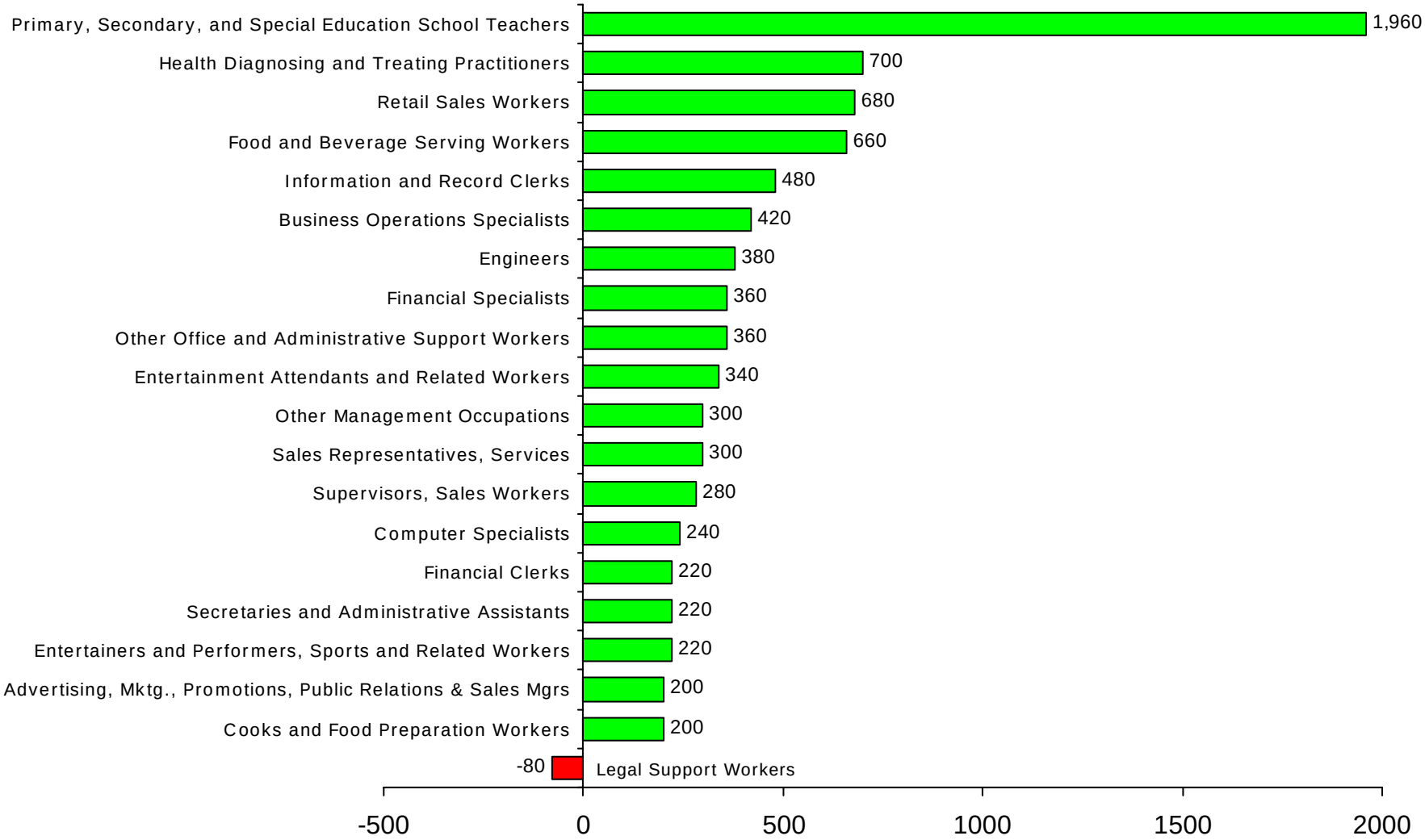
Nevada Per Capita Personal Income as a Percentage of U.S. Average, 1960-2000



Source: U.S. Census Bureau

FIGURE 33

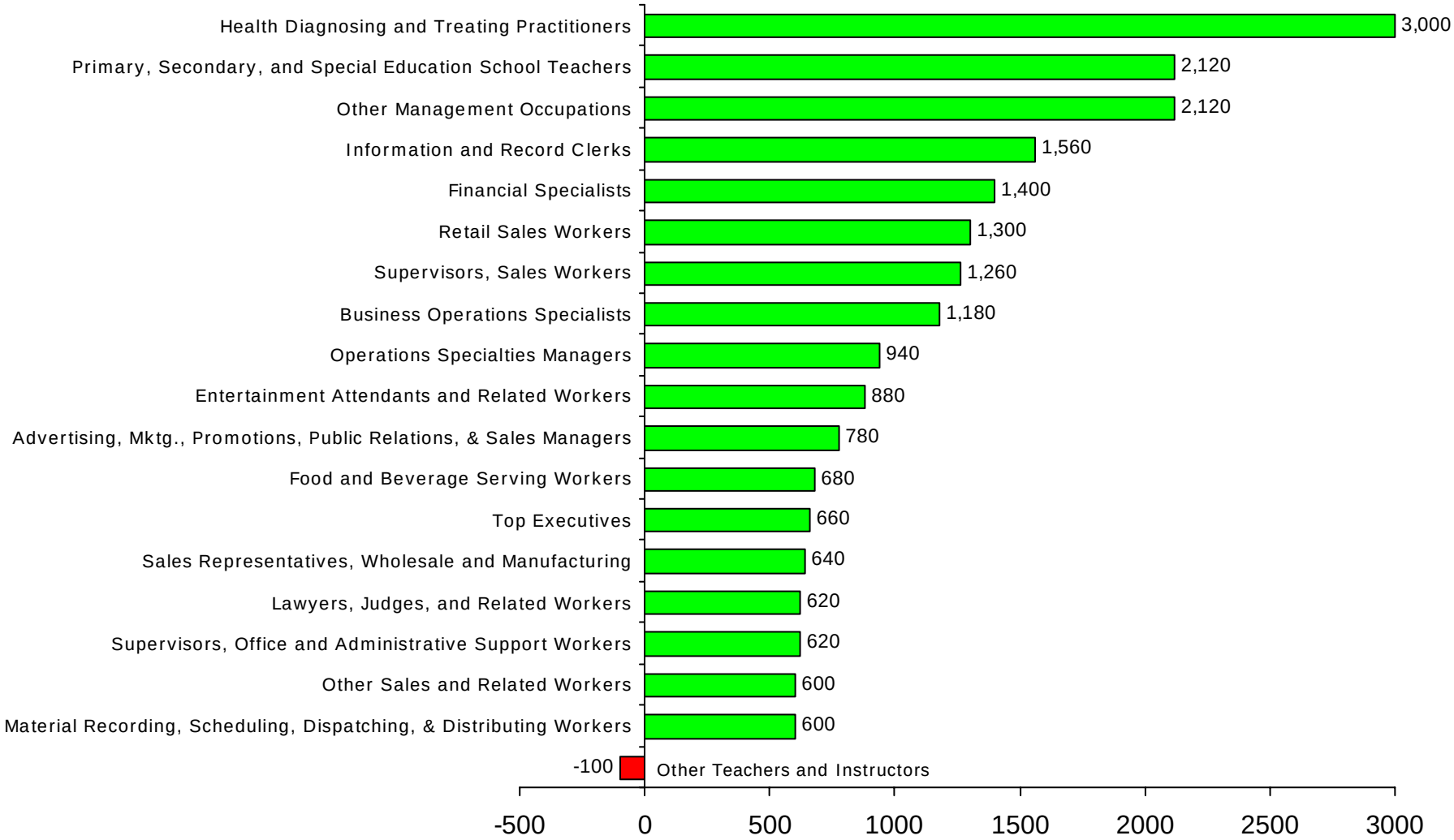
Occupations with High Net Imports and Exports—22- to 29-Year-Olds with College Degrees



Source: U.S. Census Bureau, Public Use Microdata Samples, 2000

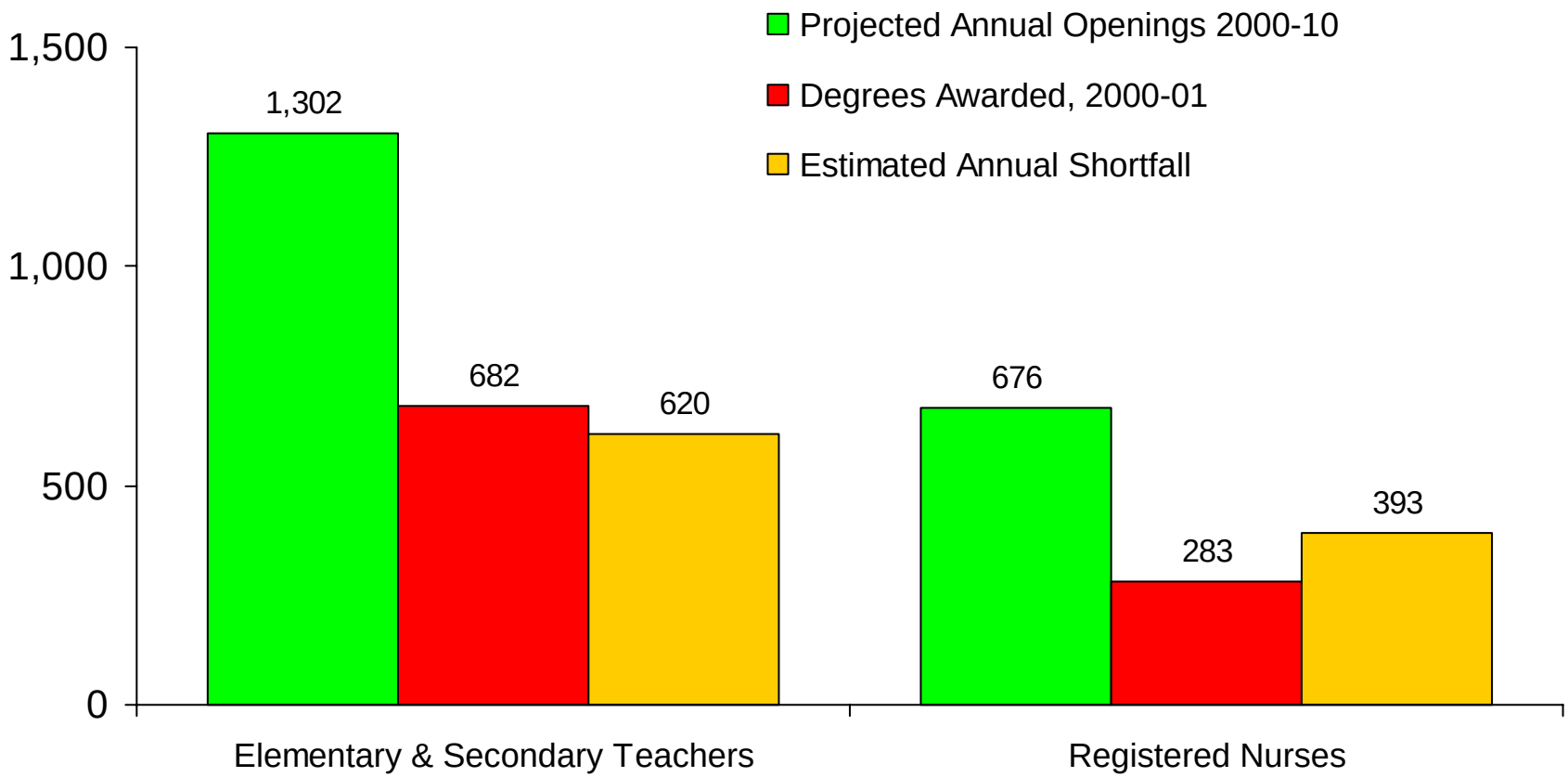
FIGURE 34

Occupations with High Net Imports and Exports—30- to 64-Year-Olds with College Degrees



Source: U.S. Census Bureau, Public Use Microdata Samples, 2000

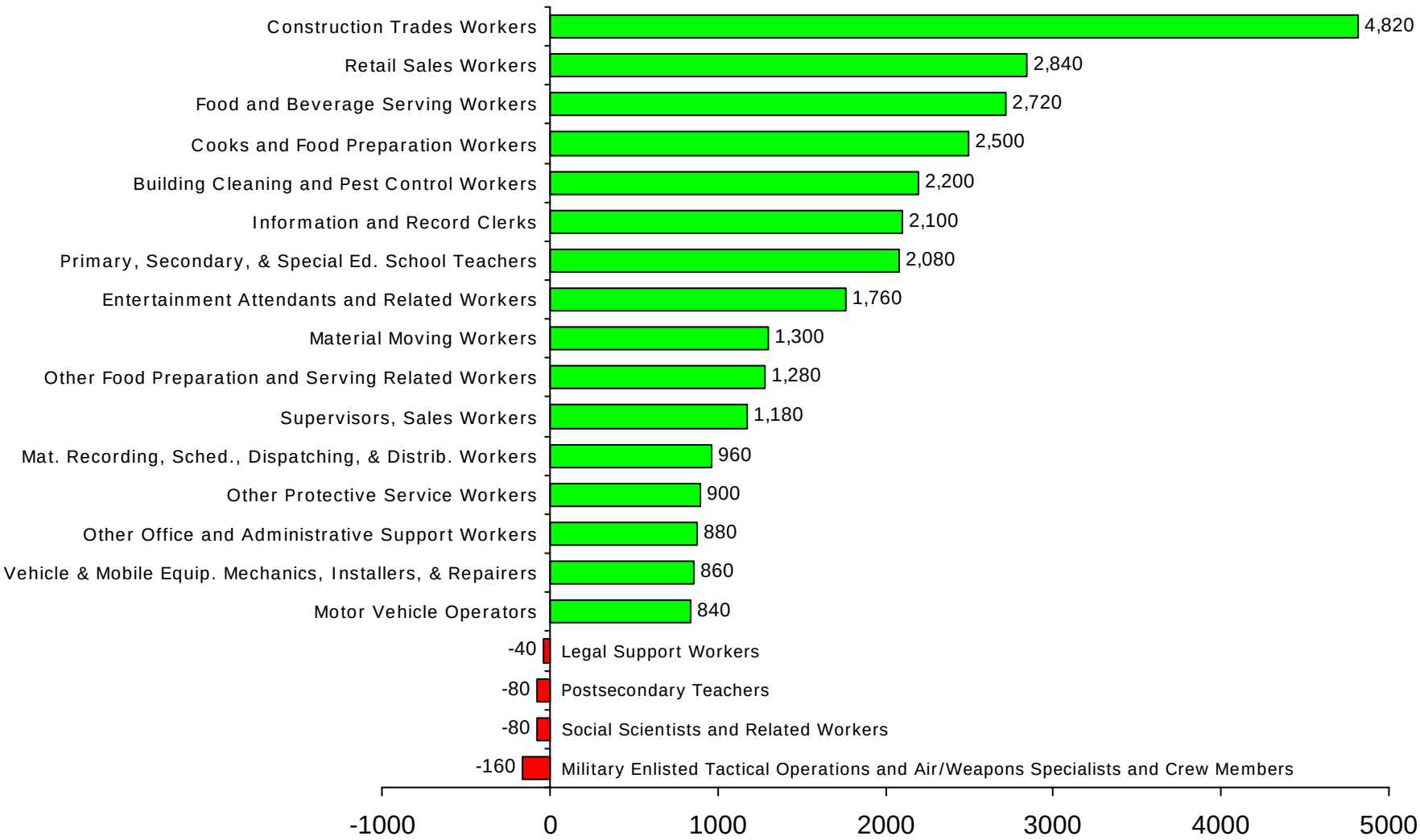
Nevada Projected Teacher and Nursing Needs vs. Actual Production



Source: Nevada Workforce Informer; www.nevadaworkforce.com.
NCES, IPEDS 2000-01 Completions.

FIGURE 36

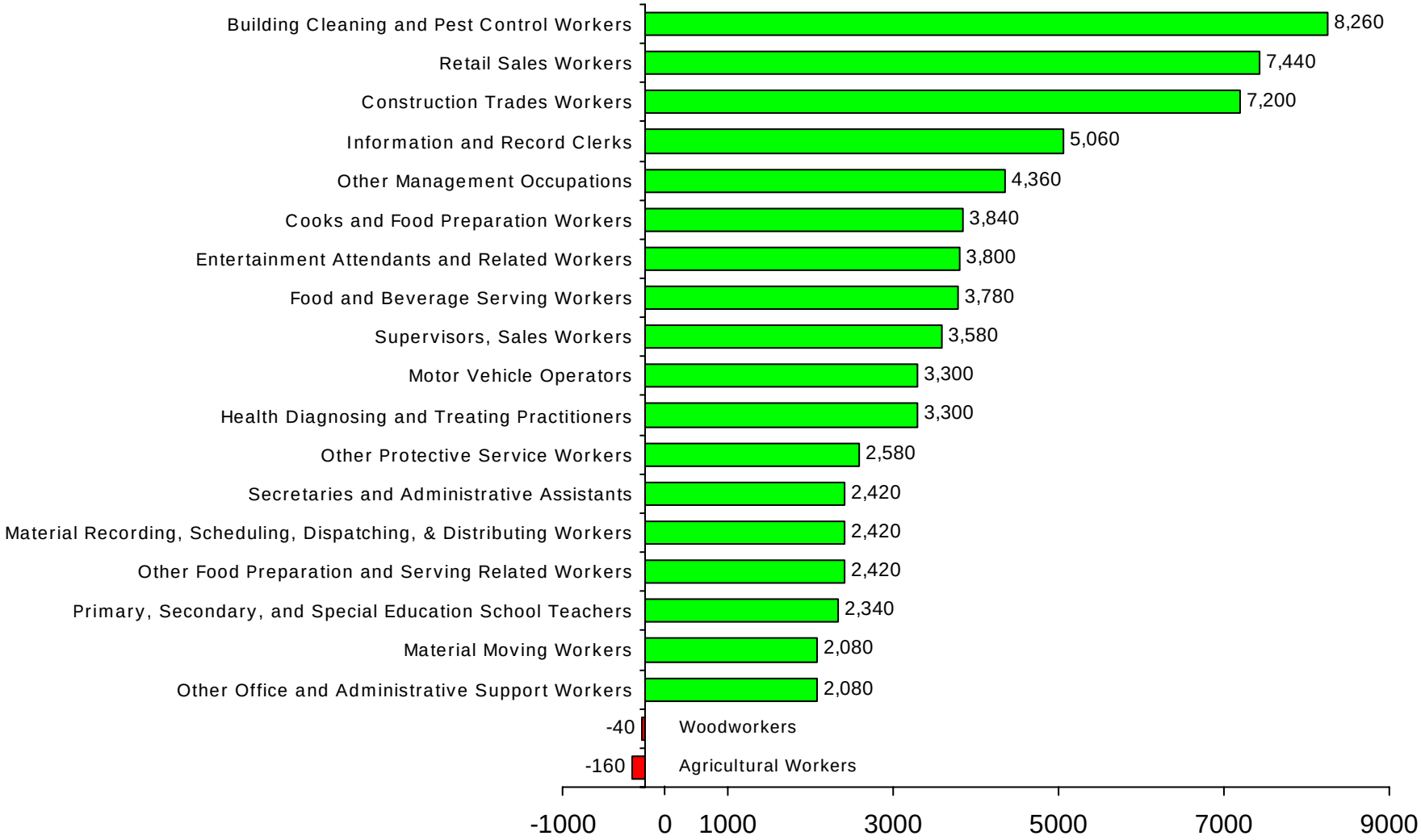
Occupations with High Net Imports and Exports—All 22- to 29-Year-Olds



Source: U.S. Census Bureau, Public Use Microdata Samples, 2000

FIGURE 37

Occupations with High Net Imports and Exports—All 30- to 64-Year-Olds



Source: U.S. Census Bureau, Public Use Microdata Samples, 2000

FIGURE 38

Development Report Card for the States, 2003

Nevada

C	**Performance**	Employment	B
		Earnings and Job Quality	C
		Equity	A
		Quality of Life	D
		Resource Efficiency	C
D	**Business Vitality**	Competitiveness of Existing Bus.	F
		Entrepreneurial Energy	B
D	**Development Capacity**	Human Resources	D
		Financial Resources	C
		Infrastructure Resources	A
		Amenity Resources	D
		Innovation Assets	F

Weaknesses (Bottom 10 Rank)

Rank	Measure
41	University Spin-Outs
42	SBIC Financing
42	College Attainment
43	K-12 Educational Expenditures
43	Royalties and Licenses
44	Homeownership Rate
45	Cost of Urban Housing
46	Technology Industry Employment
46	Air Quality
46	Mass Layoffs
46	University R&D
47	Business Closings
48	Voting Rate
49	Toxic Release Inventory
49	PhD Scientists and Engineers
49	Science and Engineering Grad Students
49	Uninsured Low Income Children
49	High School Completion
50	Industrial Diversity

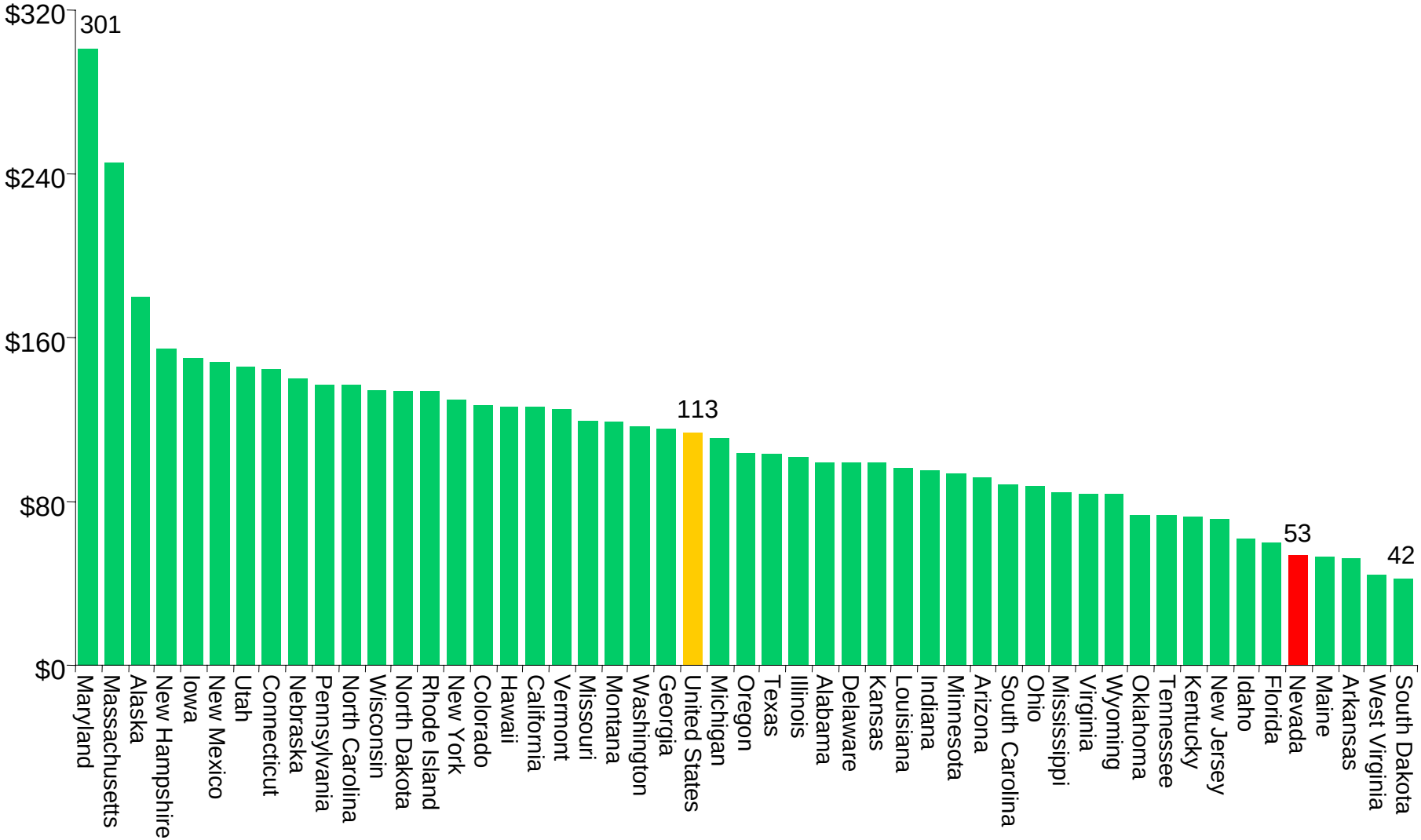
Strengths (Top 10 Rank)

Rank	Measure
1	Employment Growth: Long Term
1	Sewage Treatment Needs
1	Net Migration
3	Bridge Deficiency
6	Highway Deficiency
6	Initial Public Offerings
6	New Companies
8	Electronic Public Services
8	Poverty Rate
9	Employment Growth: Short Term
9	Vehicle Miles Traveled
9	Income Distribution
10	Urban Mass Transit

Source: Corporation for Enterprise Development

FIGURE 39

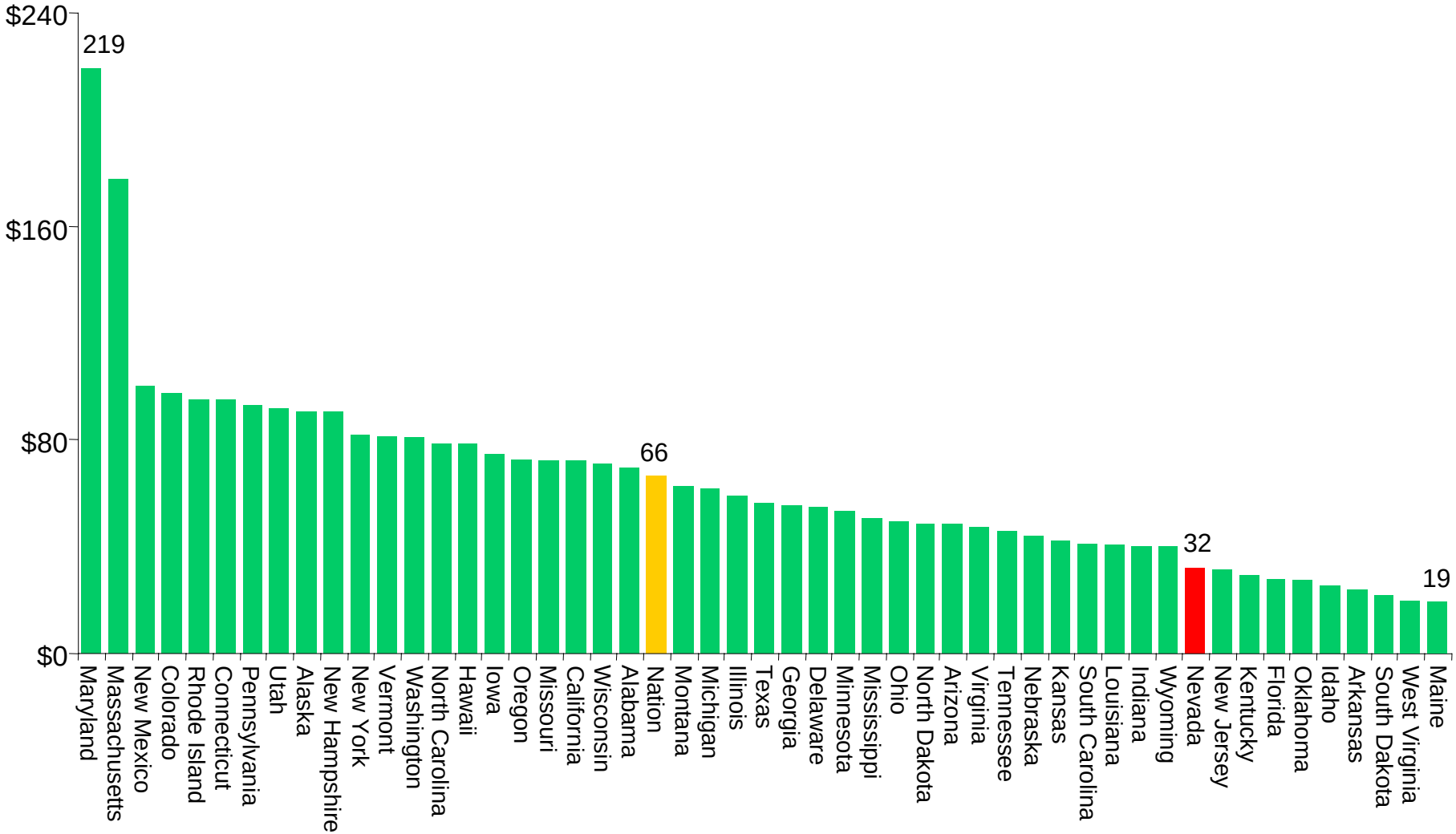
Total Research and Development Expenditures Per Capita, 2001



Source: National Science Foundation, U.S. Census Bureau

FIGURE 40

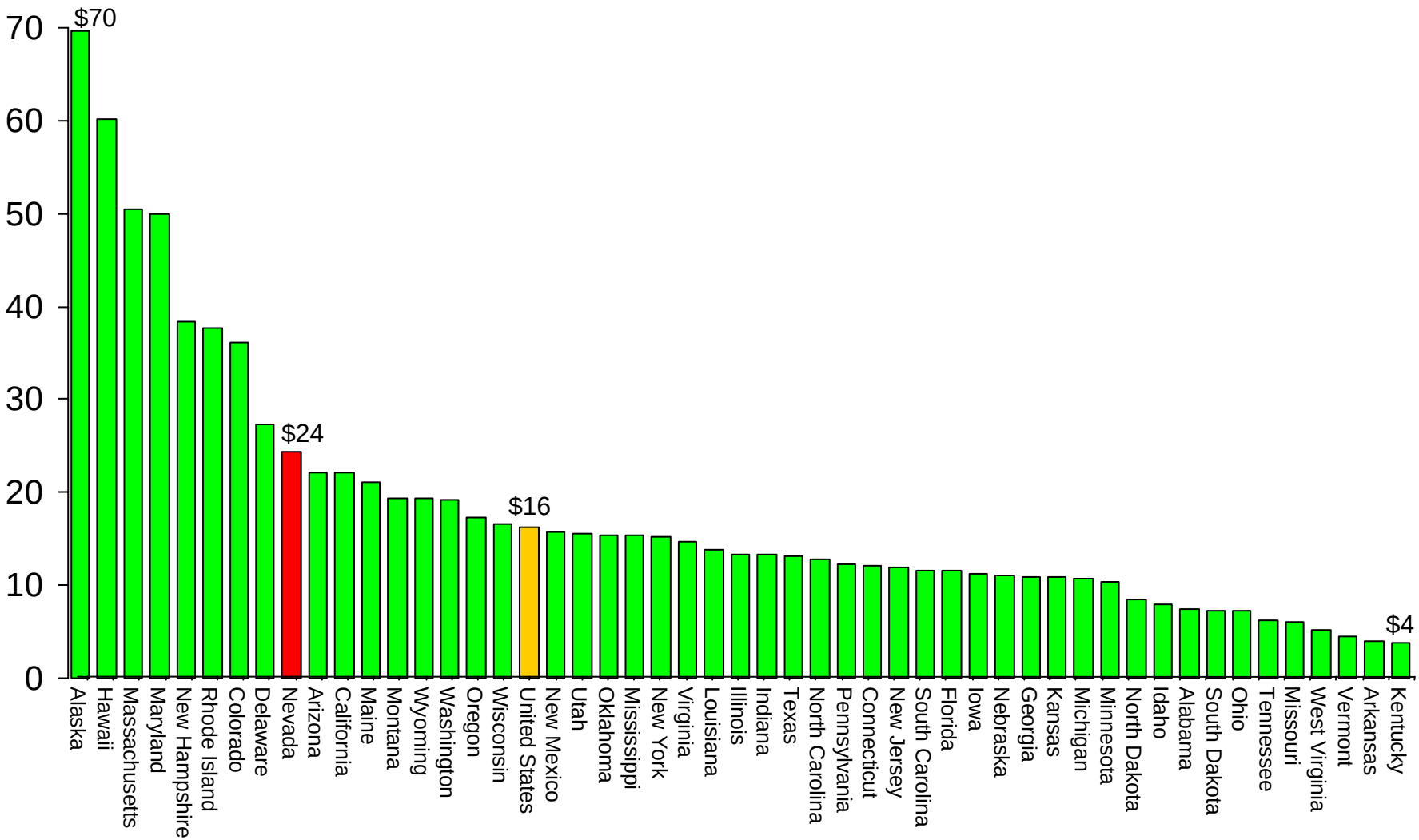
Federal Research and Development Expenditures Per Capita, 2001



Source: National Science Foundation, U.S. Census Bureau

FIGURE 41

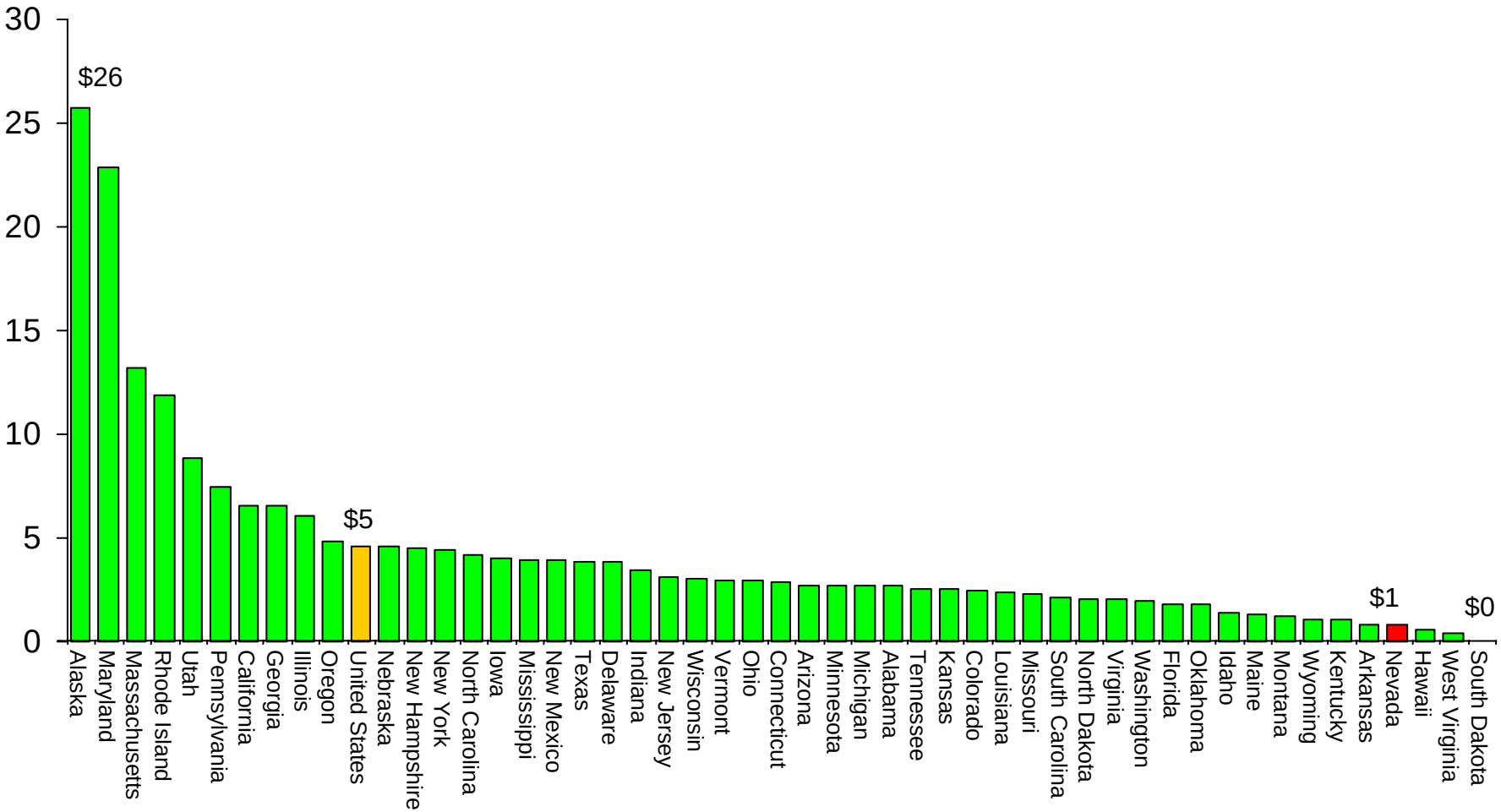
Total Physical Science R&D Per Capita, 2001



Source: National Science Foundation WebCASPAR Database System

FIGURE 42

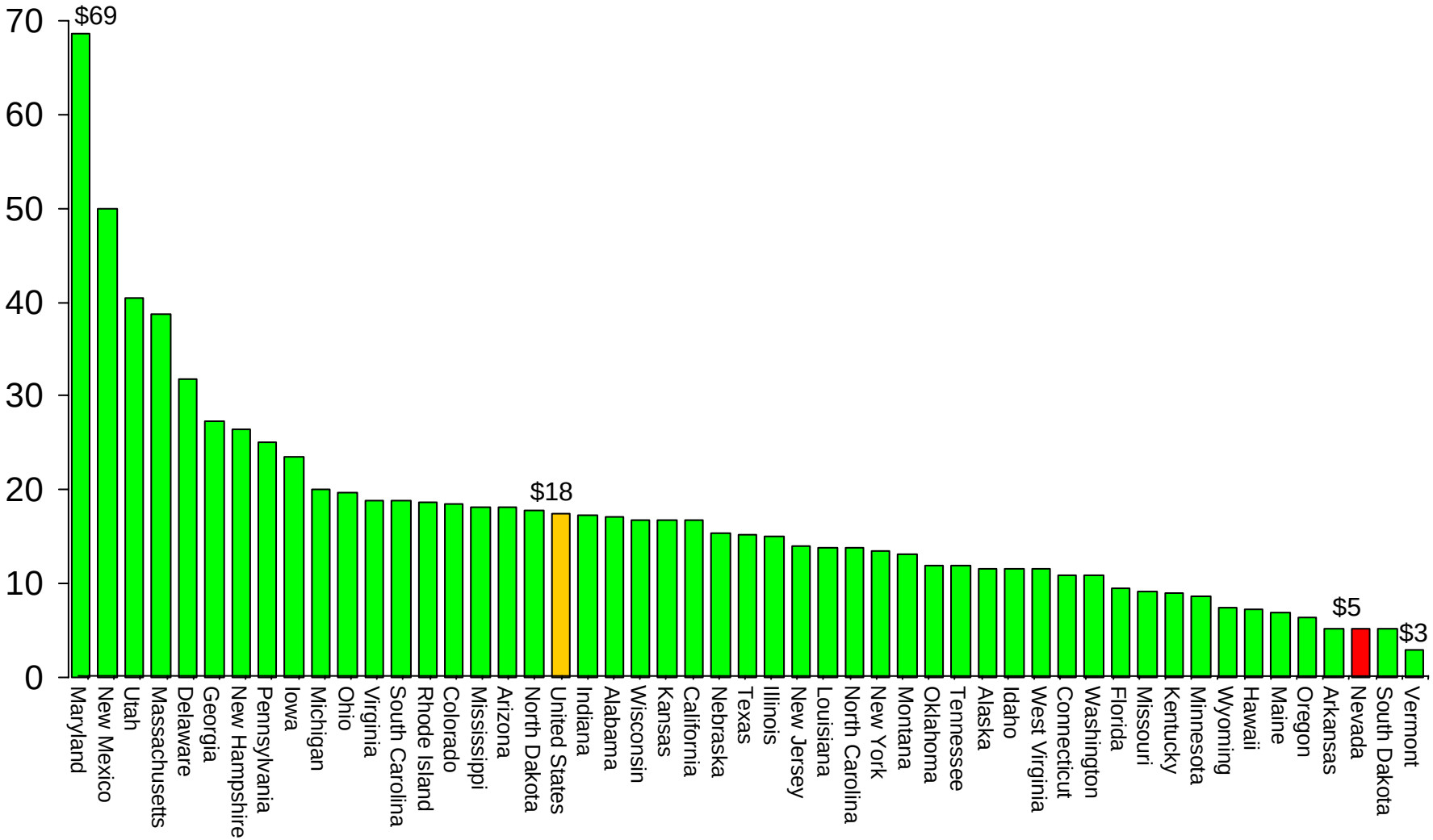
Total Math and Computer Science R&D Per Capita, 2001



Source: National Science Foundation WebCASPAR Database System

FIGURE 43

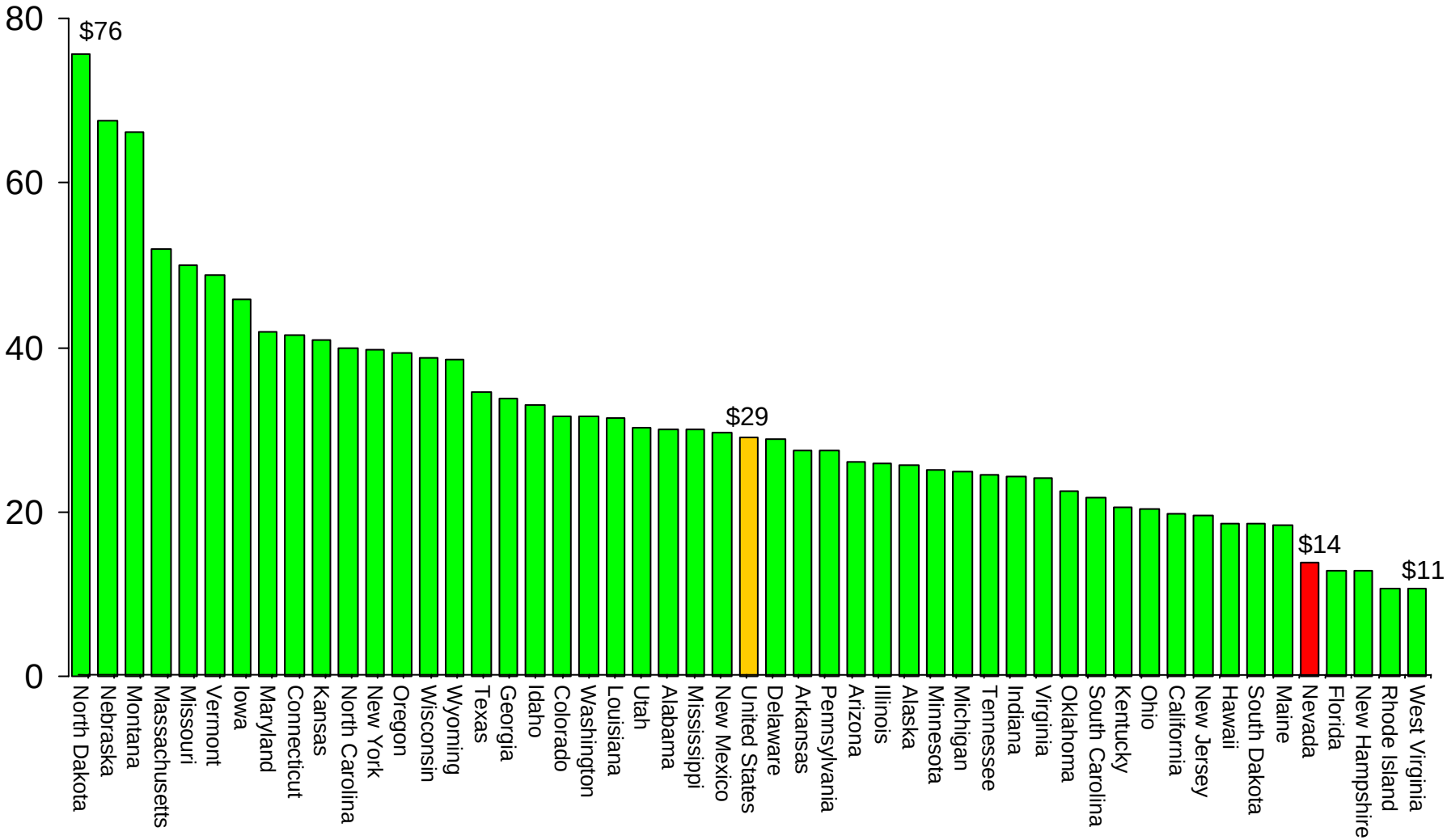
Total Engineering R&D Per Capita, 2001



Source: National Science Foundation WebCASPAR Database System

FIGURE 44

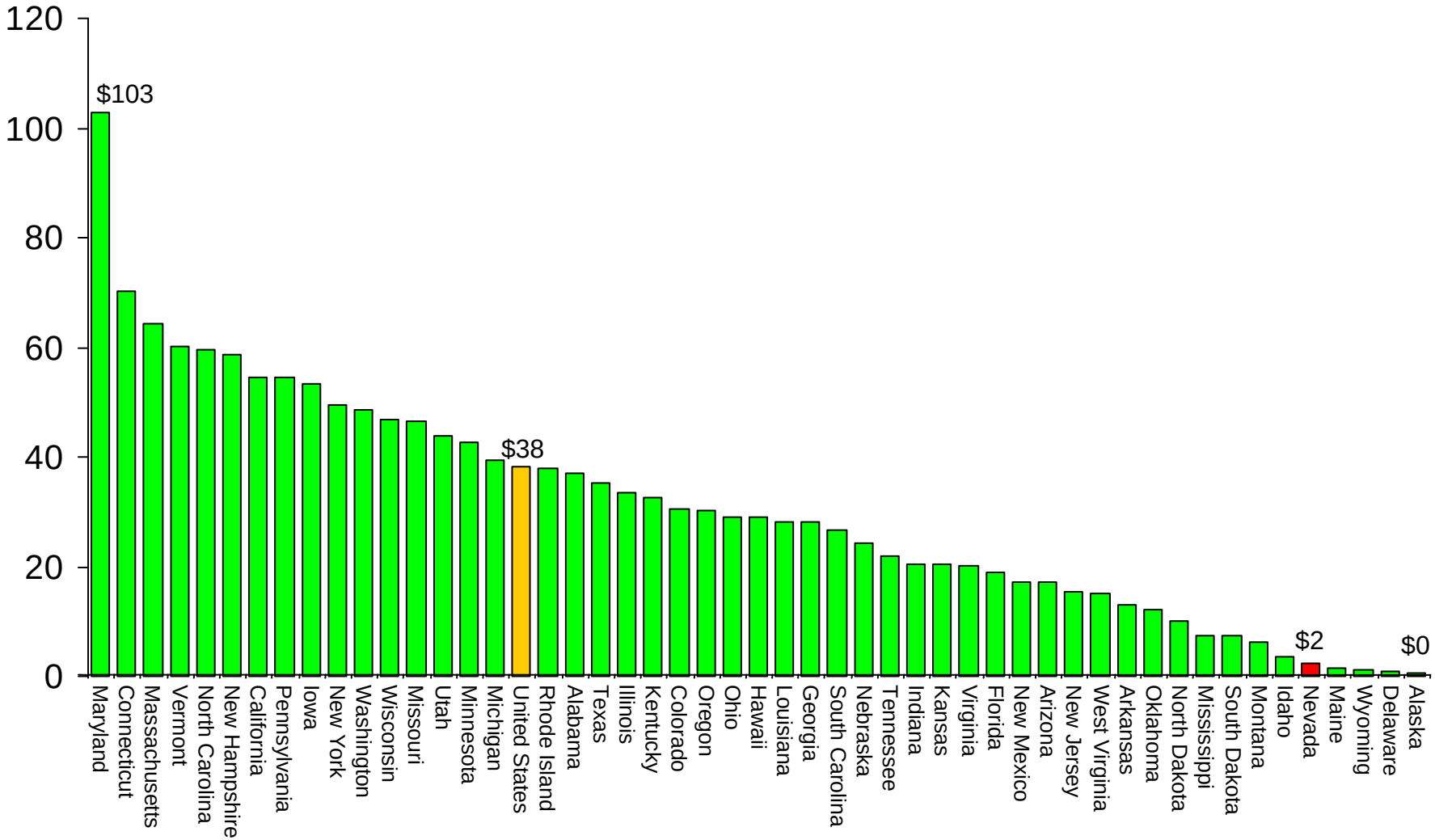
Total Life Science R&D Per Capita, 2001



Source: National Science Foundation WebCASPAR Database System

FIGURE 45

Total Medical R&D Per Capita, 2001



Source: National Science Foundation WebCASPAR Database System

FIGURE 46

UN–Las Vegas Peers—Revenues per FTE Student, 2001-02

Source: NCES, IPEDS 2001-02 Finance Data Set

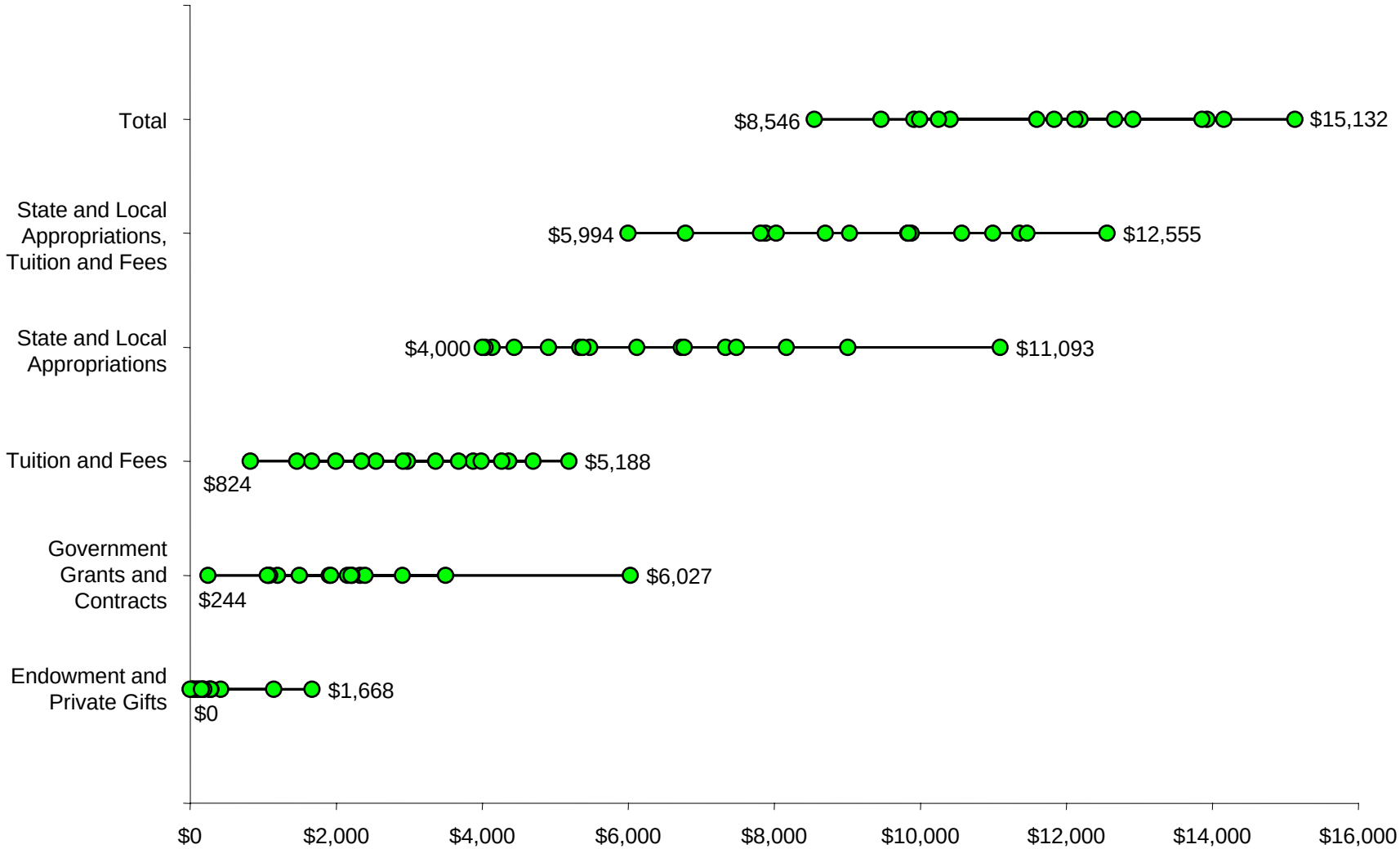
FIGURE 47

UN–Reno Peers—Revenues per FTE Student, 2001-02

Source: NCES, IPEDS 2001-02 Finance Data Set

FIGURE 48

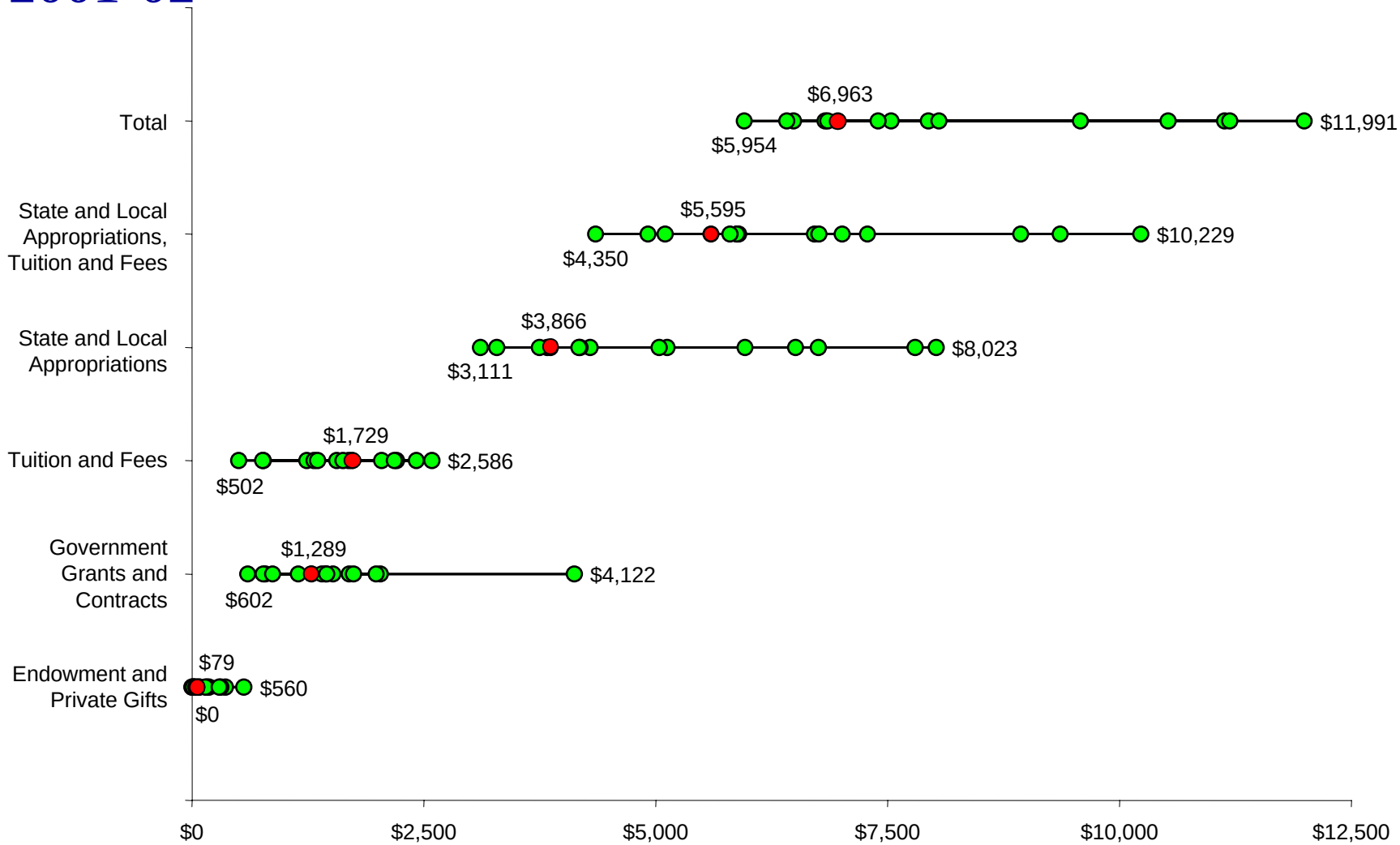
Nevada State Peers—Revenues per FTE Student, 2001-02



Source: NCES, IPEDS 2001-02 Finance Data Set

FIGURE 49

CC of Southern Nevada Peers—Revenues per FTE Student, 2001-02

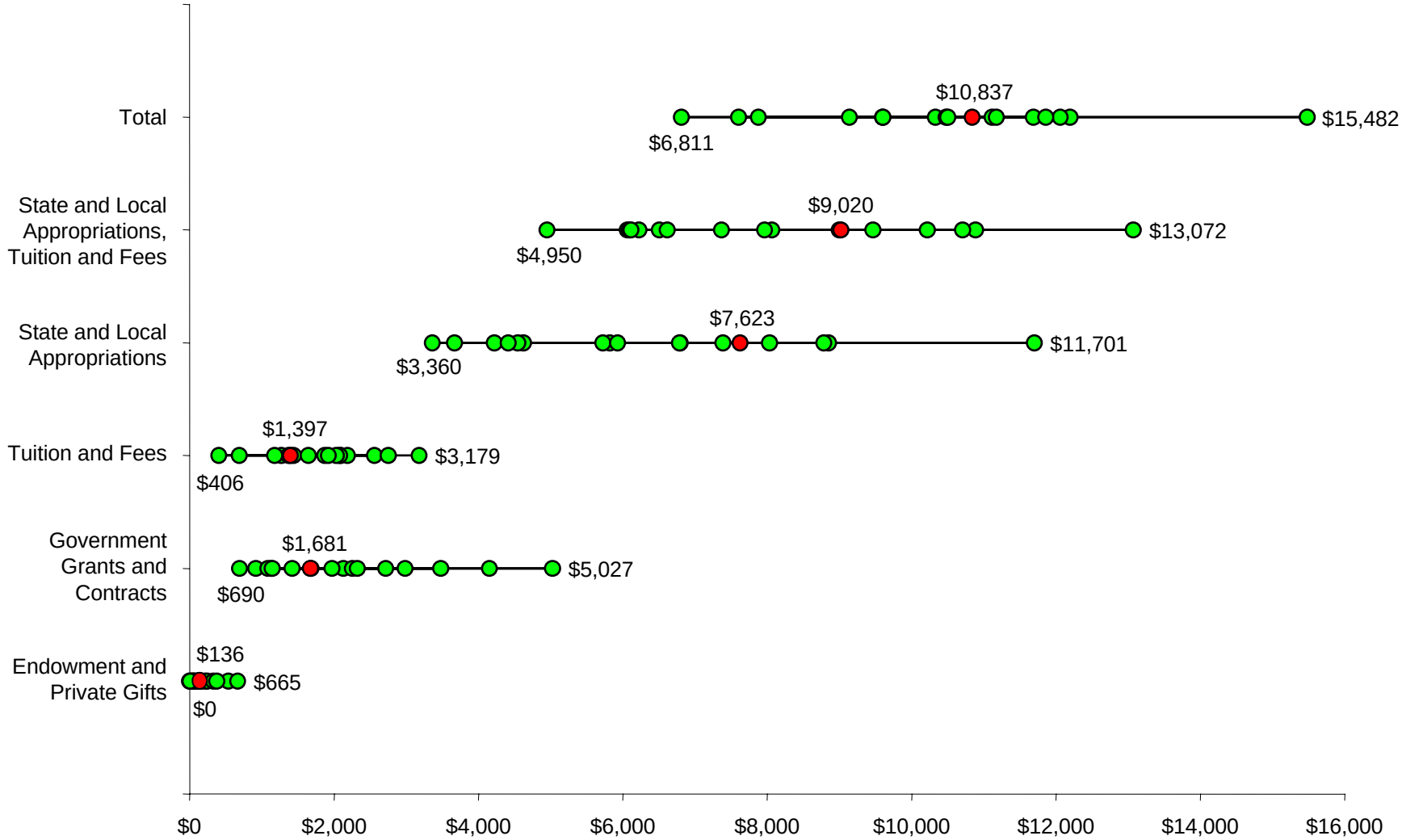


Note: Data not available for Sacramento City College and Saddleback College.

Source: NCES, IPEDS 2001-02 Finance Data Set

FIGURE 50

Great Basin College Peers—Revenues per FTE Student, 2001-02

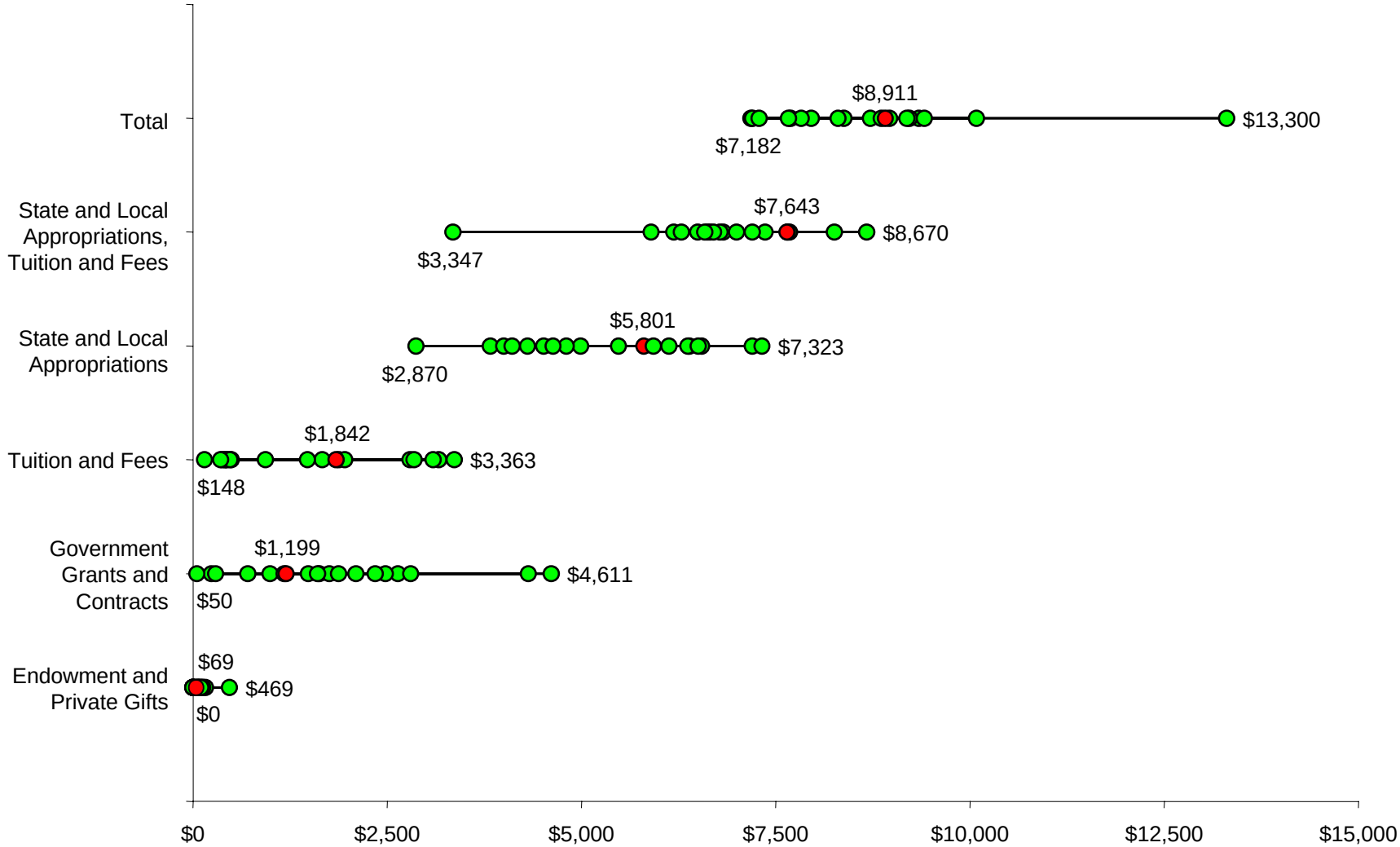


Note: Data not available for Hopkinsville Community College.

Source: NCES, IPEDS 2001-02 Finance Data Set

FIGURE 51

Truckee Meadows CC Peers—Revenues per FTE Student, 2001-02

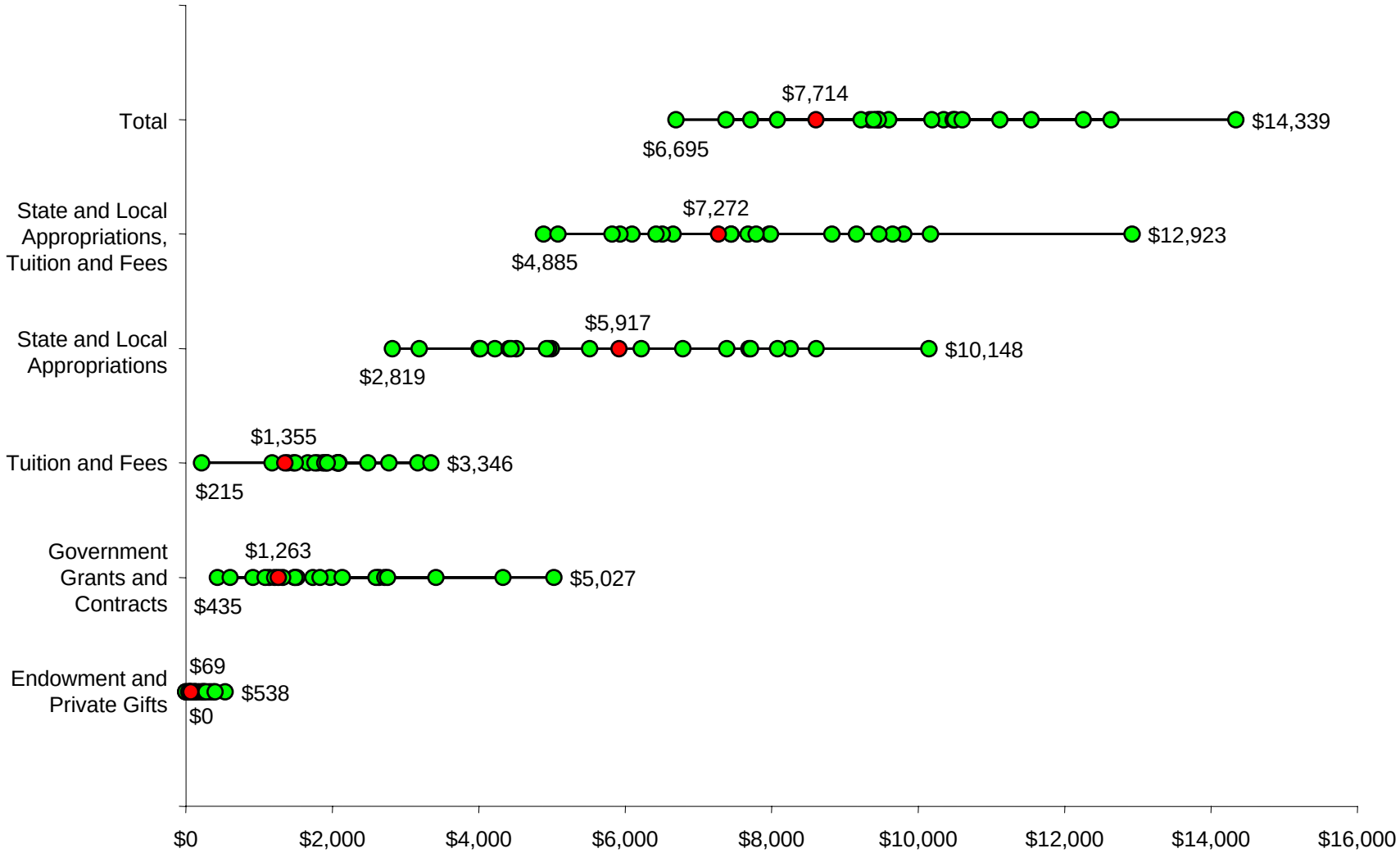


Note: Data not available for Jefferson CC and Wayne County CC.

Source: NCES, IPEDS 2001-02 Finance Data Set

FIGURE 52

Western CC Peers—Revenues per FTE Student, 2001-02

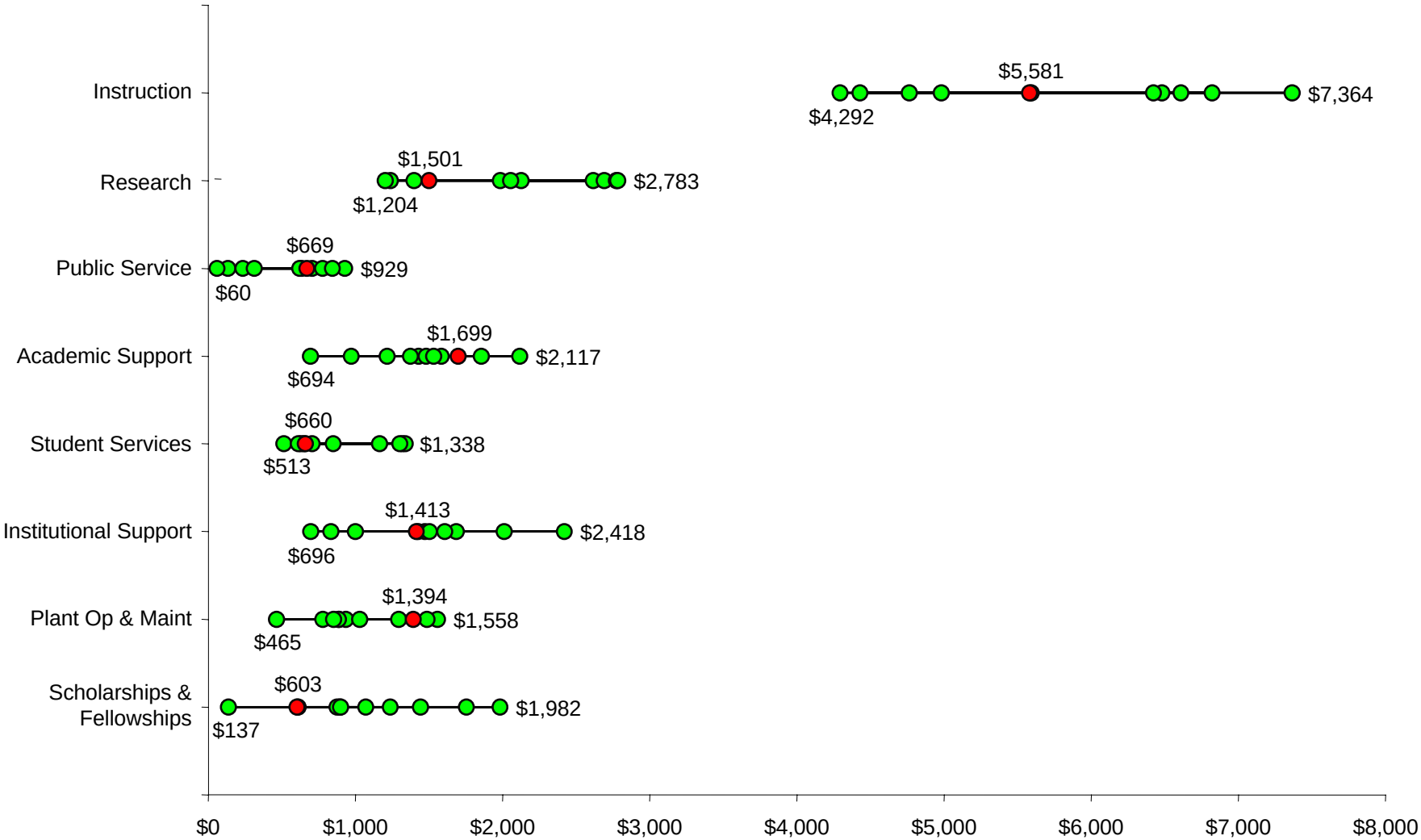


Note: Data not available for Columbia College.

Source: NCES, IPEDS 2001-02 Finance Data Set

FIGURE 53

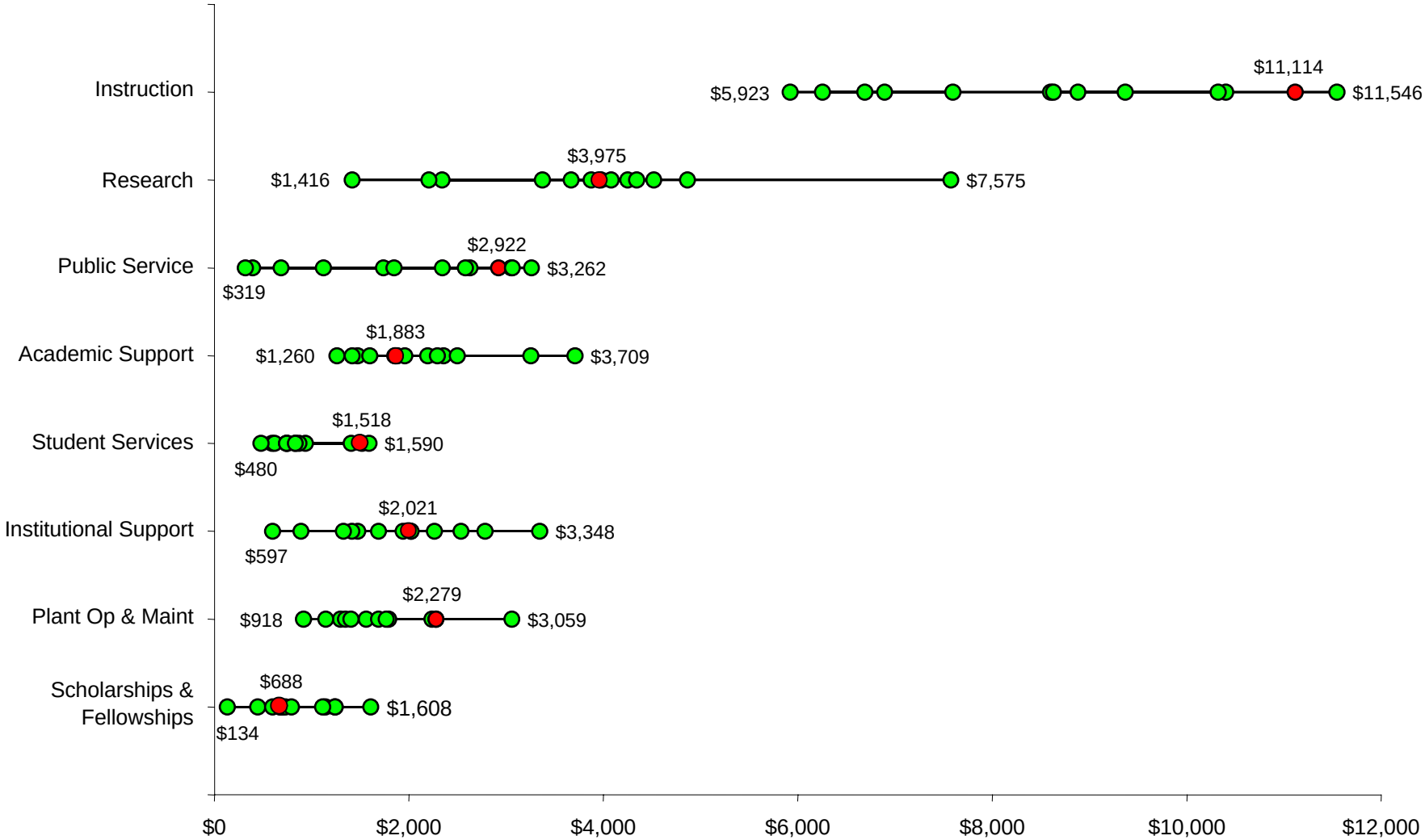
UN–Las Vegas Peers—Expenditures per FTE Student, 2001-02



Source: NCES, IPEDS 2001-02 Finance Data Set

FIGURE 54

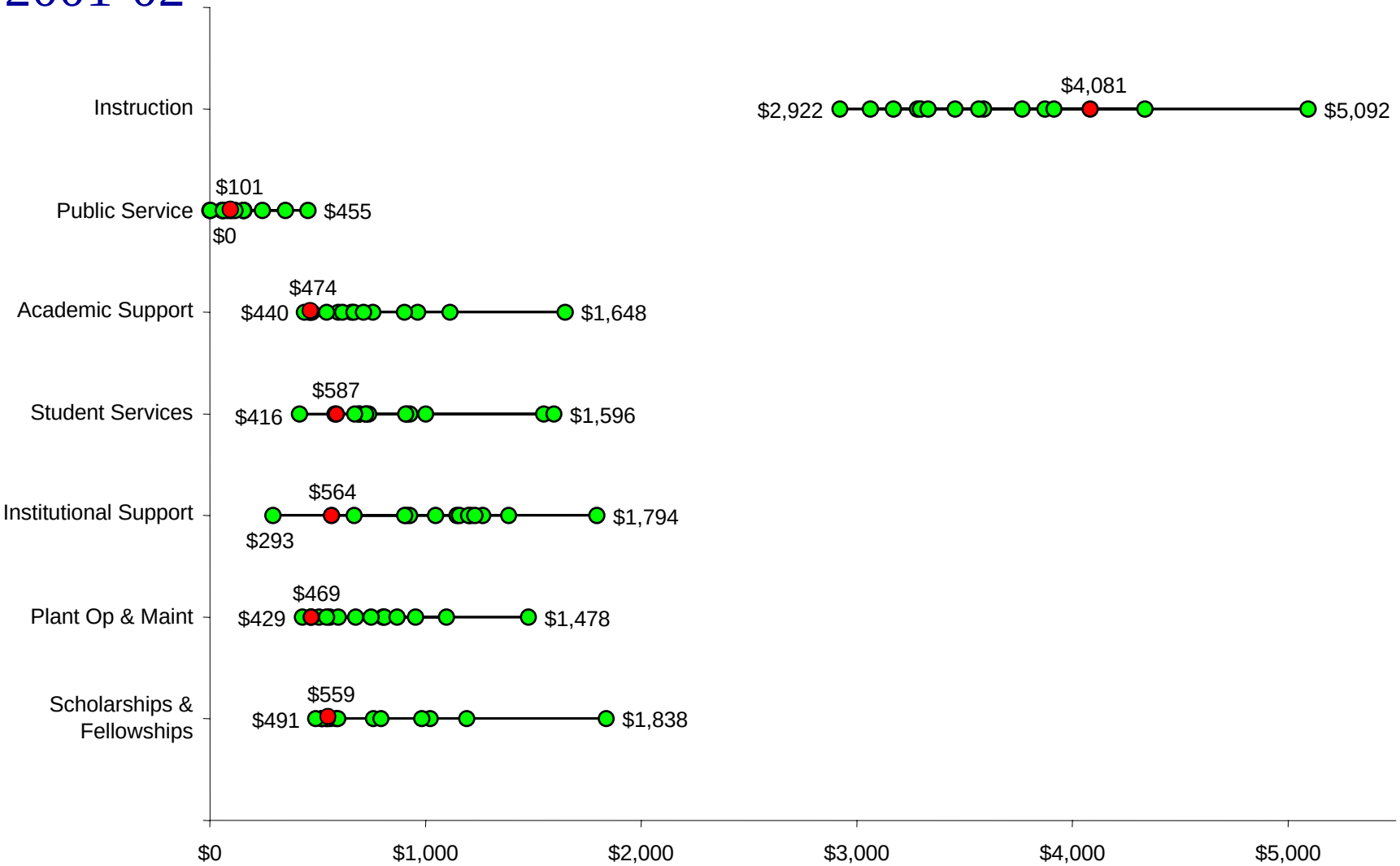
UN–Reno Peers—Expenditures per FTE Student, 2001-02



Source: NCES, IPEDS 2001-02 Finance Data Set

FIGURE 55

CC of Southern Nevada Peers—Expenditures per FTE Student, 2001-02

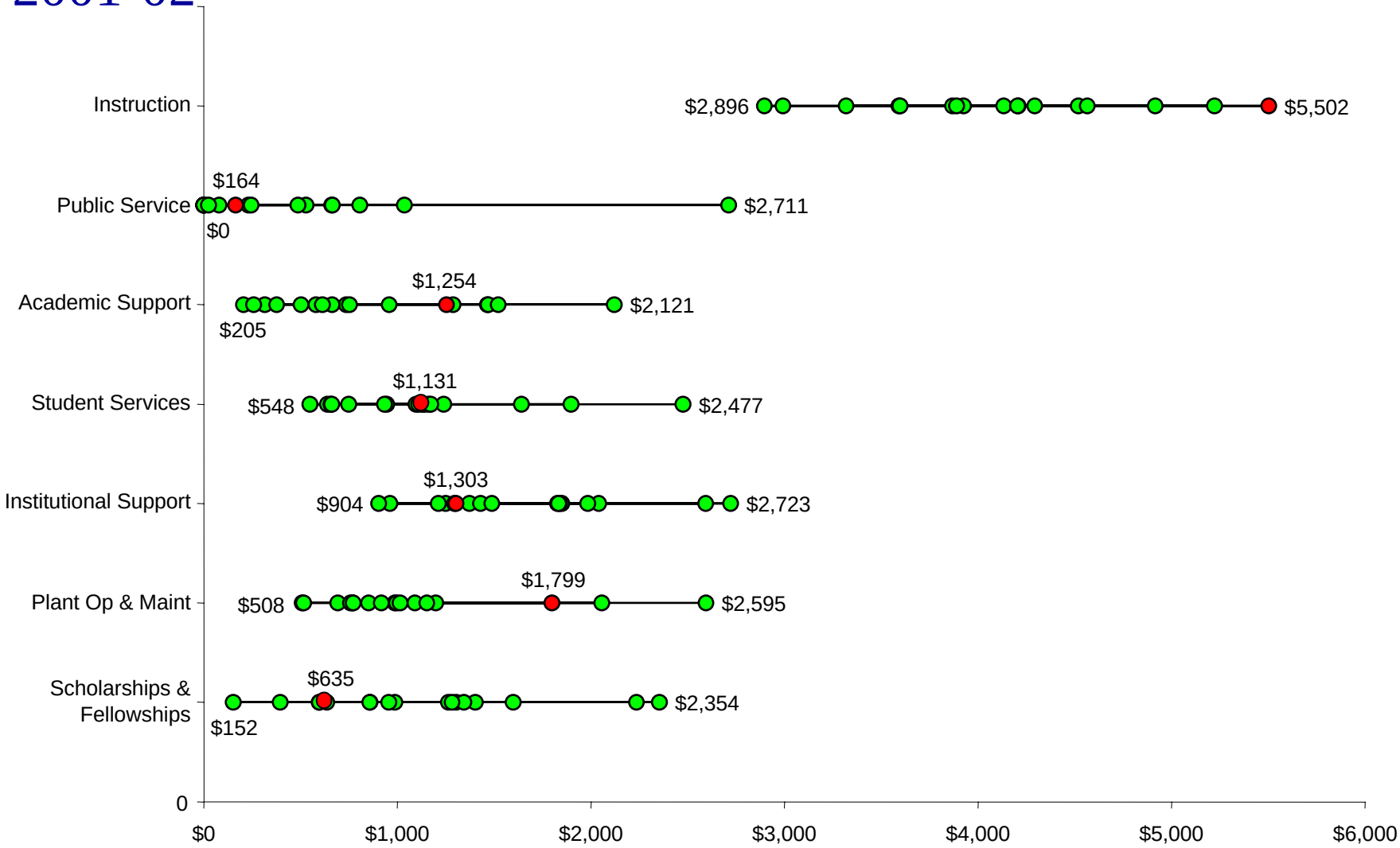


Note: Data not available for Sacramento City College and Saddleback College.

Source: NCES, IPEDS 2001-02 Finance Data Set

FIGURE 56

Great Basin College Peers—Expenditures per FTE Student, 2001-02

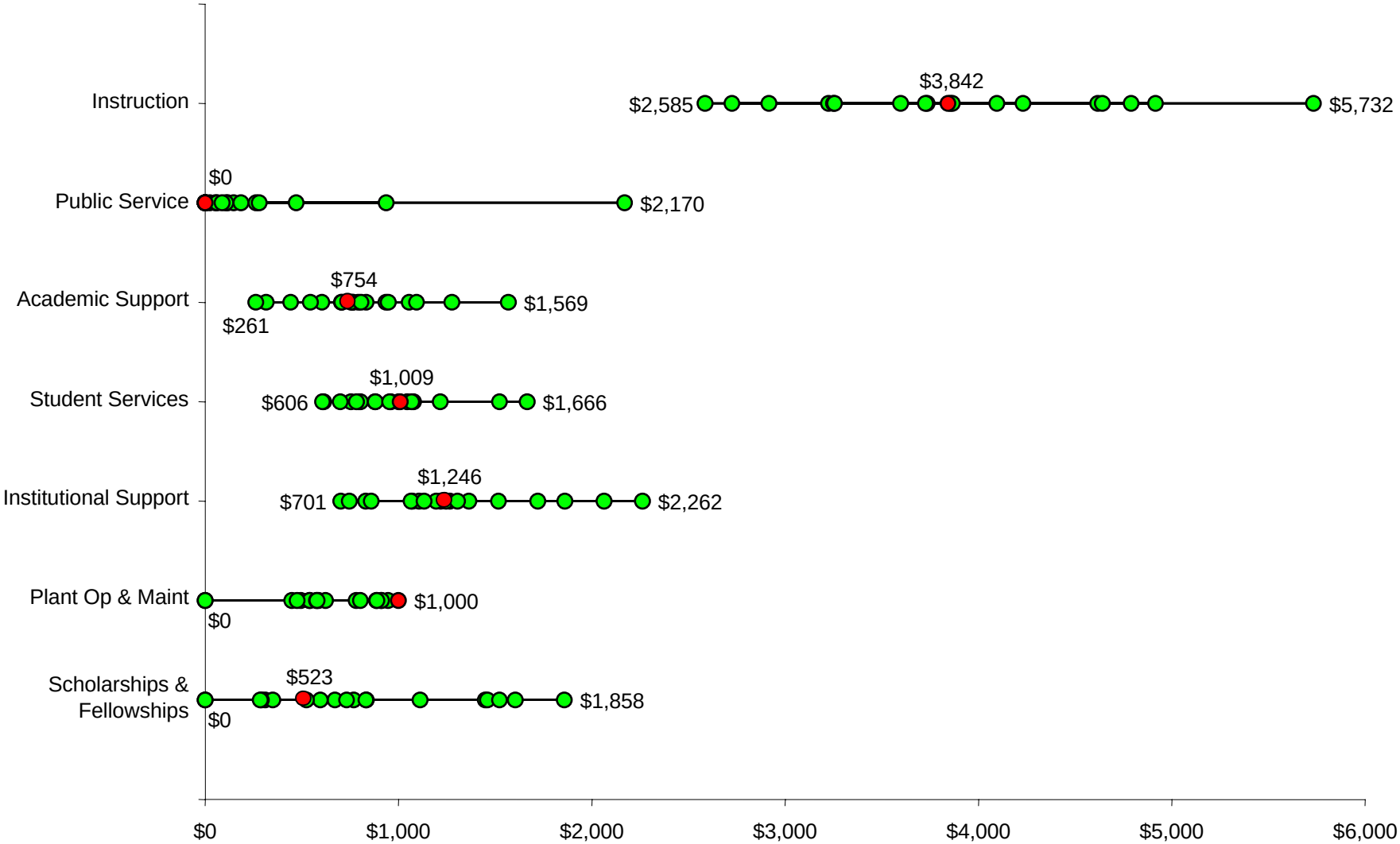


Note: Data not available for Hopkinsville CC.

Source: NCES, IPEDS 2001-02 Finance Data Set

FIGURE 57

Truckee Meadows CC Peers—Expenditures per FTE Student, 2001-02

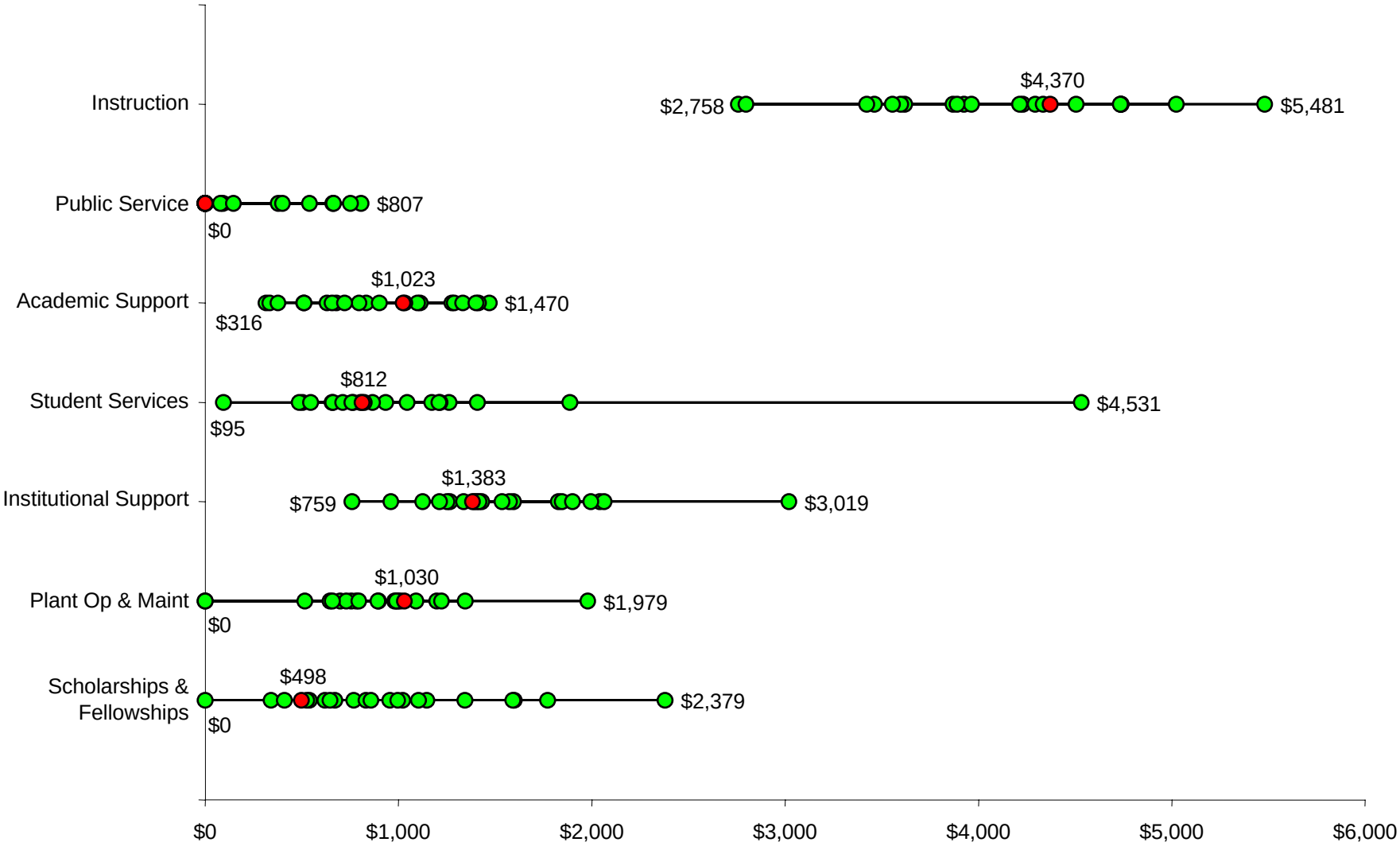


Note: Data not available for Jefferson CC and Wayne County CC.

Source: NCES, IPEDS 2001-02 Finance Data Set

FIGURE 58

Western CC Peers—Expenditures per FTE Student, 2001-02

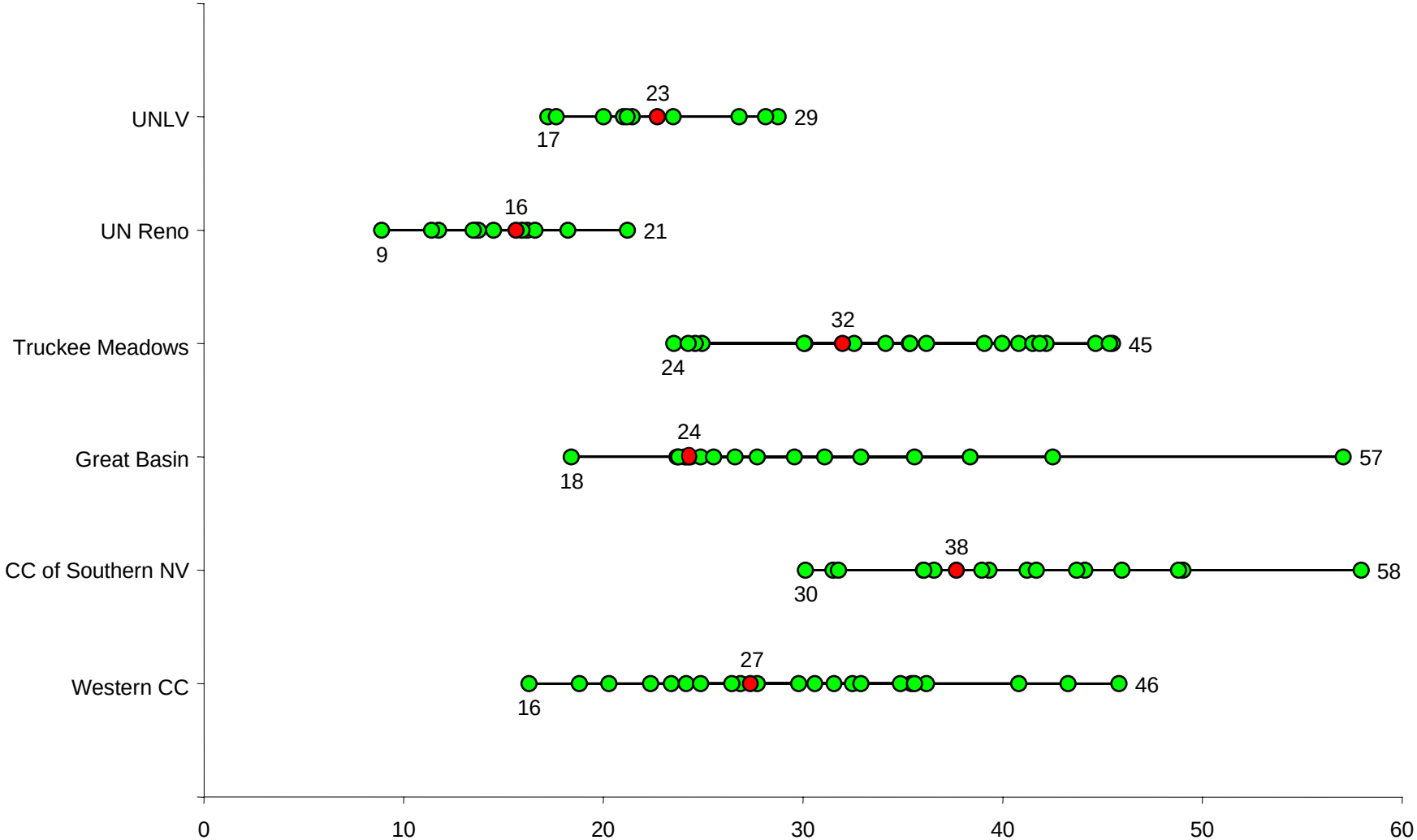


Note: Data not available for Columbia College.

Source: NCES, IPEDS 2001-02 Finance Data Set

FIGURE 59

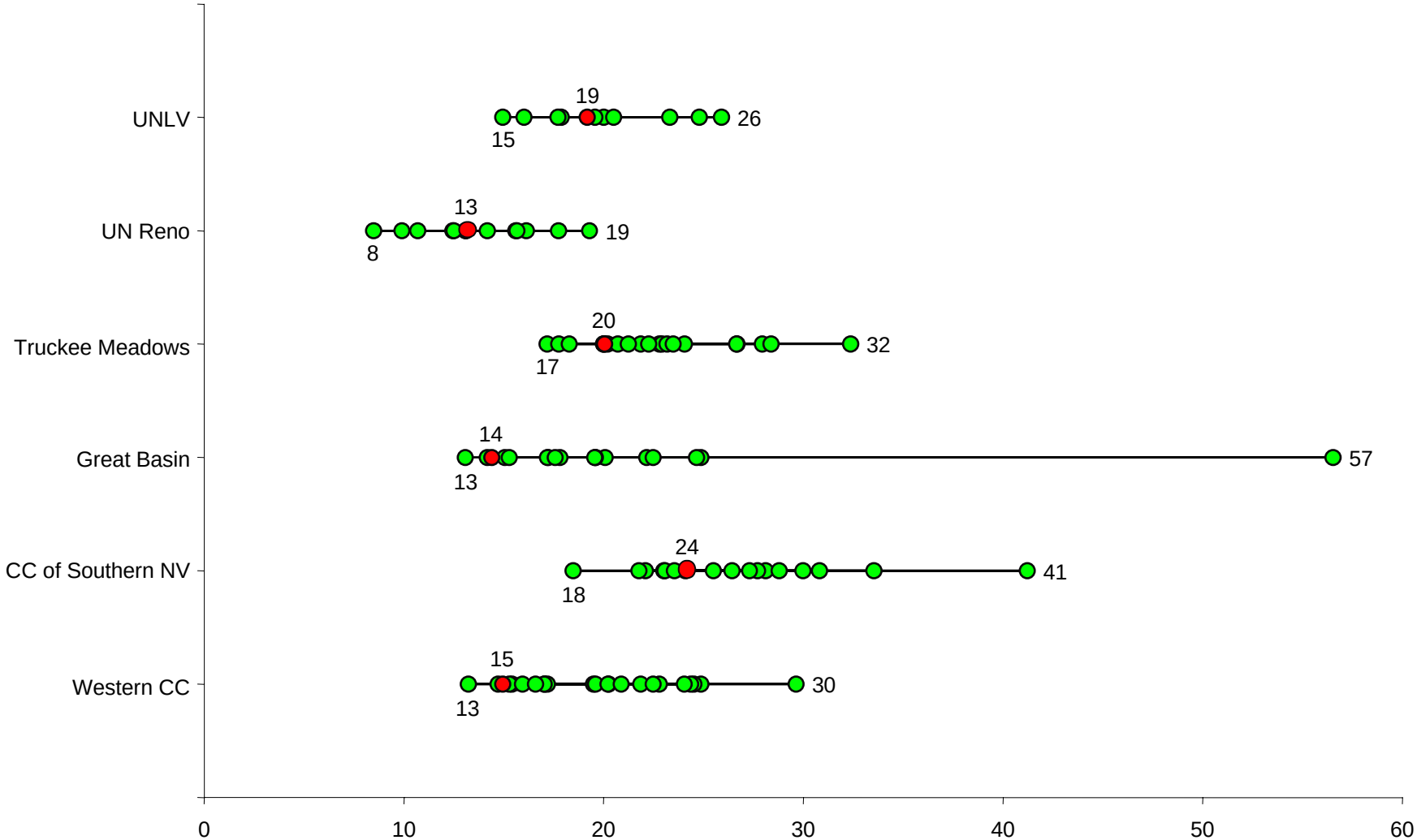
Nevada Peer Groups—FTE Students per Full-Time Faculty, Fall 2001



Source: NCES, IPEDS Fall 2001 Staff Survey

FIGURE 60

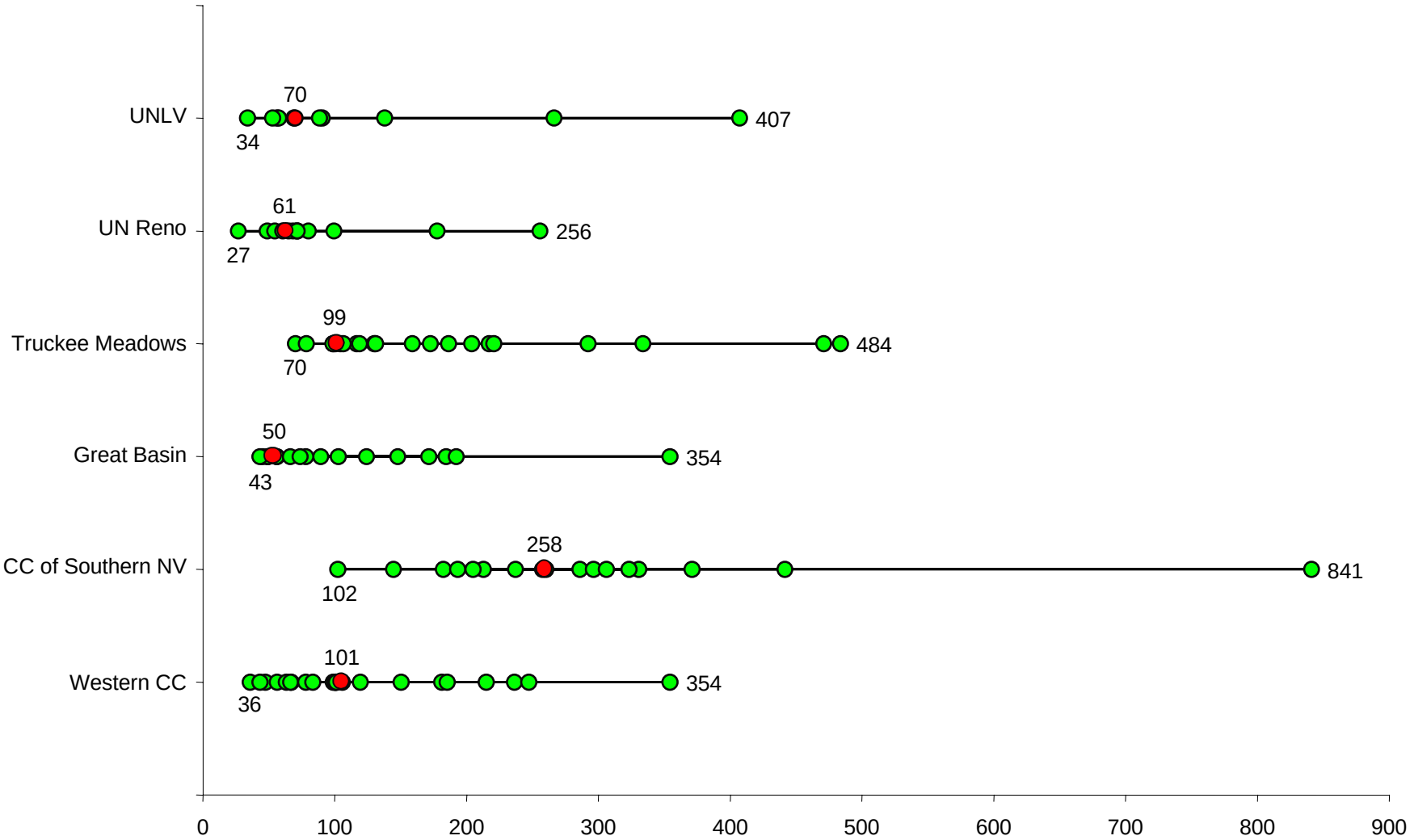
Nevada Peer Groups—FTE Students per FTE Faculty, Fall 2001



Source: NCES, IPEDS Fall 2001 Staff Survey

FIGURE 61

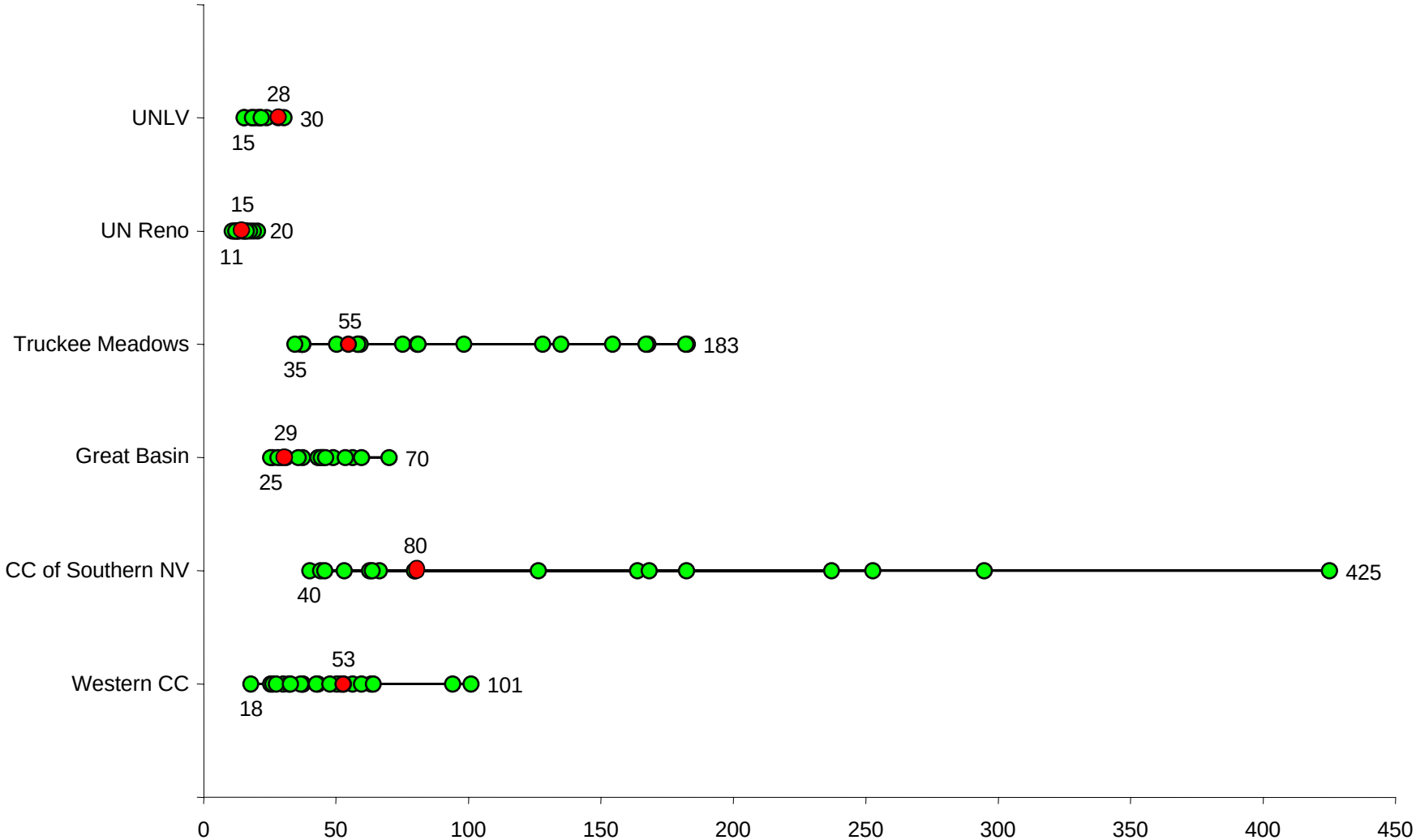
Nevada Peer Groups—FTE Students per Full-Time Executive/Administrator, Fall 2001



Source: NCES, IPEDS Fall 2001 Staff Survey

FIGURE 62

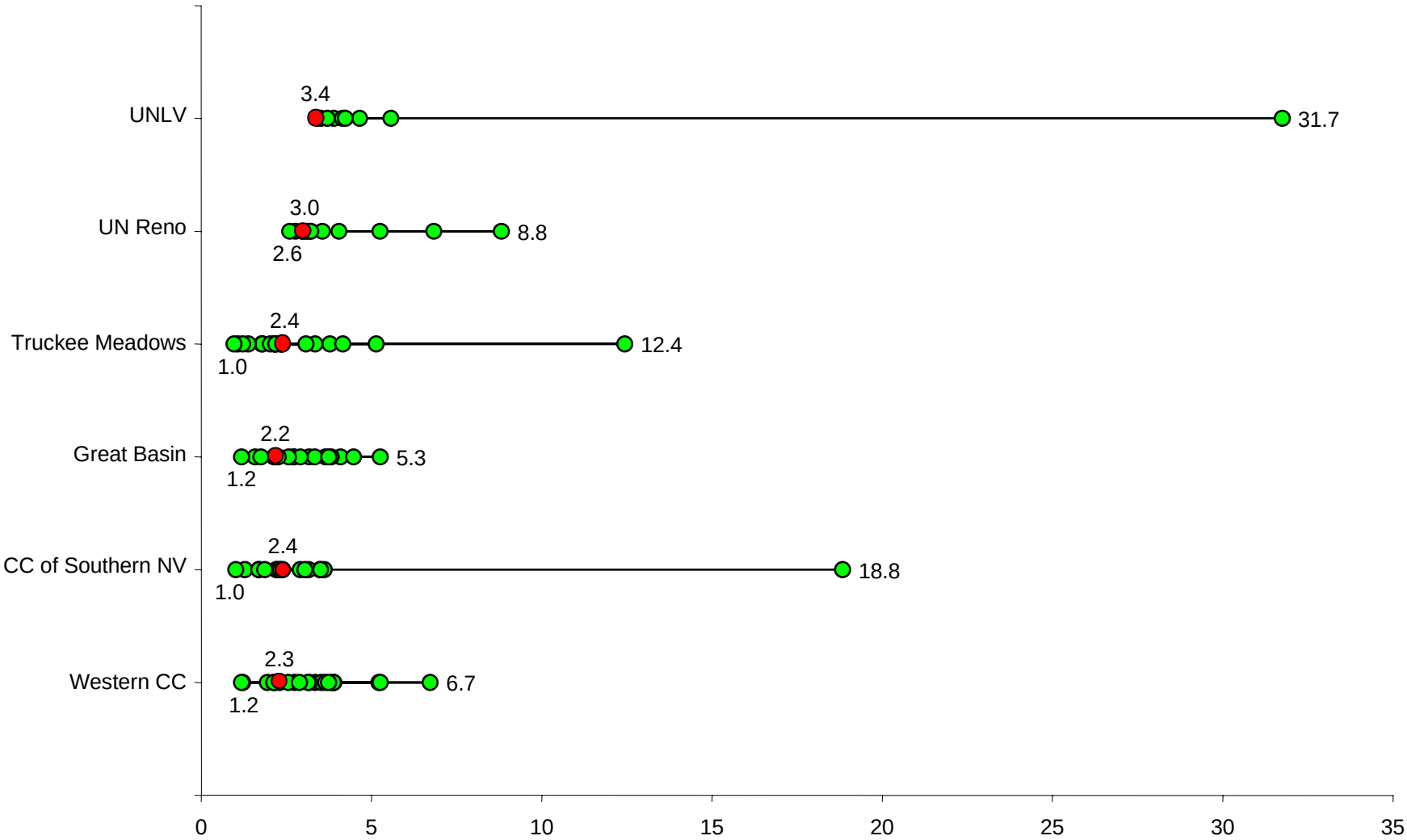
Nevada Peer Groups—FTE Students per Full-Time Executive/Administrator and Other Professional, Fall 2001



Source: NCES, IPEDS Fall 2001 Staff Survey

FIGURE 63

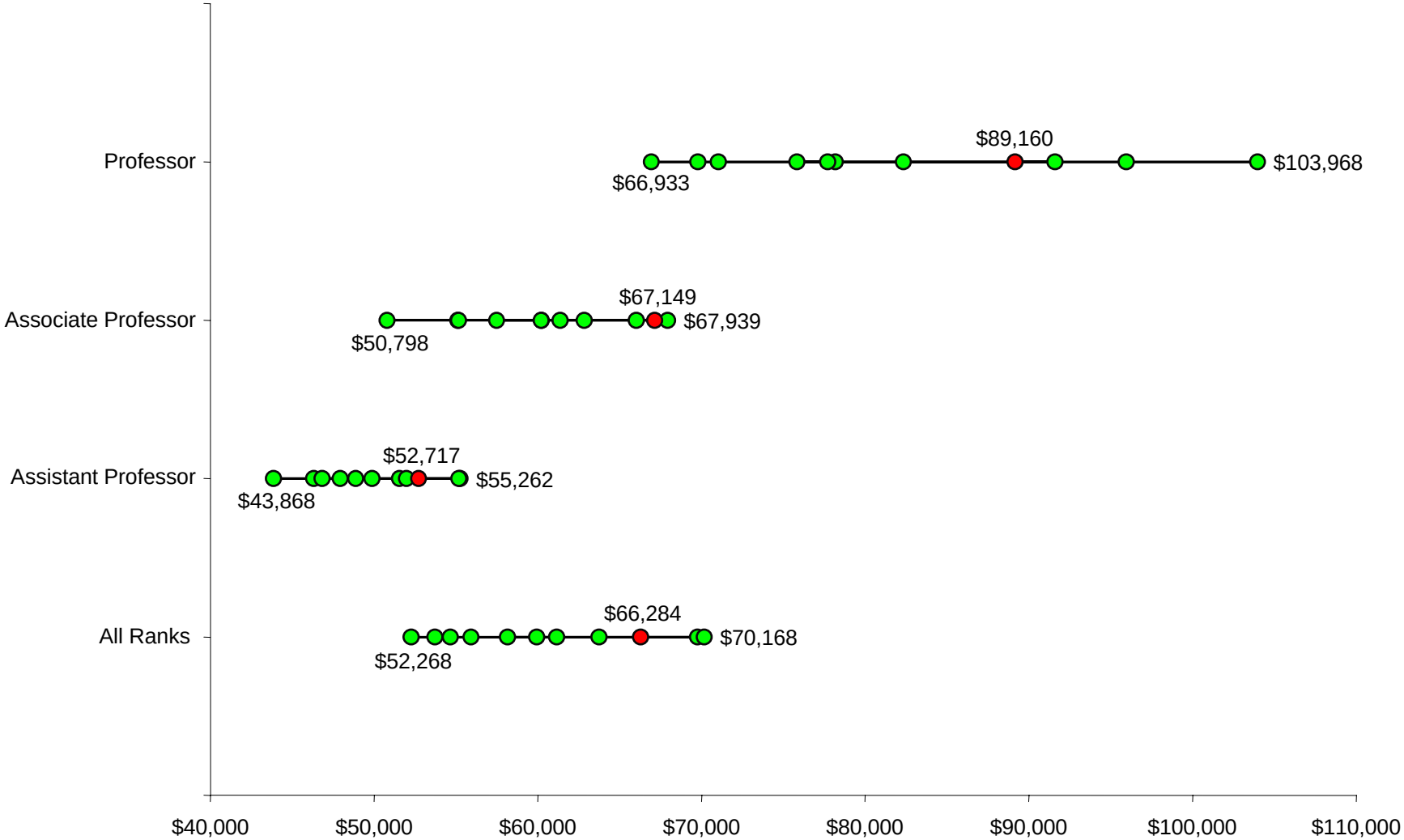
Nevada Peer Groups—Full-Time Exempt per FTE Clerical, Fall 2001



Source: NCES, IPEDS Fall 2001 Staff Survey

FIGURE 64

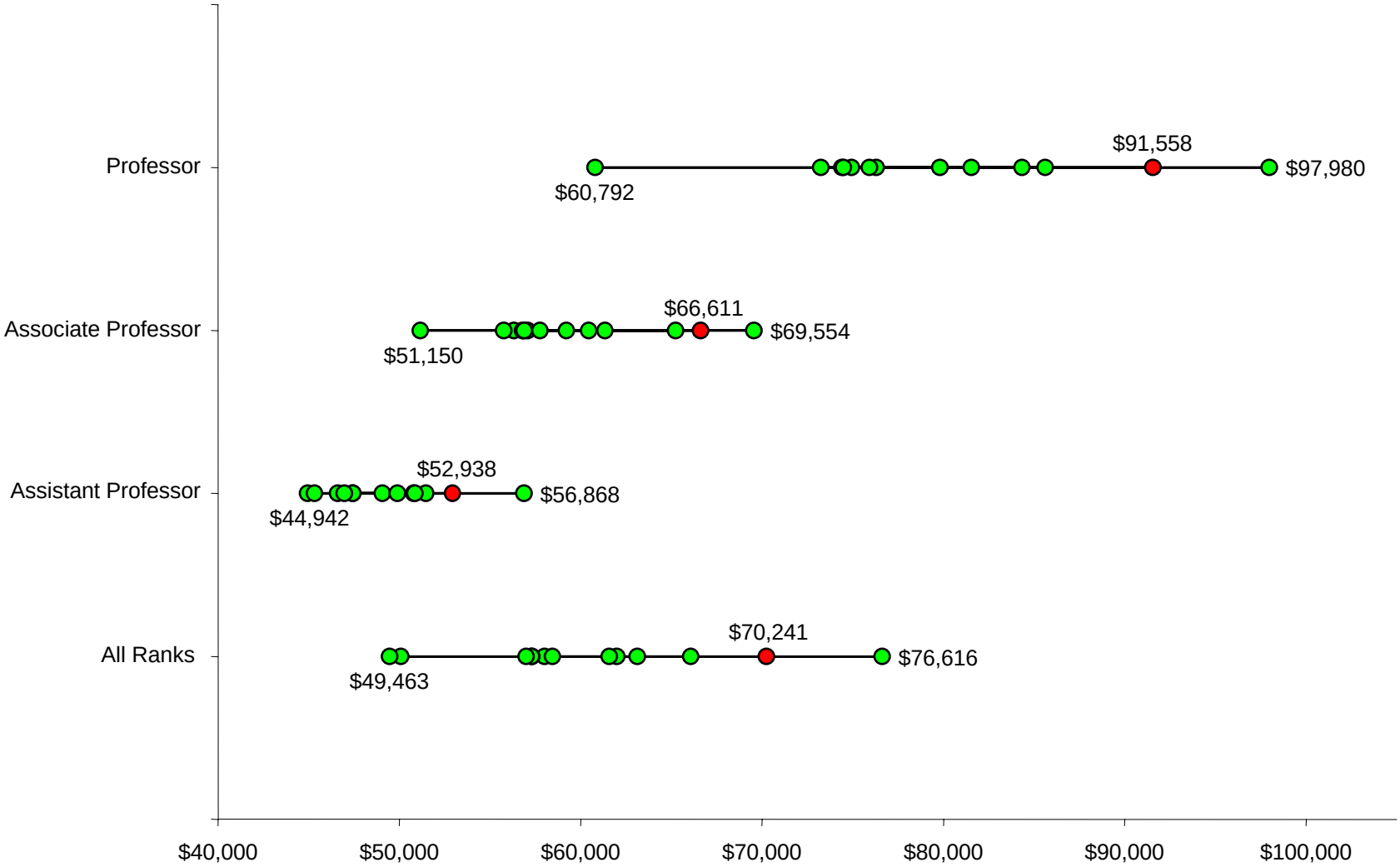
UN–Las Vegas Peers—Full-Time 9/10 Month Average Faculty Salaries By Rank, 2001-02



Source: NCES, IPEDS 2001-02 Faculty Salary Data Set

FIGURE 65

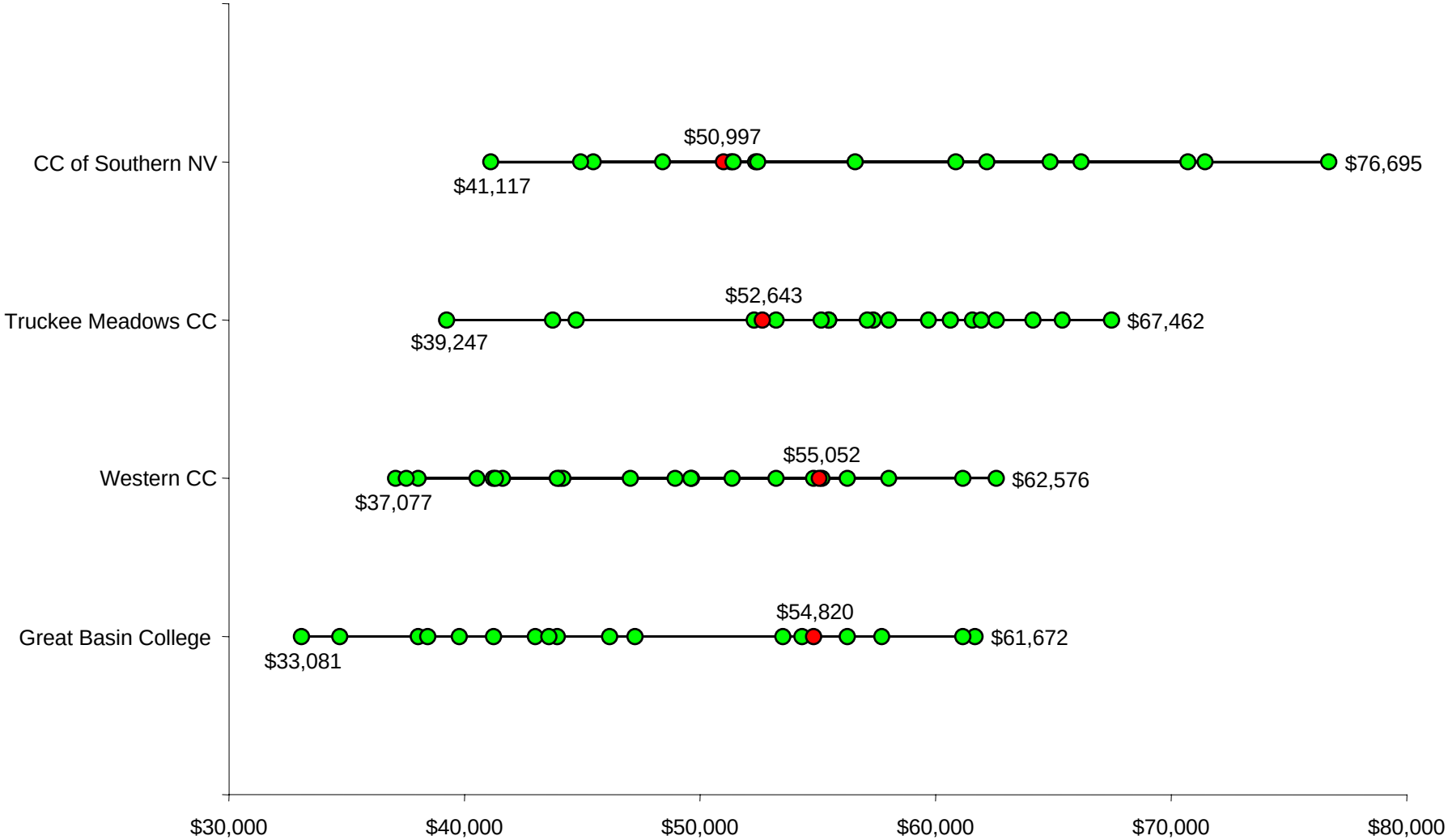
UN–Reno Peers—Full-Time 9/10 Month Average Faculty Salaries By Rank, 2001-02



Source: NCES, IPEDS 2001-02 Faculty Salary Data Set

FIGURE 66

Nevada Community College Peers—Full-Time 9/10 Month Average Faculty Salaries, 2001-02

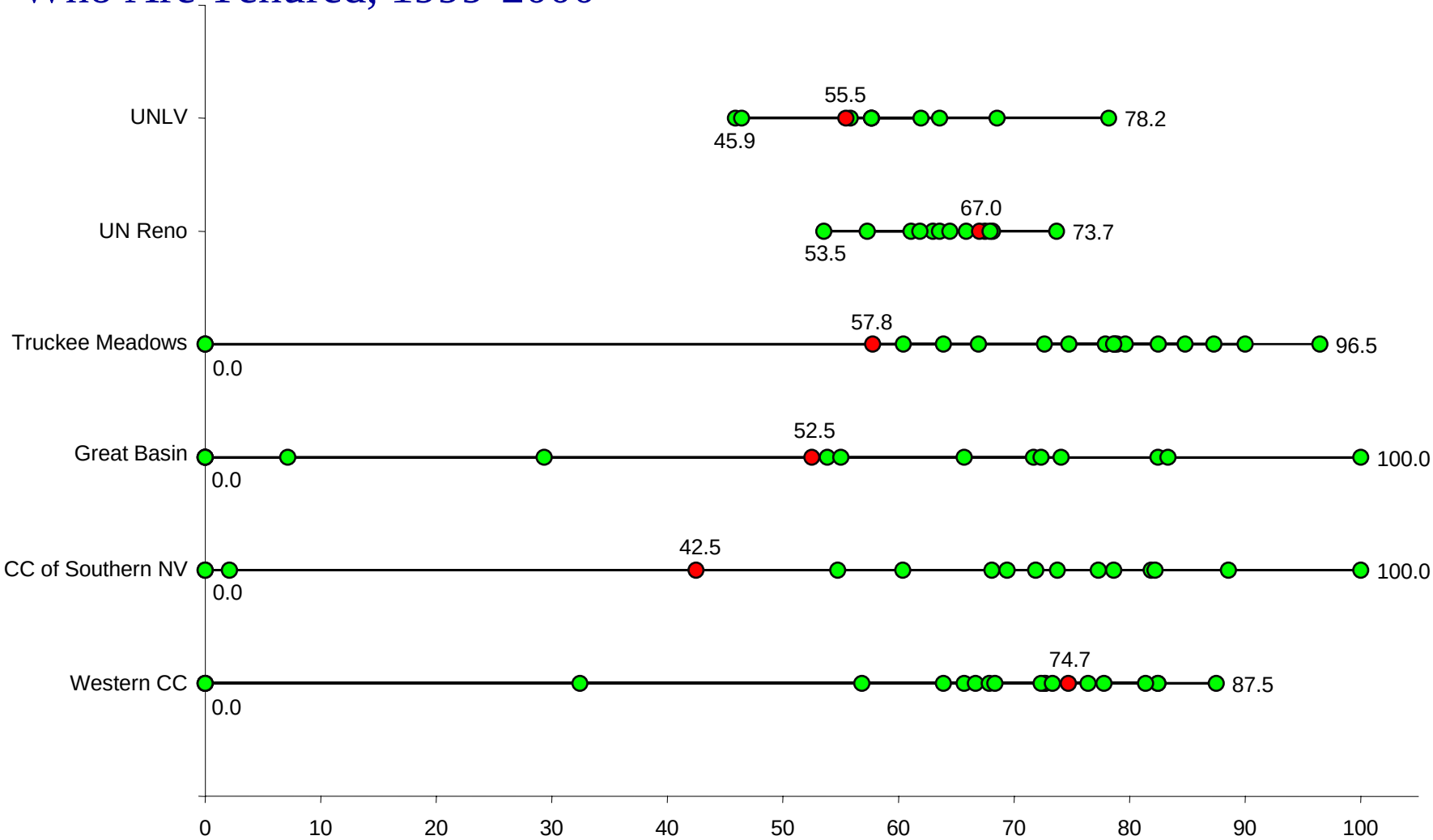


Note: Imperial Valley College in the Truckee Meadows peer group has no reported 9/10 month faculty.

Source: NCES, IPEDS 2001-02 Faculty Salary Data Set

FIGURE 67

Nevada Peer Groups—Percent of Full-Time 9/10 Month Faculty Who Are Tenured, 1999-2000

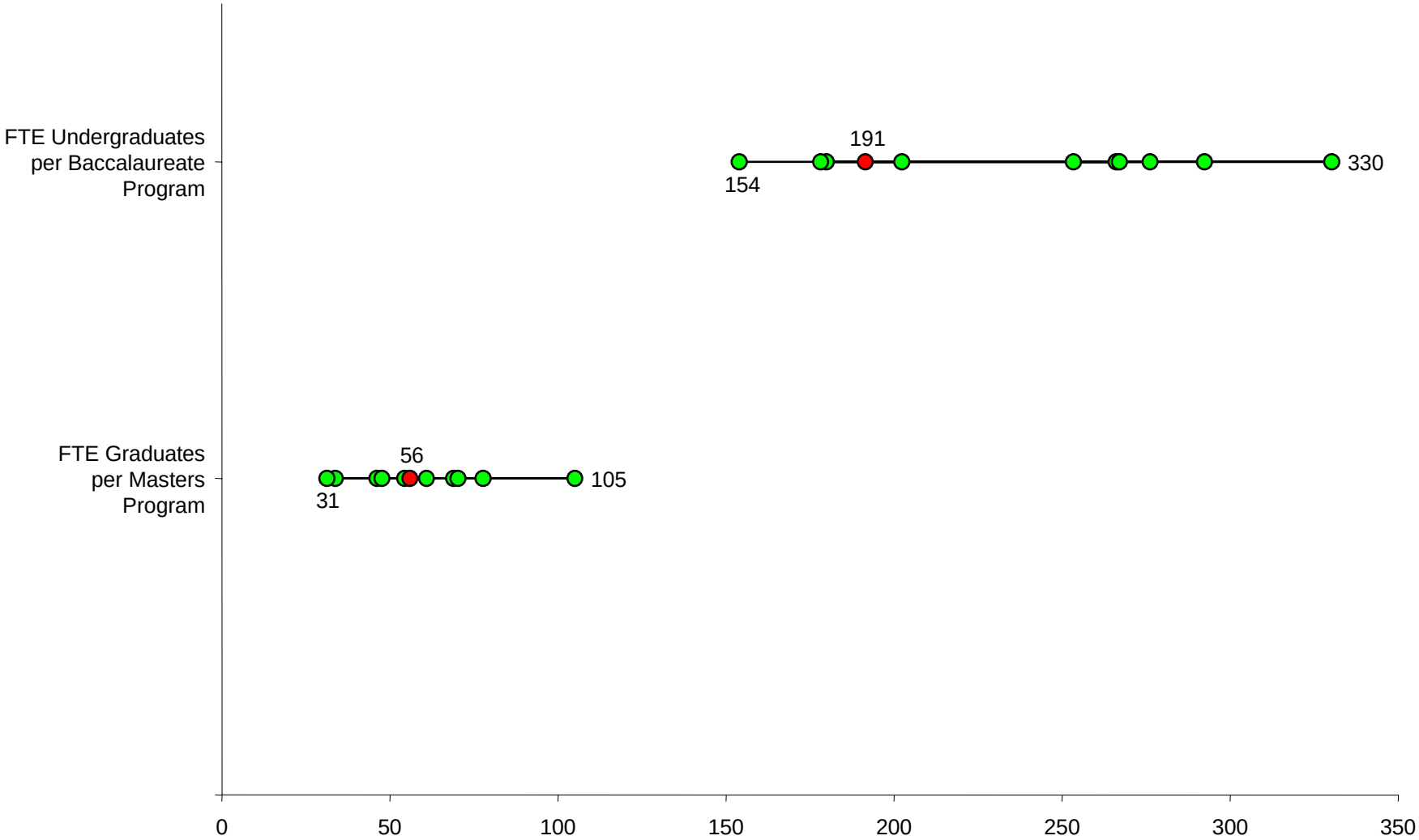


Note: Data are not available for 3 peers in the Truckee group, 2 peers in the Great Basin and Western Group, and 1 peer in the Southern group.

Source: NCES, IPEDS 1999-2000 Faculty Salary Data Set

FIGURE 68

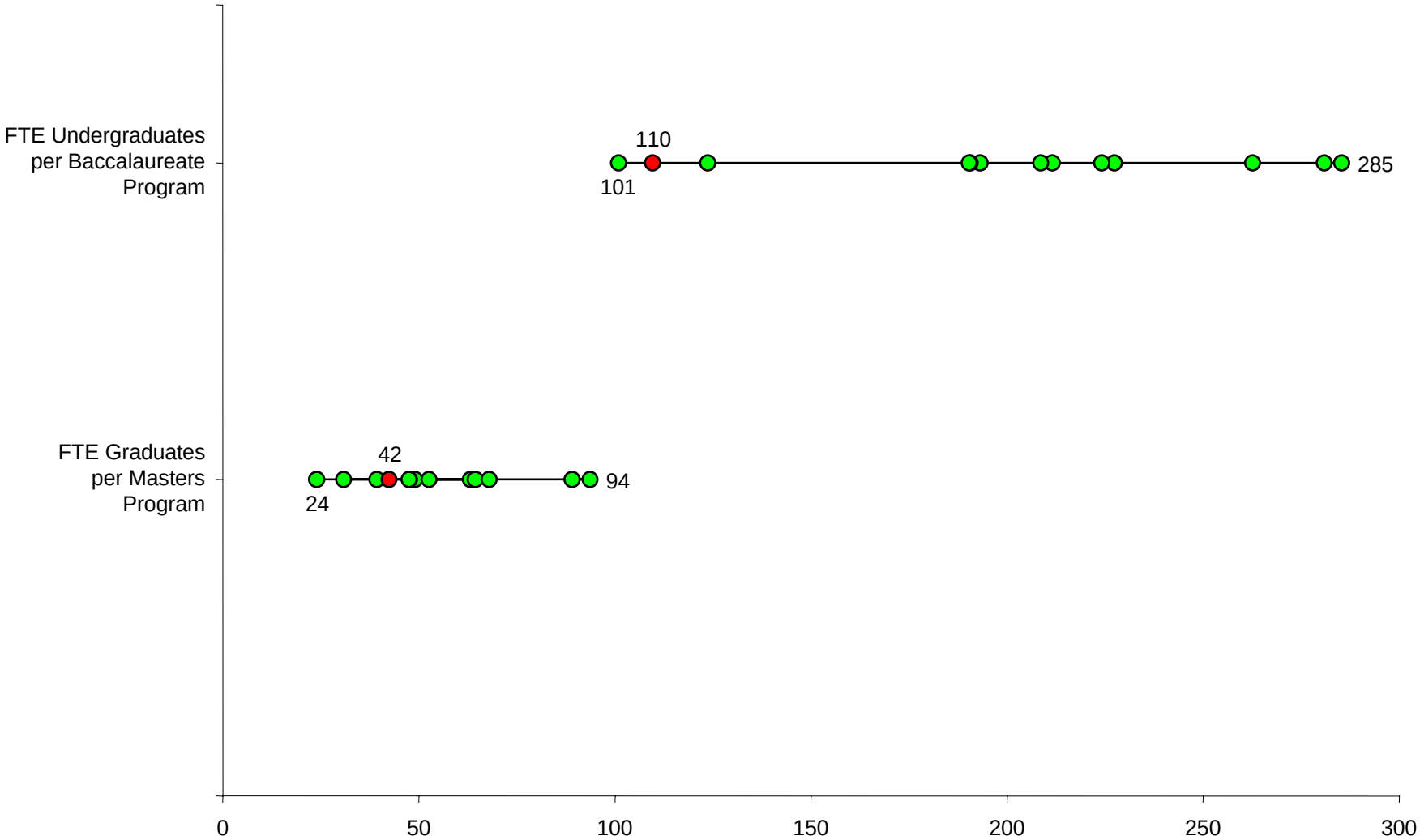
UN–Las Vegas Peers—FTE Undergraduates per Baccalaureate Program, FTE Graduates per Master's Program, 2001-02



Source: NCES, IPEDS Fall 2001 Enrollments, 2001-02 Completions

FIGURE 69

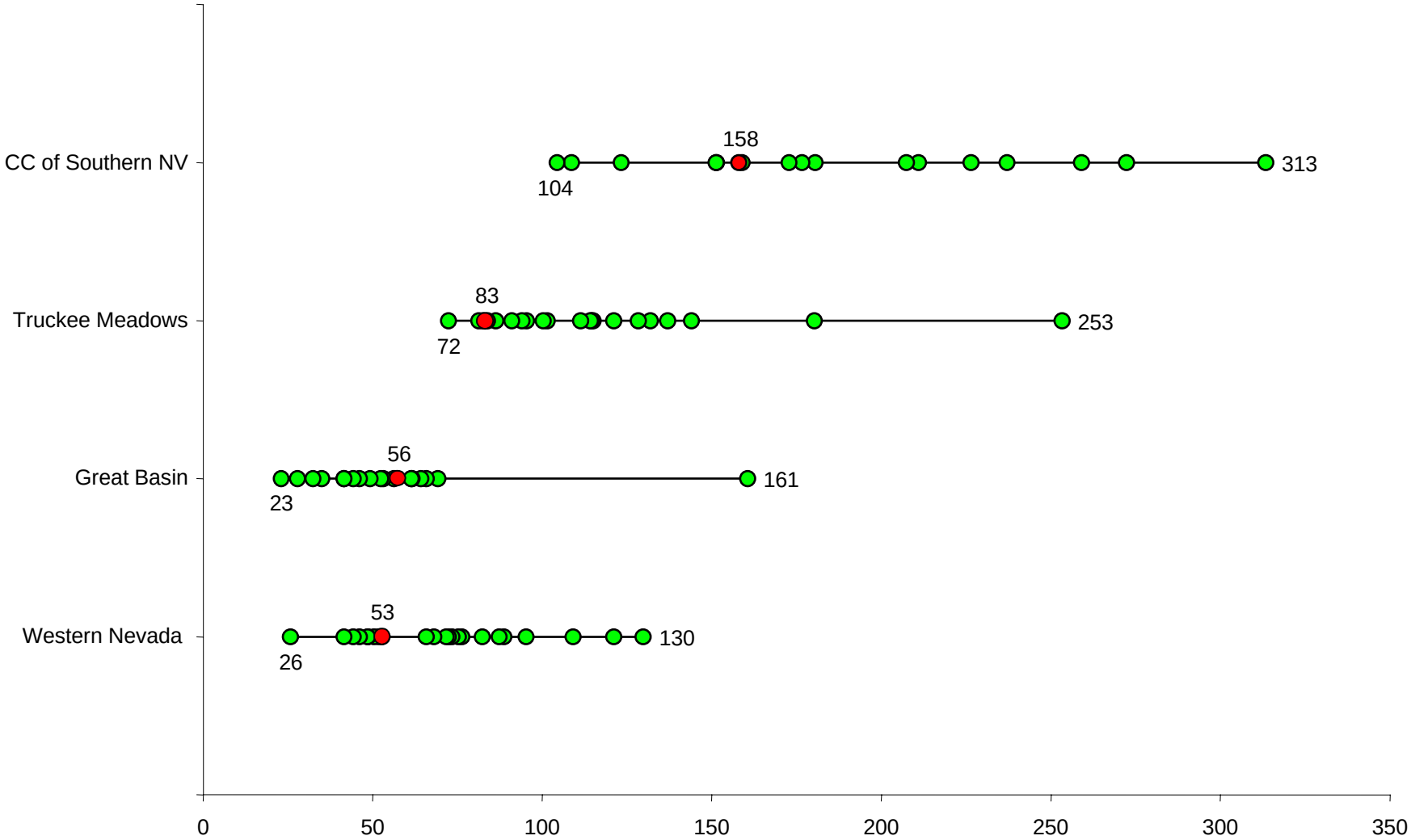
UN–Reno Peers—FTE Undergraduates per Baccalaureate Program, FTE Graduates per Master's Program, 2001-02



Source: NCES, IPEDS Fall 2001 Enrollments, 2001-02 Completions

FIGURE 70

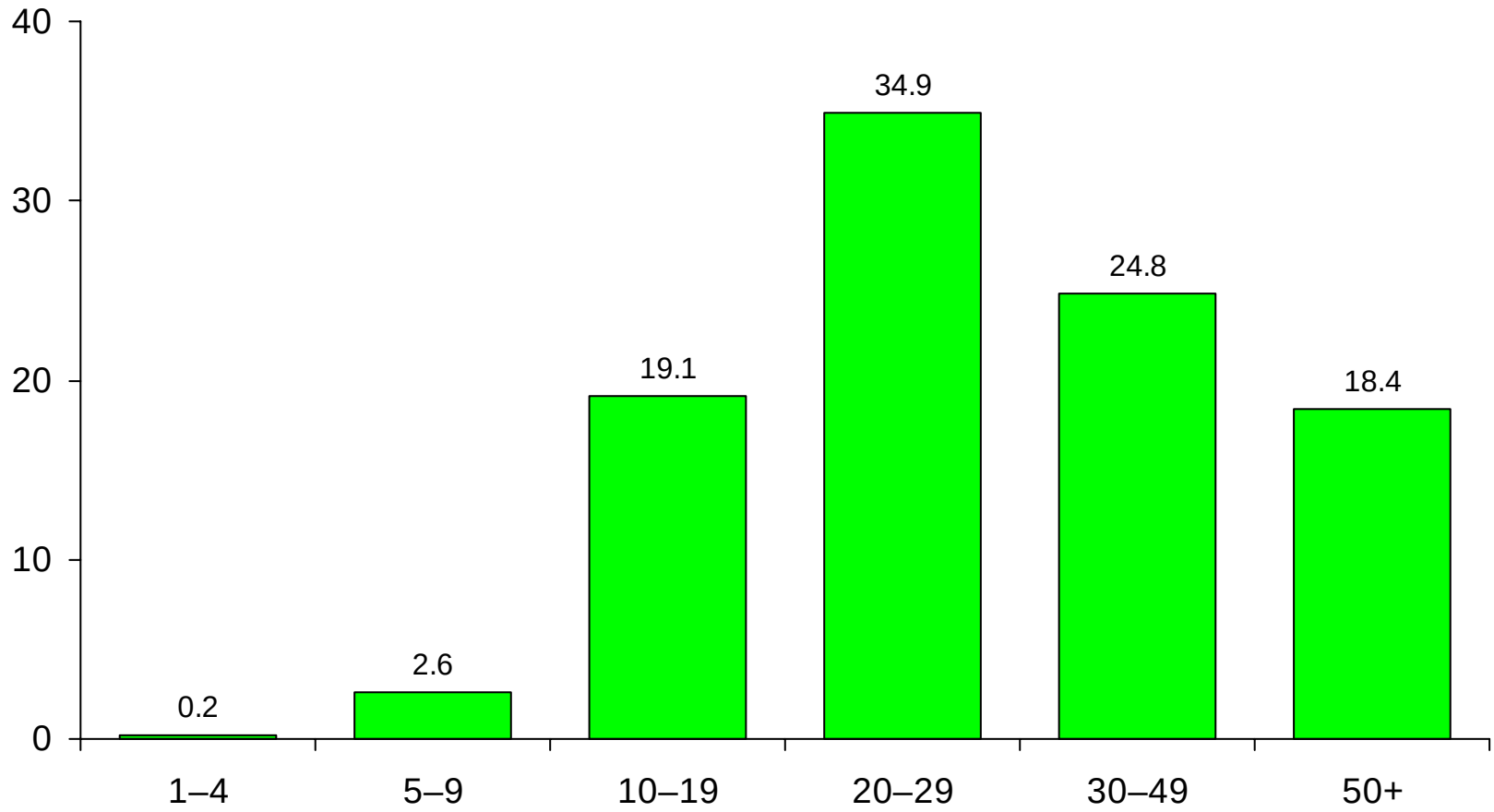
Nevada Community Colleges and Peers—FTE Undergraduates per Associate/Certificate Program, 2001-02



Source: NCES, IPEDS Fall 2001 Enrollments, 2001-02 Completions

FIGURE 71

UN–Las Vegas Lower-Division Course Percentages by Section Size, Fall 2003

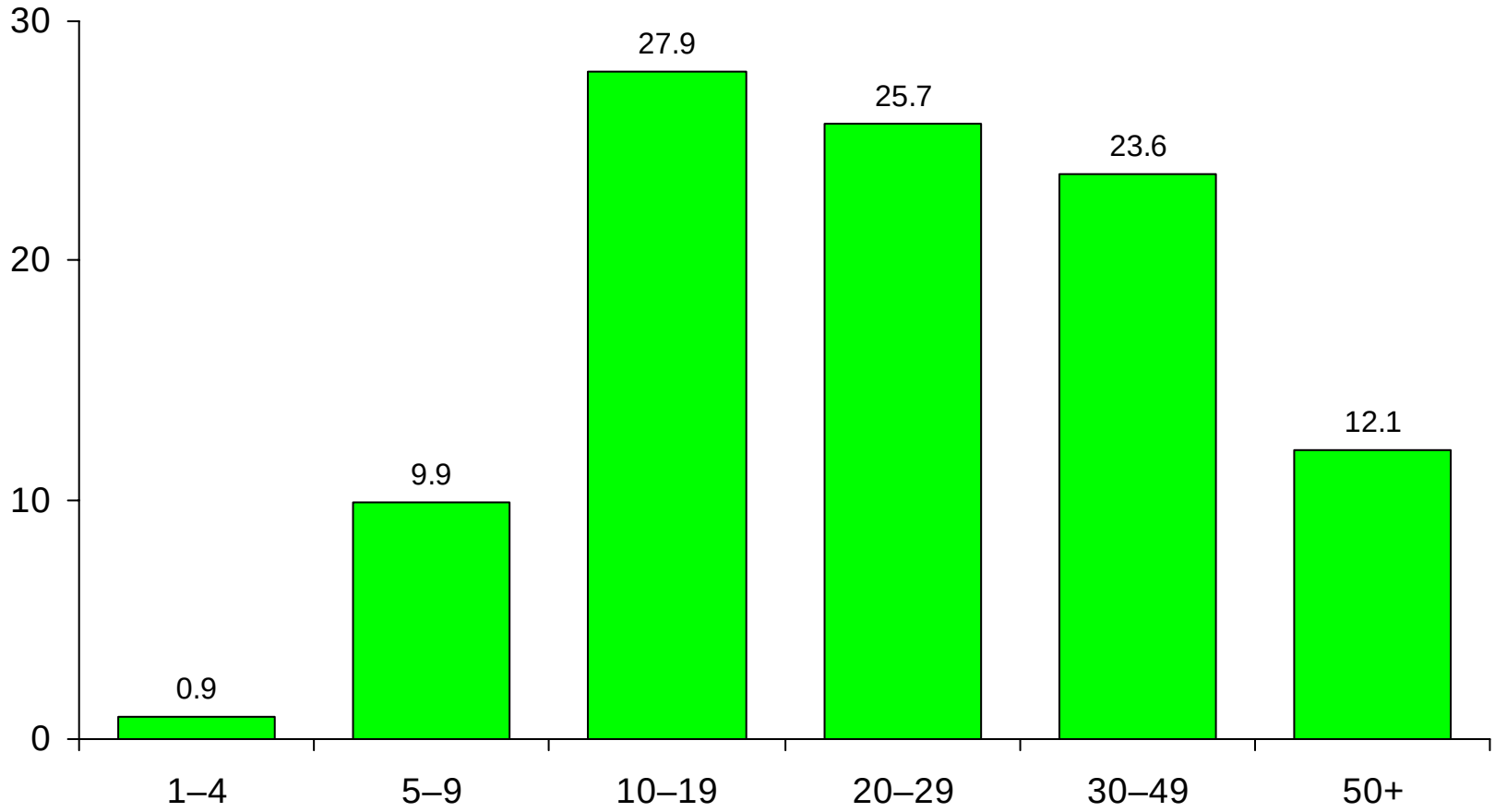


Note: Data excludes subsections, individual instruction sections, distance education sections, and most courses without scheduled times.

Source: University and Community College System of Nevada

FIGURE 72

UN–Las Vegas Upper-Division Course Percentages by Section Size, Fall 2003

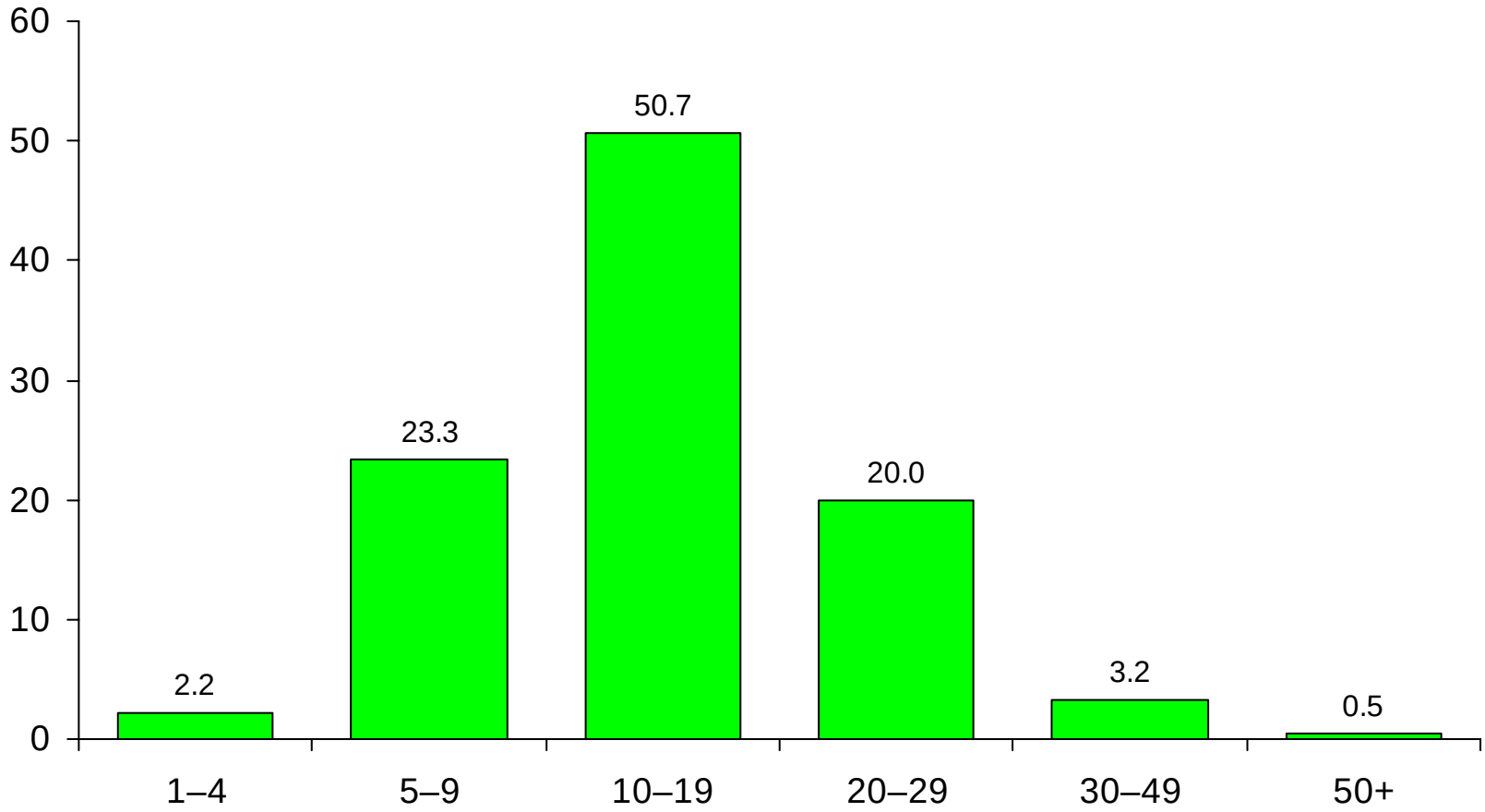


Note: Data excludes subsections, individual instruction sections, distance education sections, and most courses without scheduled times.

Source: University and Community College System of Nevada

FIGURE 73

UN–Las Vegas Graduate Course Percentages by Section Size, Fall 2003

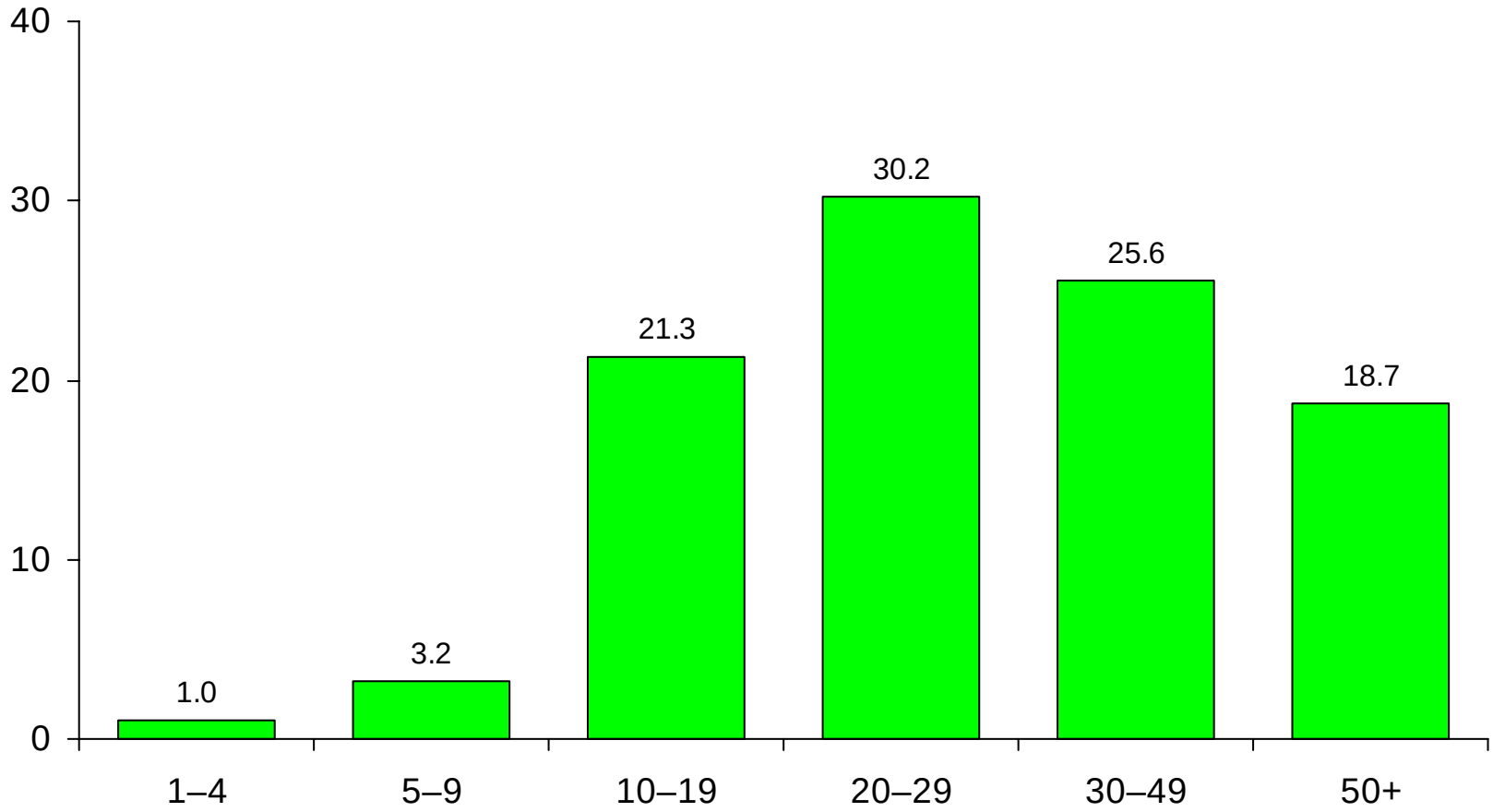


Note: Data excludes subsections, individual instruction sections, distance education sections, and most courses without scheduled times.

Source: University and Community College System of Nevada

FIGURE 74

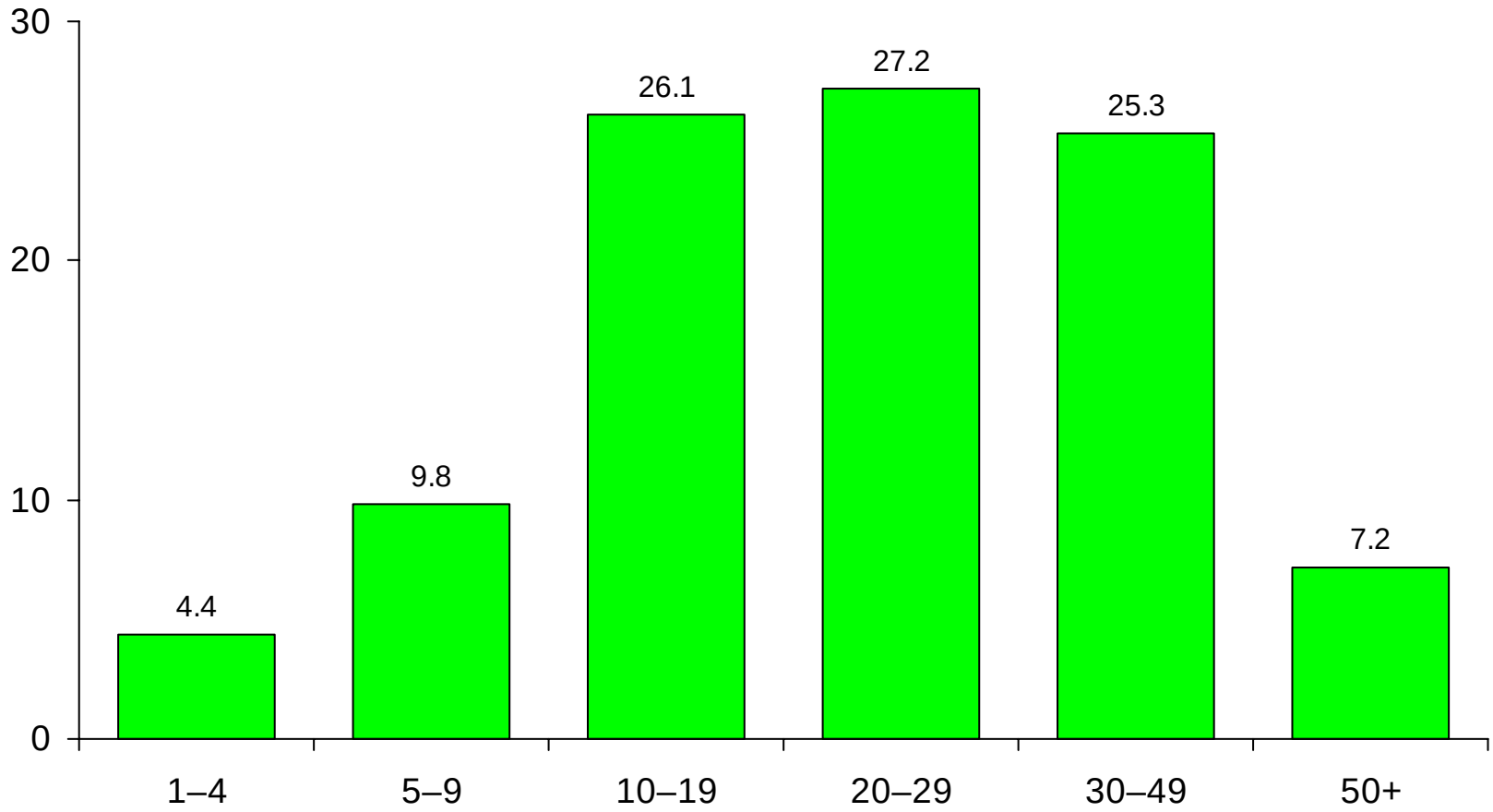
UN–Reno Lower-Division Course Percentages by Section Size, Fall 2003



Source: University and Community College System of Nevada

FIGURE 75

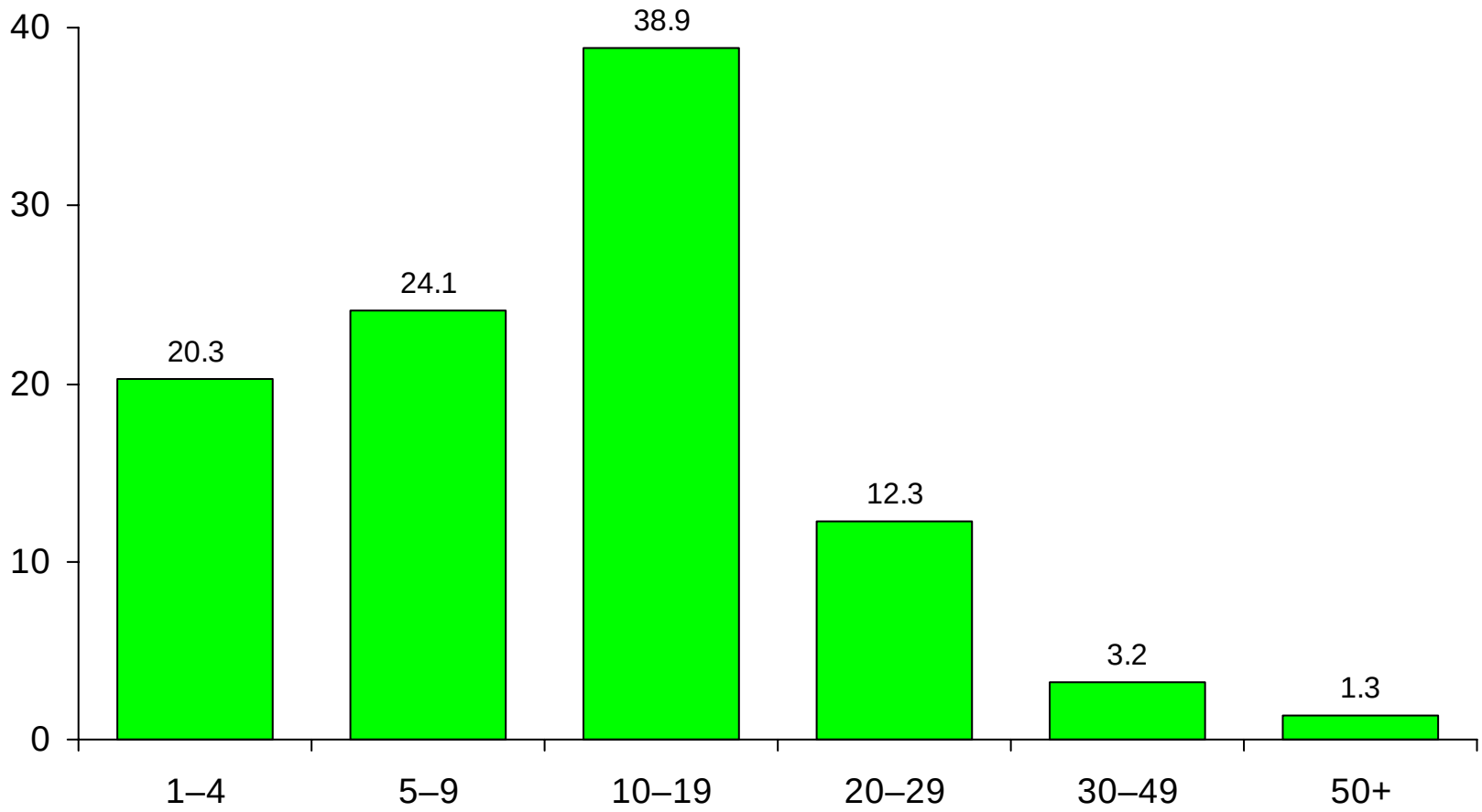
UN–Reno Upper-Division (Including 400/600 Dual-Listed) Course Percentages by Section Size, Fall 2003



Source: University and Community College System of Nevada

FIGURE 76

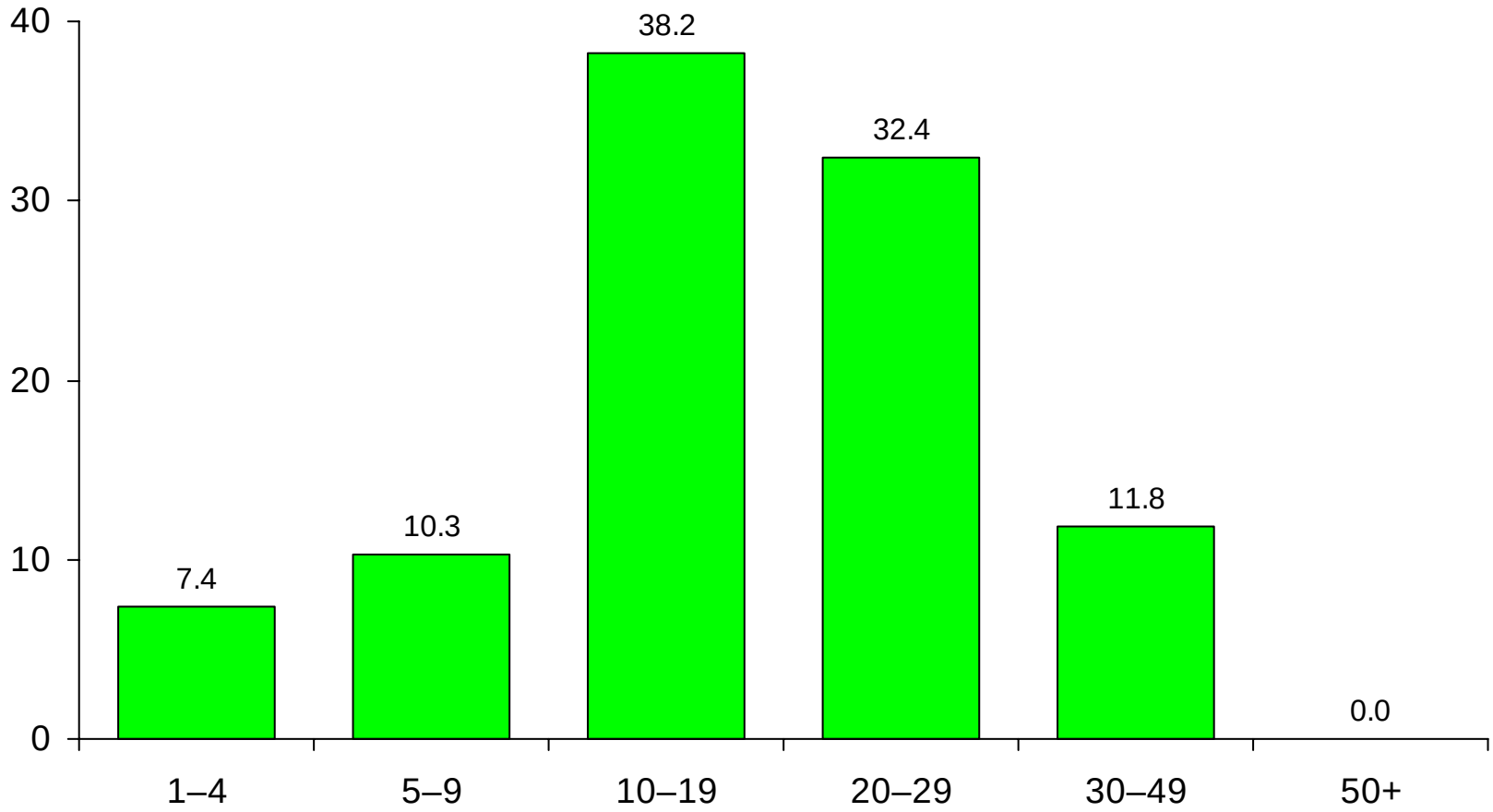
UN–Reno Graduate Course Percentages by Section Size, Fall 2003



Note: Data does not include Medical School classes (except Speech Pathology), Cooperative Extension, or labs.

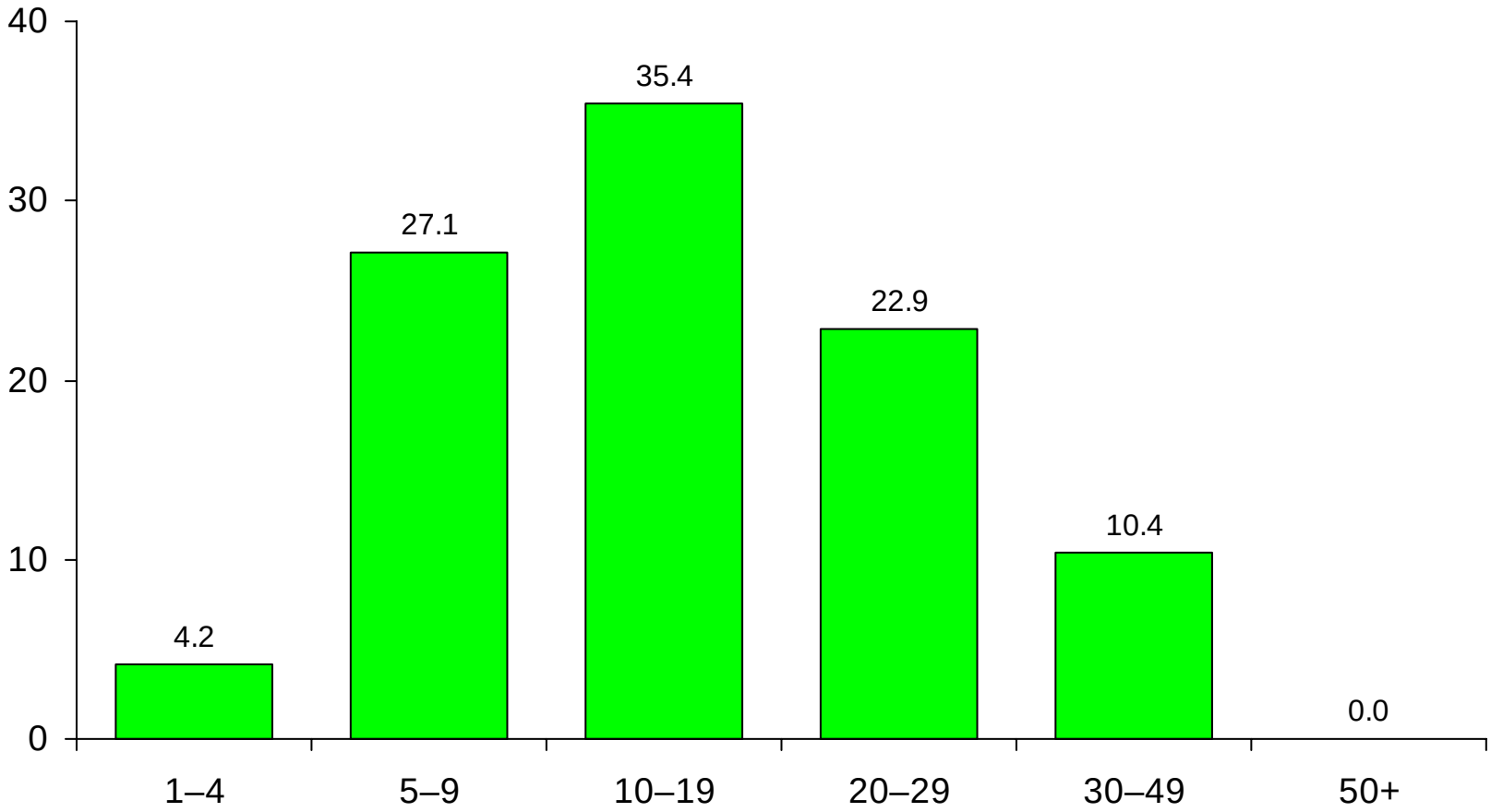
Source: University and Community College System of Nevada

Nevada State College Lower-Division Course Percentages by Section Size, Fall 2003



Source: University and Community College System of Nevada

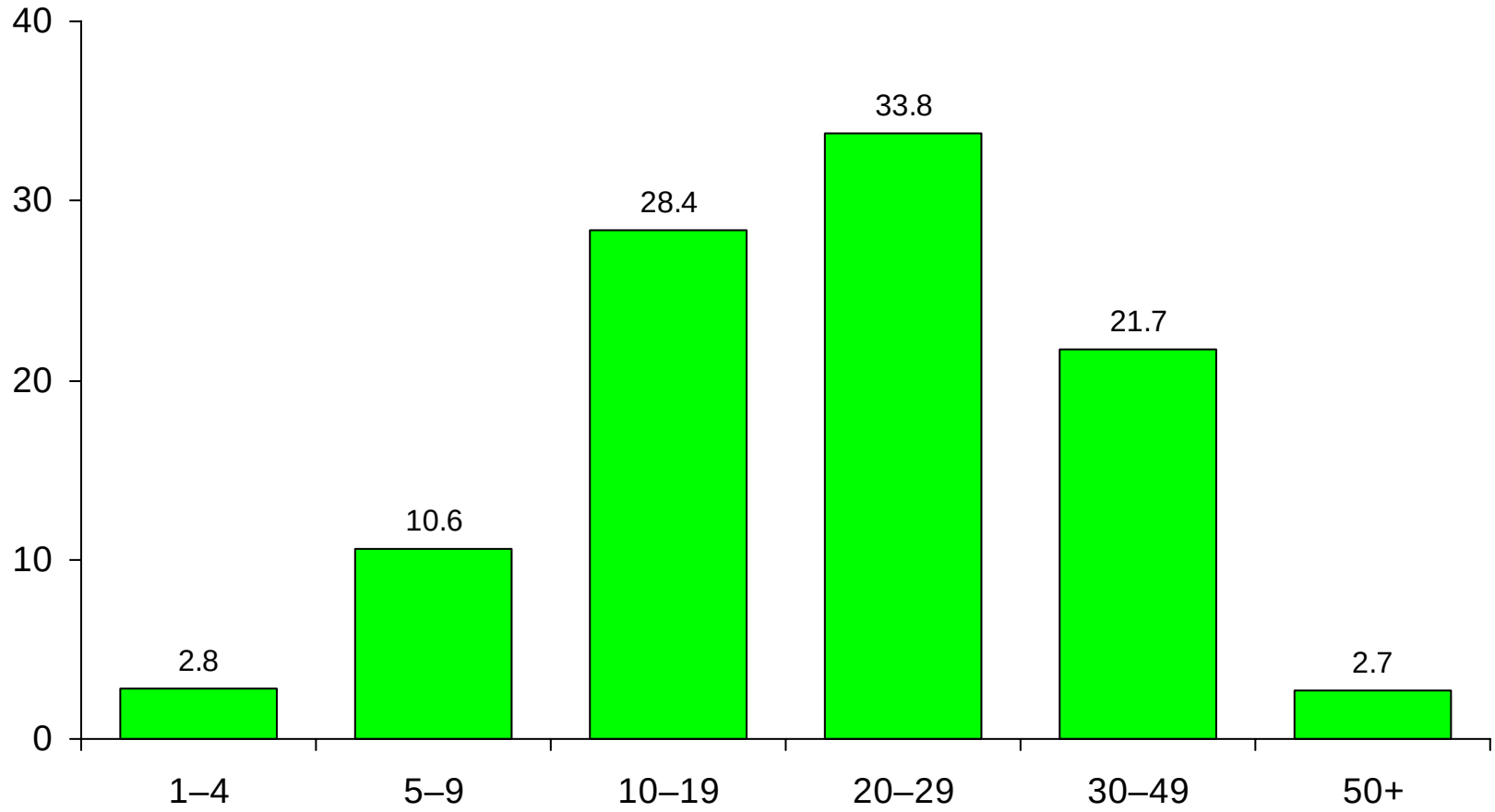
Nevada State College Upper-Division Course Percentages by Section Size, Fall 2003



Source: University and Community College System of Nevada

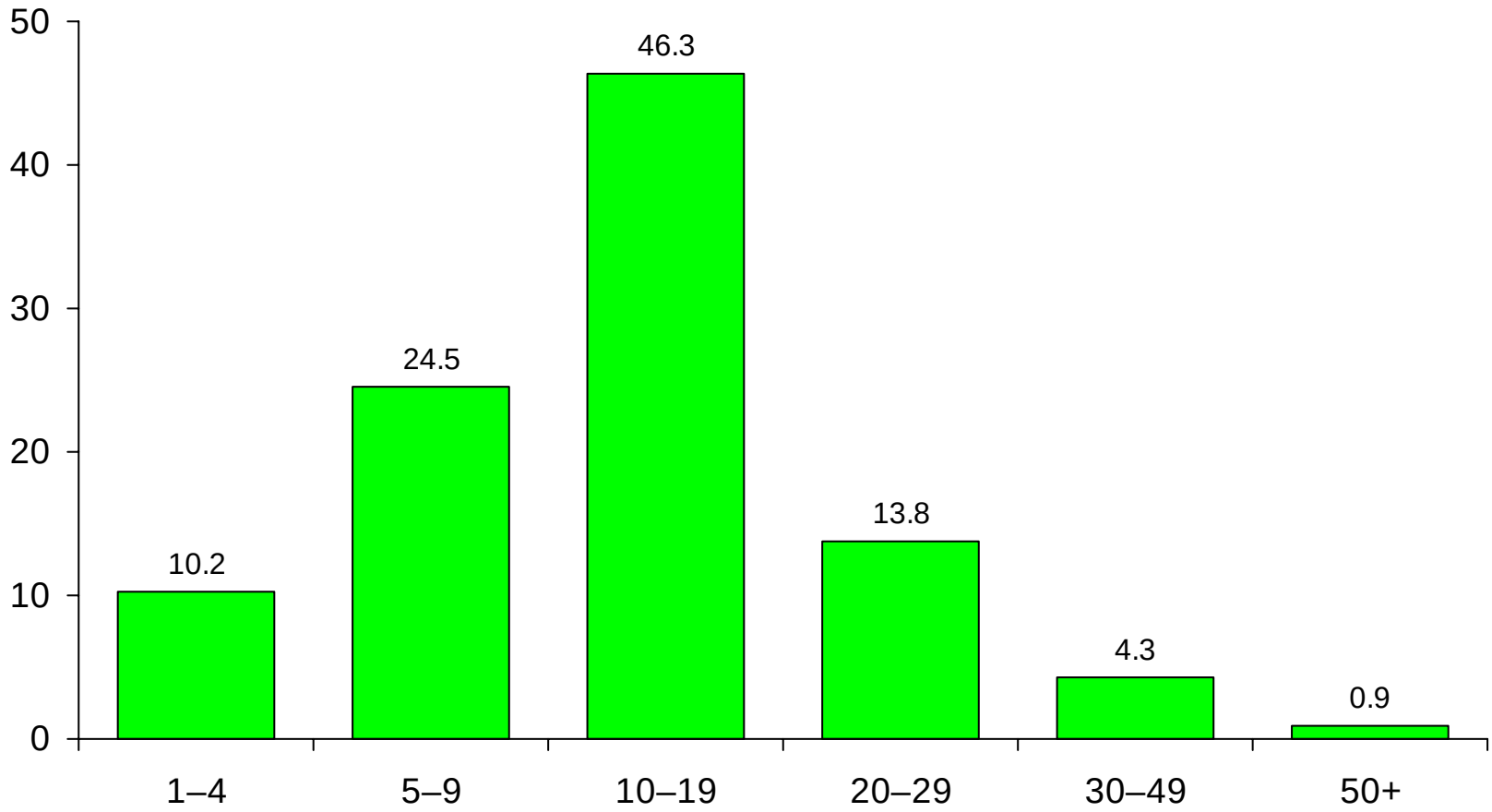
FIGURE 79

CC of Southern Nevada Lower-Division Course Percentages by Section Size, Fall 2003



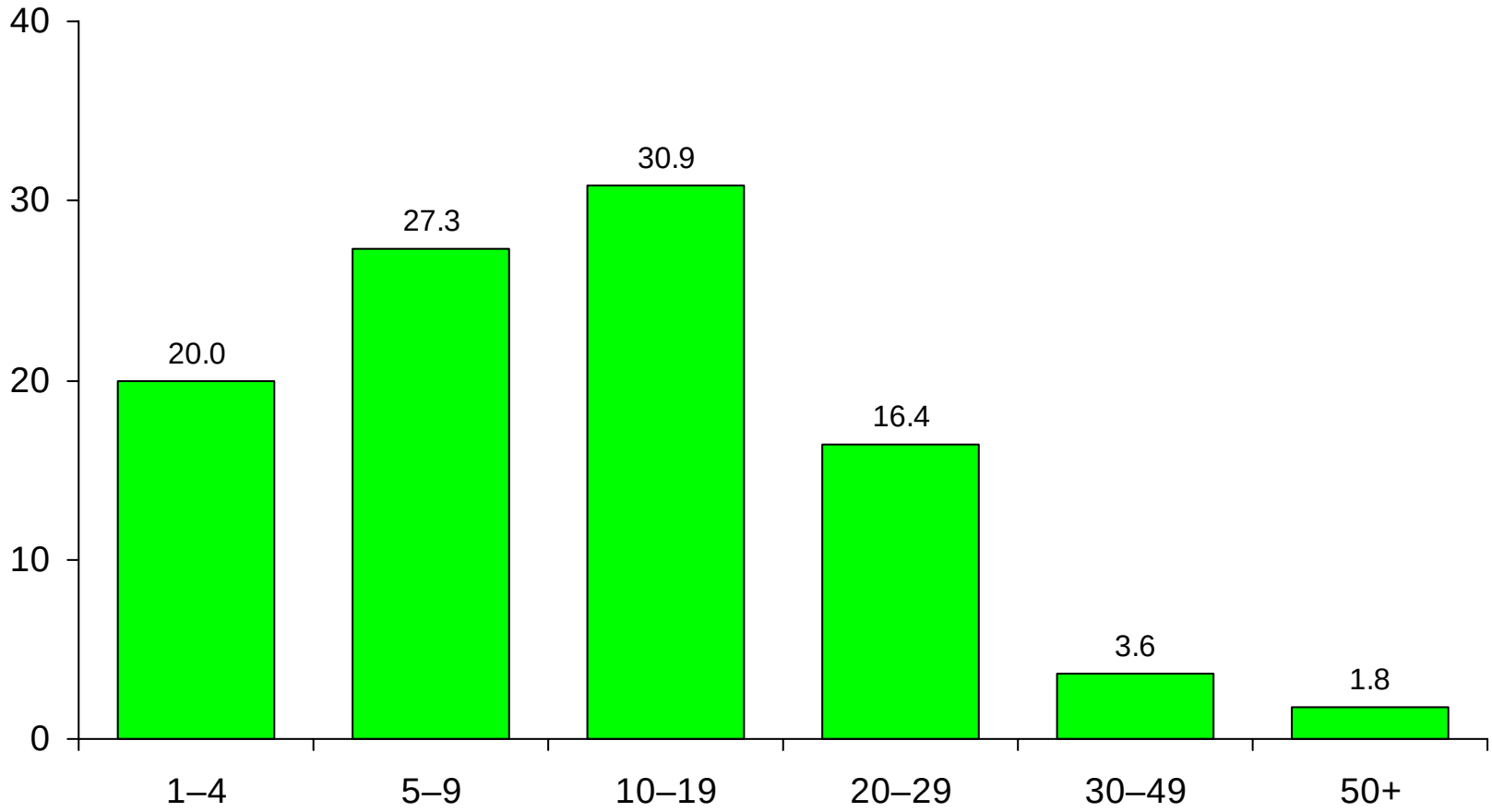
Source: University and Community College System of Nevada

Great Basin College Lower-Division Course Percentages by Section Size, Fall 2003



Source: University and Community College System of Nevada

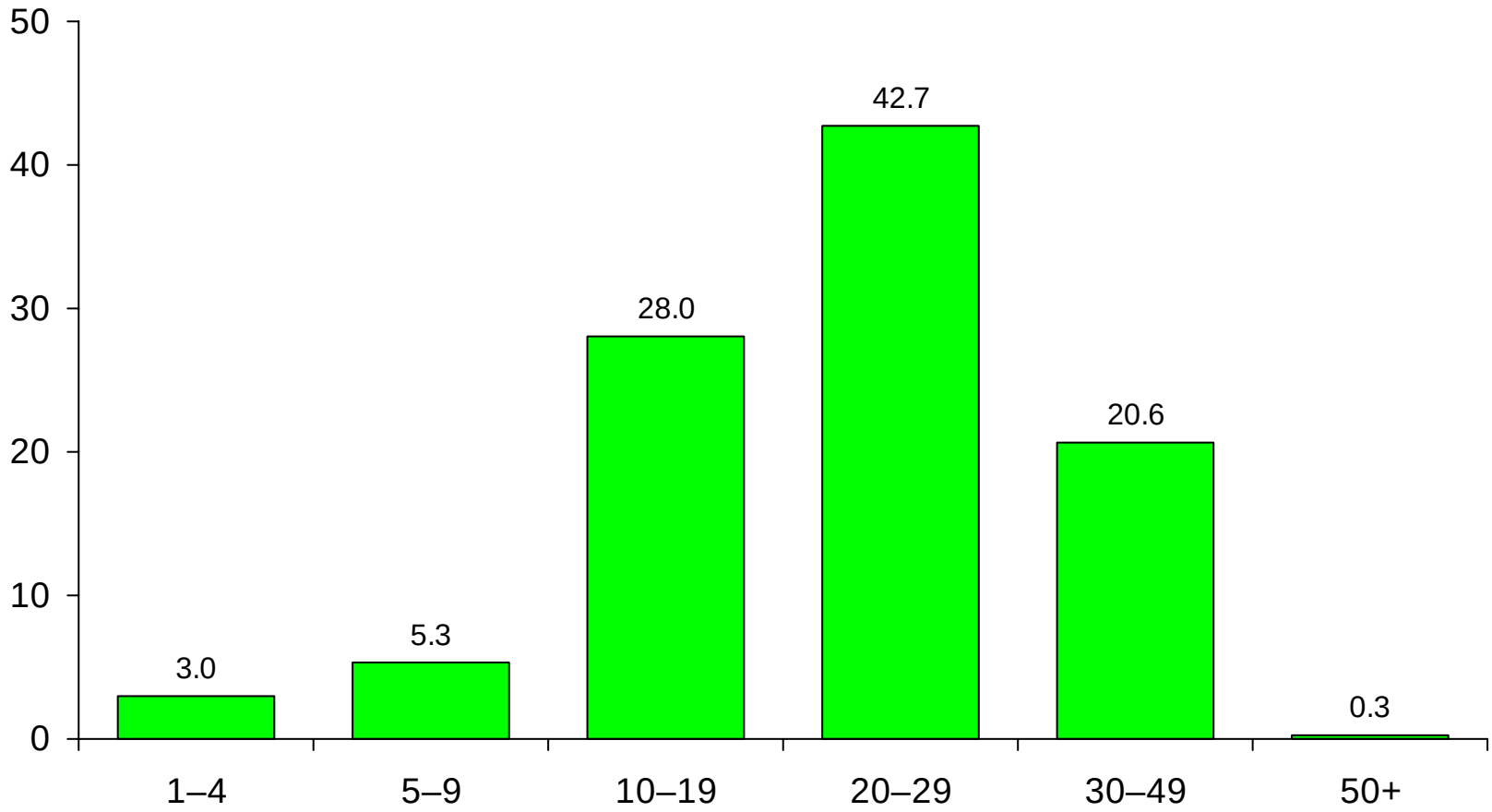
Great Basin College Upper-Division Course Percentages by Section Size, Fall 2003



Source: University and Community College System of Nevada

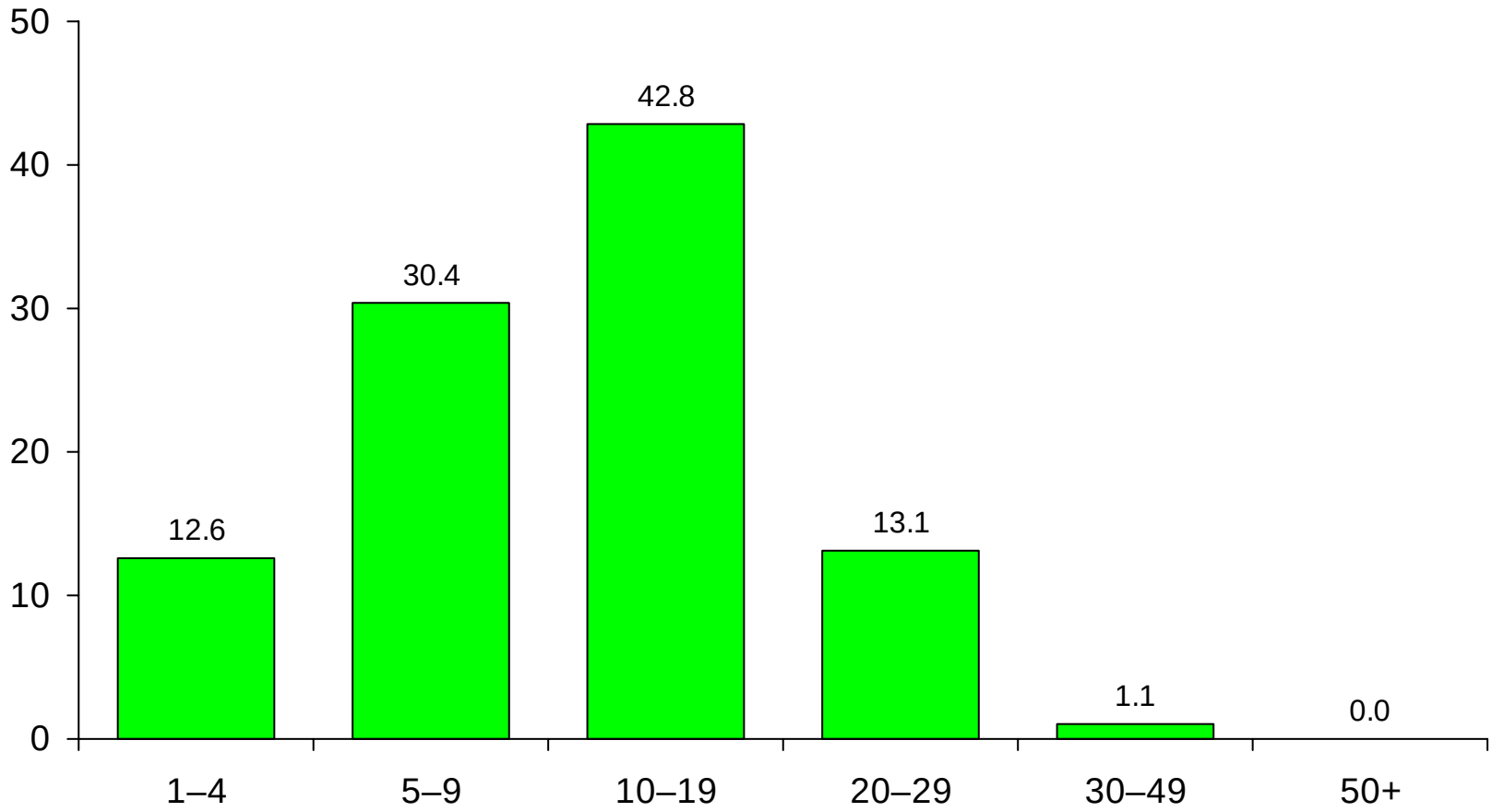
FIGURE 82

Truckee Meadows CC Lower-Division Course Percentages by Section Size, Fall 2003



Source: University and Community College System of Nevada

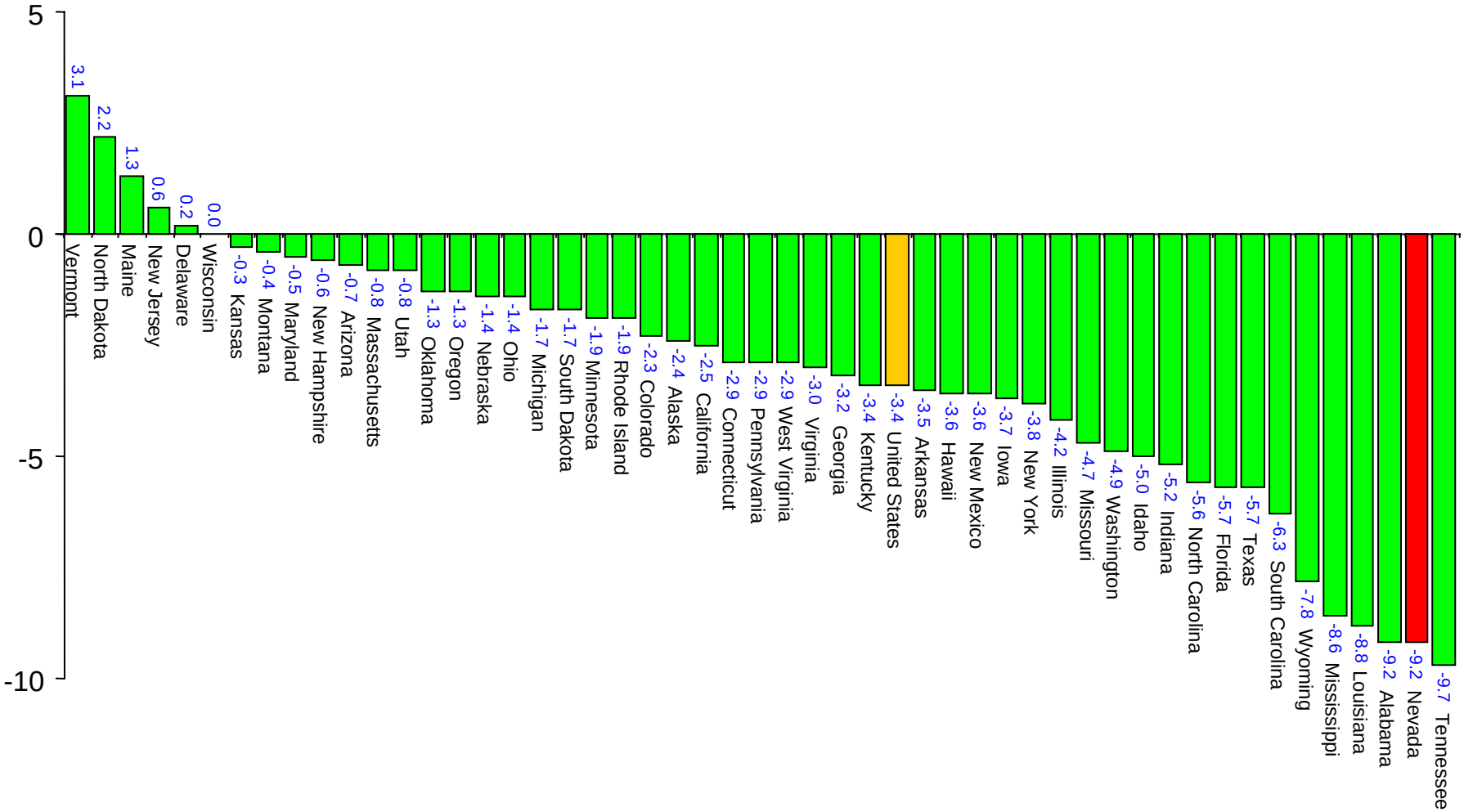
Western Nevada CC Lower-Division Course Percentages by Section Size, Fall 2003



Source: University and Community College System of Nevada

FIGURE 84

Projected State and Local Budget Surplus (Gap) as a Percent of Revenues, 2010



Source: NCHEMS; Don Boyd (Rockefeller Institute of Government)

FIGURE 85

Own-Source State-Local Revenue

Adjusted for Inflation and Population Changes

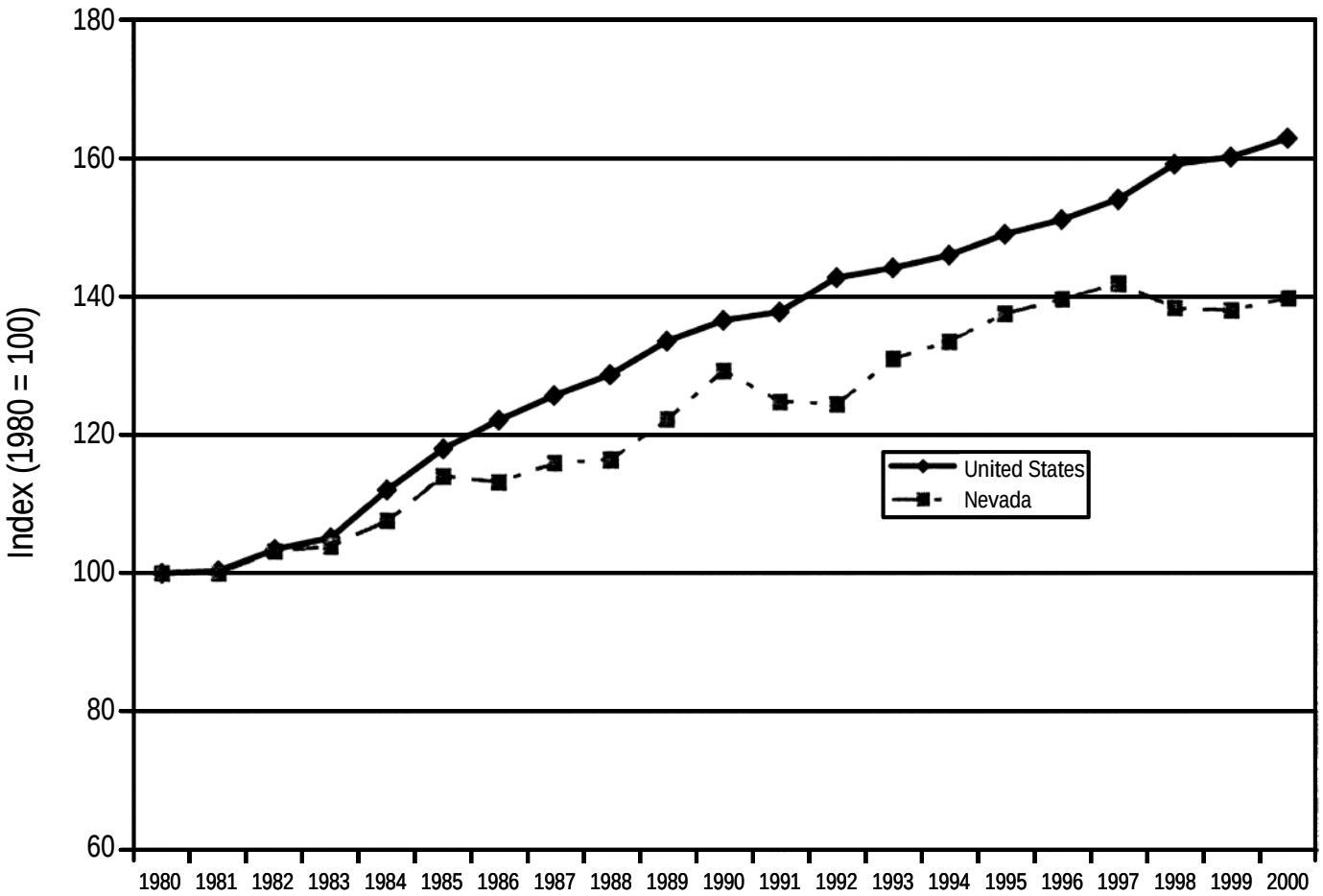
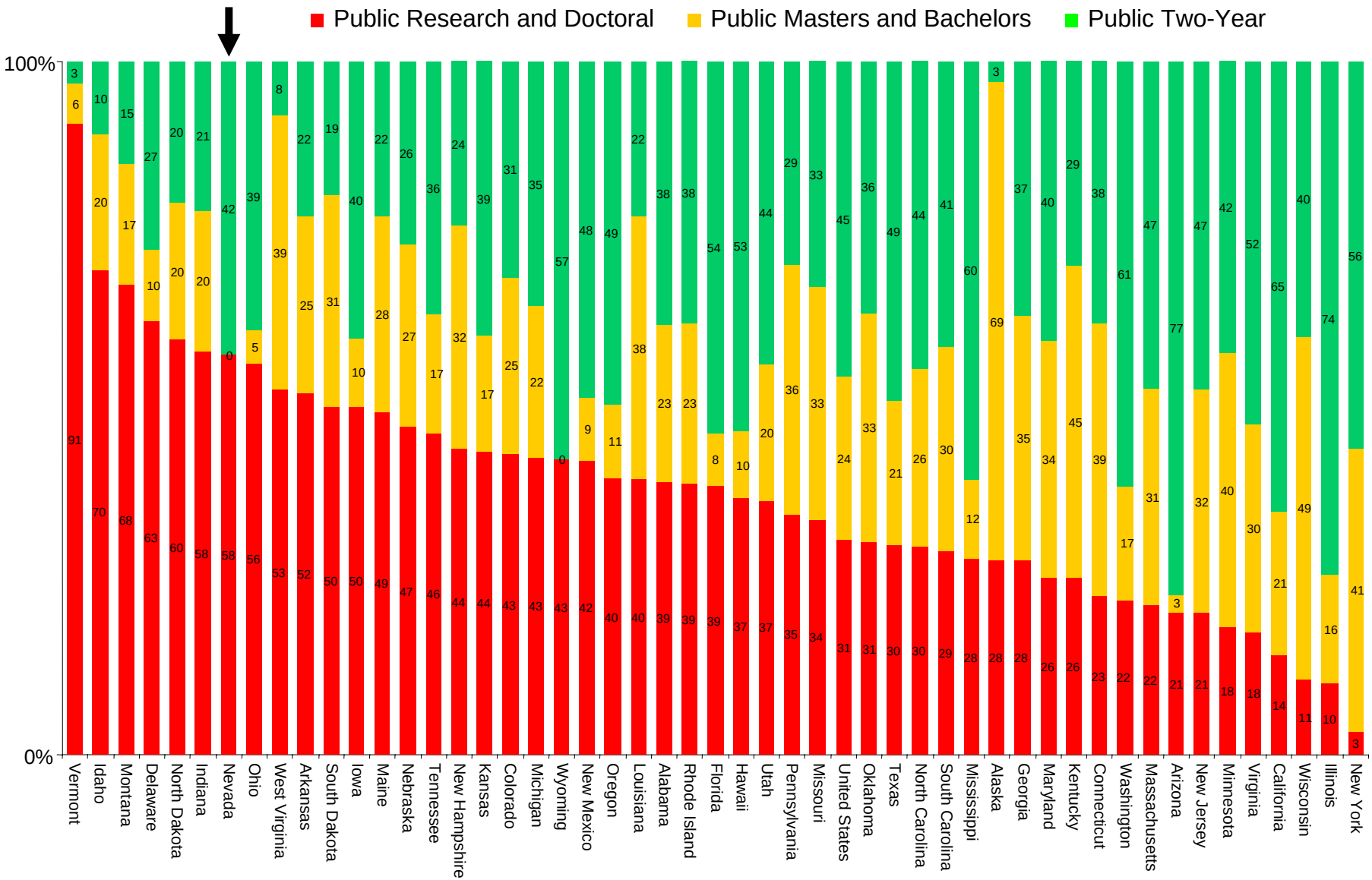


FIGURE 86

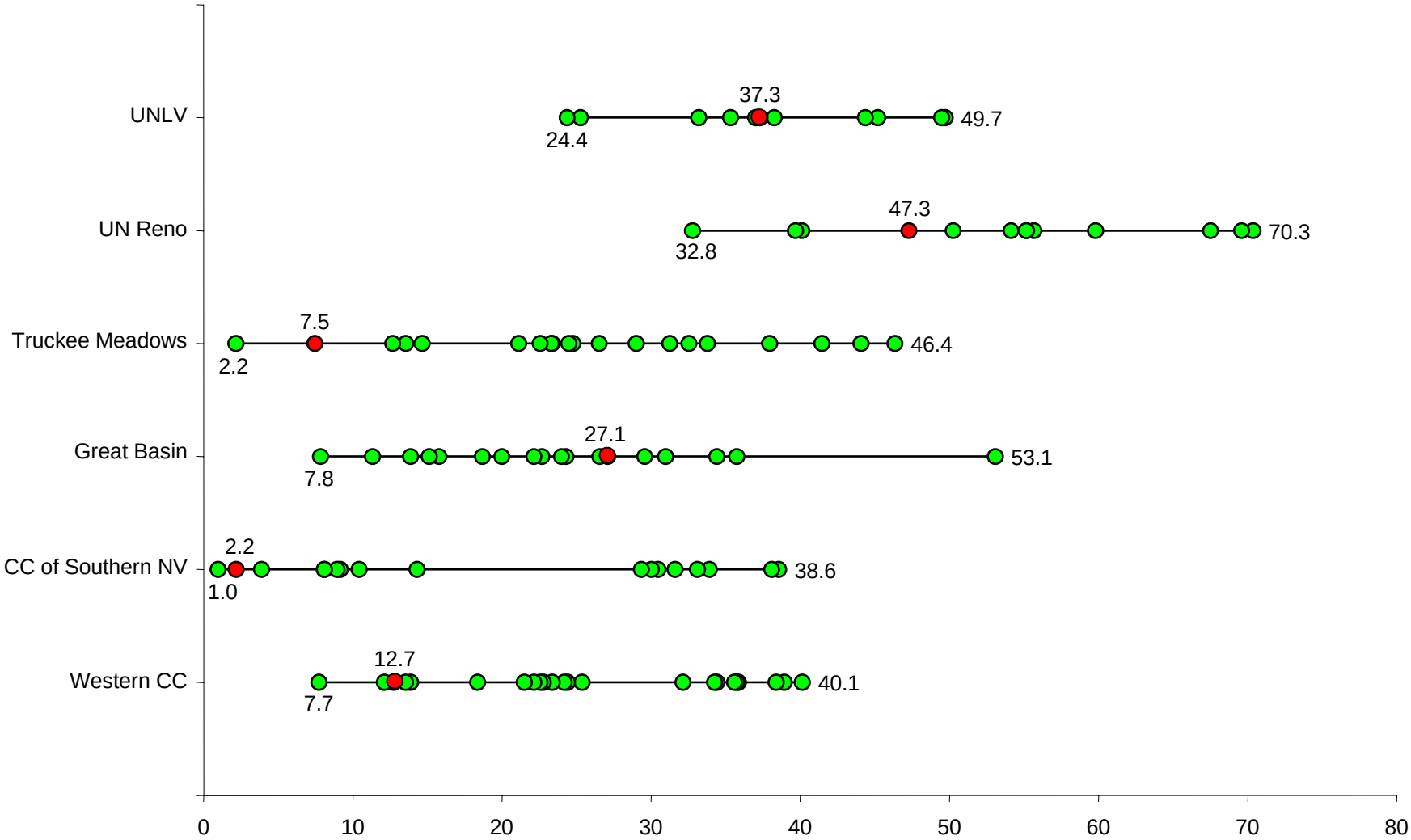
Public Undergraduate FTE Enrollment by Sector, Fall 2001



Source: NCES-IPEDS, Fall Enrollment Survey

FIGURE 87

Nevada Peer Groups—Graduation Rates, 2002



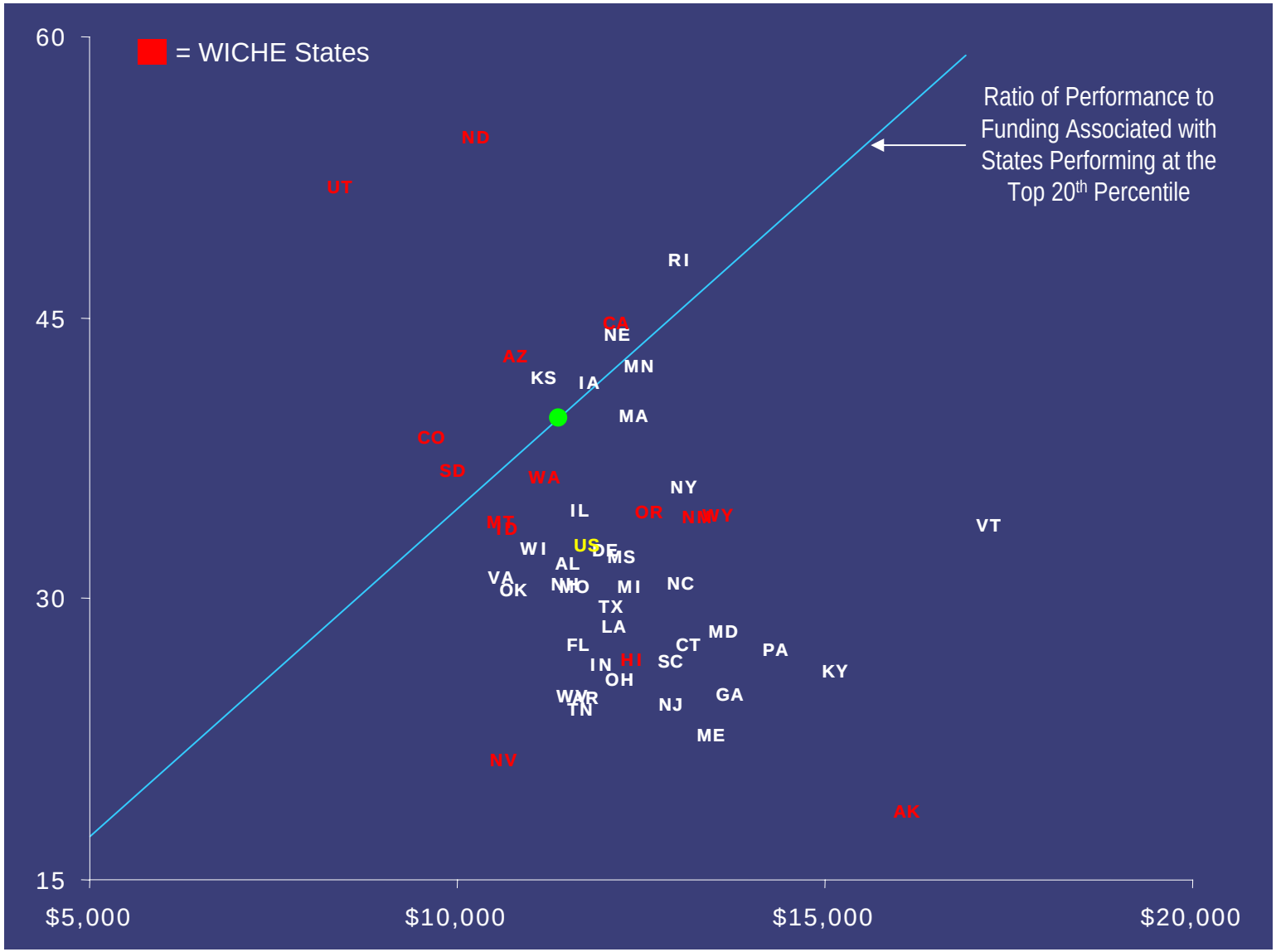
Note: Data are not available for Wayne County CC District in the Truckee Meadows Group.

Source: NCES, IPEDS 2002 Graduation Rate Survey

FIGURE 88

Performance Relative to Total Funding per FTE—State Higher Education Systems

FTE Undergraduates (Fall 2001) per 100 18-44 with High School Diploma, 2000

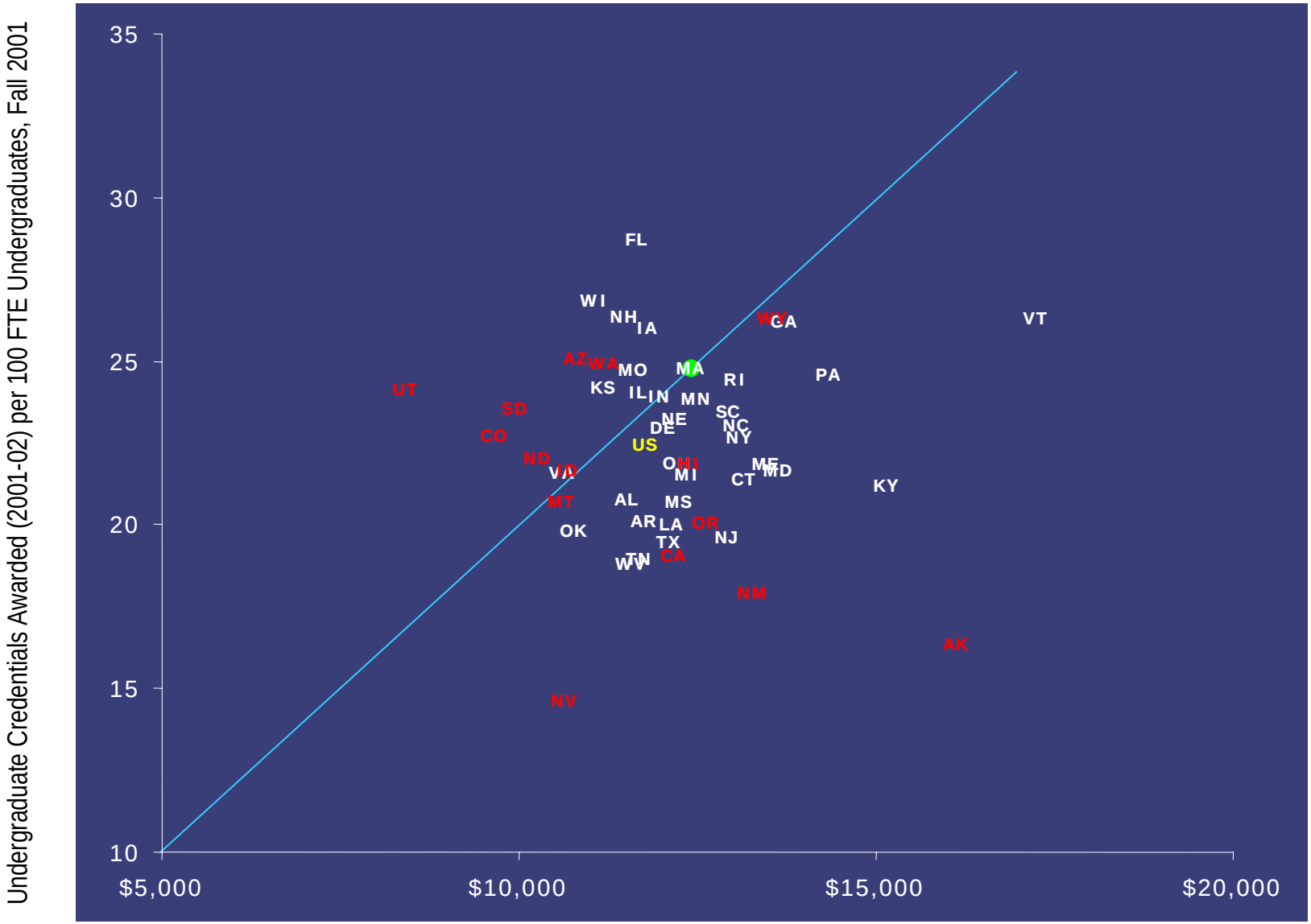


Total Funding per FTE (State, Local, Tuition & Fees, State Financial Aid—Adjusted for COL and Faculty Salaries)

FIGURE 89

Performance Relative to Total Funding per FTE—State Higher Education Systems

Undergraduate Credentials Awarded (2001-02) per 100 FTE Undergraduates, Fall 2001



Total Funding per FTE (State, Local, Tuition & Fees, State Financial Aid—Adjusted for COL and Faculty Salaries)

FIGURE 90

Performance Relative to Total Funding per FTE—State Higher Education Systems

Federal and Industry R&D per Capita, 2001

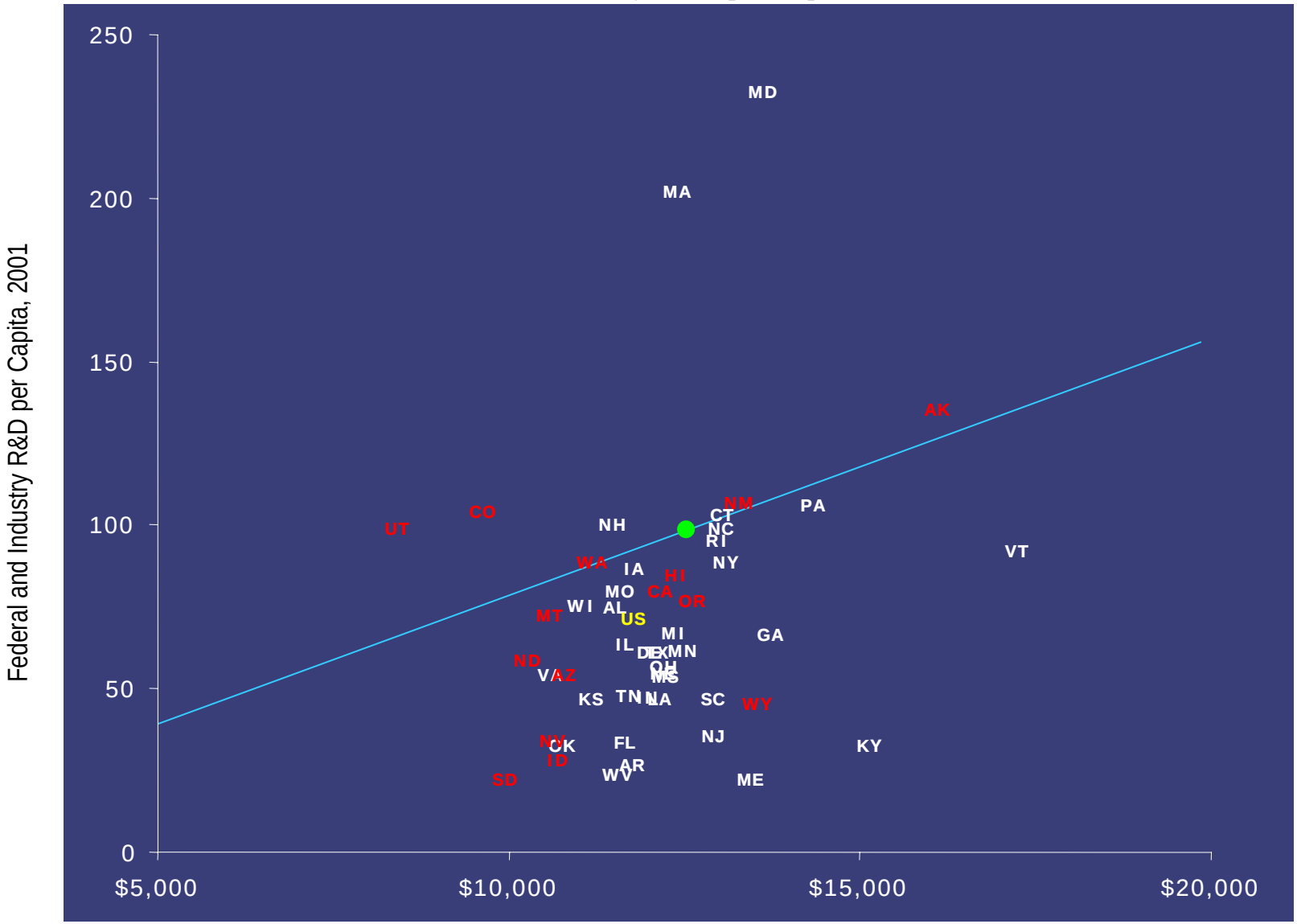
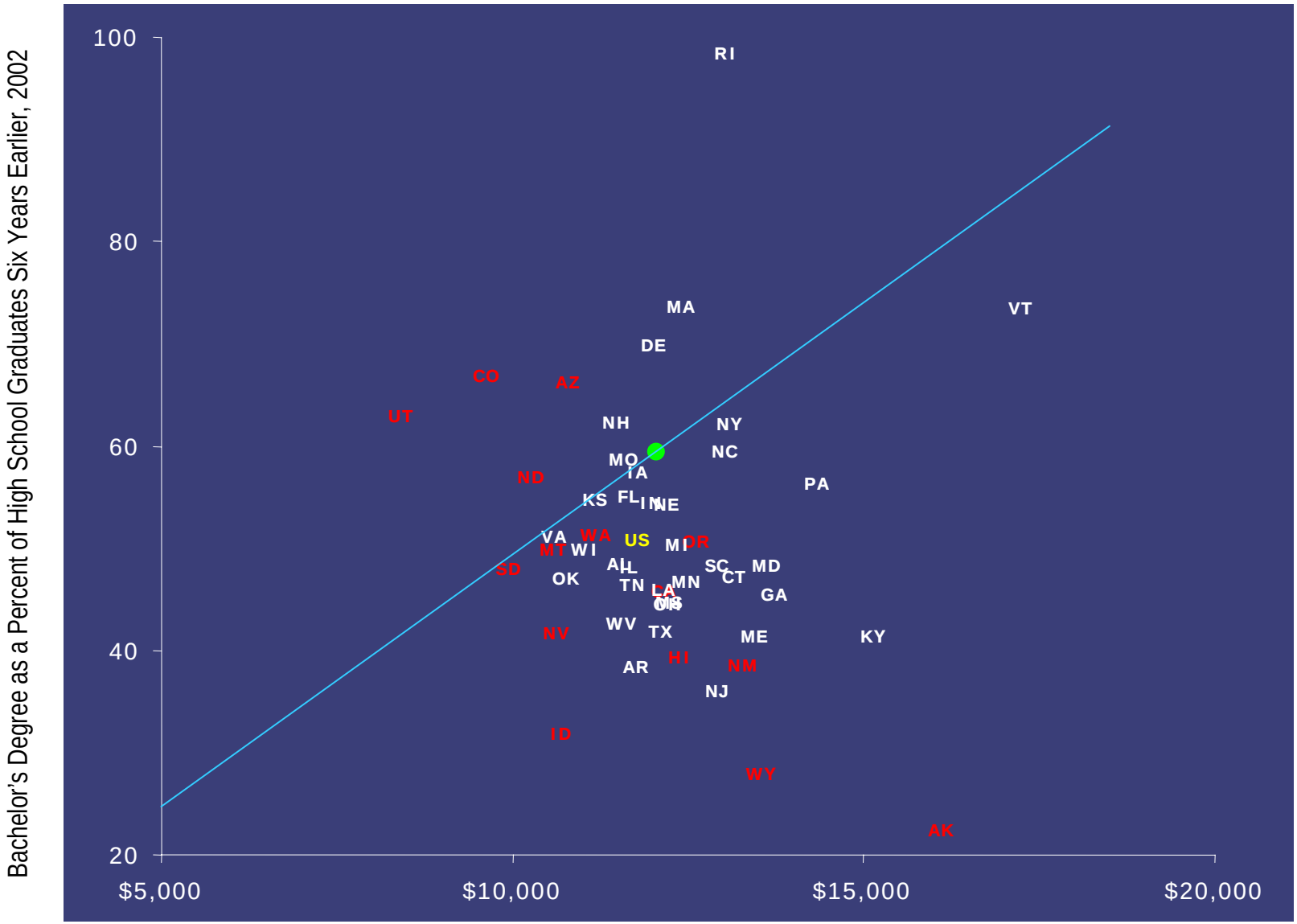


FIGURE 91

Performance Relative to Total Funding per FTE—State Higher Education Systems

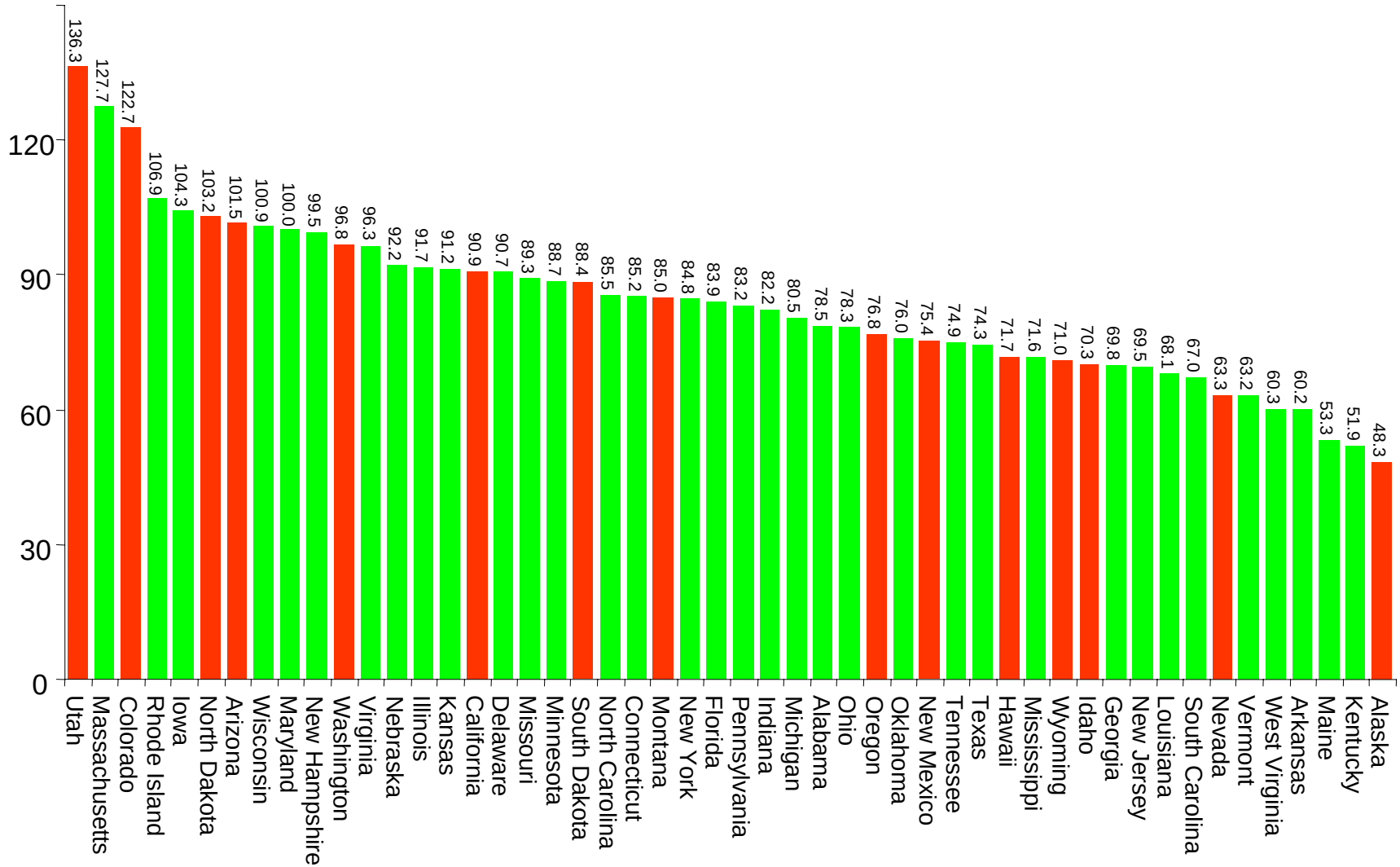
Bachelor's Degree as a Percent of High School Graduates Six Years Earlier, 2002



Total Funding per FTE (State, Local, Tuition & Fees, State Financial Aid—Adjusted for COL and Faculty Salaries)

FIGURE 92

Performance Relative to Total Funding per FTE—Overall Index Scores for State Higher Education Systems



APPENDIX A

Elements of the Proposal

Proposal to Provide Technical Assistance to the Committee to Evaluate Higher Education Programs

National Center for Higher Education Management Systems (NCHEMS)

Western Interstate Commission for Higher Education (WICHE)

State Higher Education Executive Officers (SHEEO)

November 28, 2003

TABLE OF CONTENTS

Proposal to Provide Technical Assistance to the Committee to Evaluate Higher Education Programs

A. INTRODUCTION

Assembly Bill No. 203 as passed by the Nevada legislature created the Committee to Evaluate Higher Education Programs 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 is soliciting proposals from qualified organizations to assist them in their work. This proposal is being submitted in response to that solicitation.

The response to the solicitation is a joint effort 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)

NCHEMS will take the leadership role in the project and serve as the fiscal agent. Work by WICHE and SHEEO will be conducted as subcontractors to NCHEMS.

These three organizations, collectively, bring a wealth of knowledge and experience to the issues around which assistance is being sought:

1. The staffs of the three organizations are comprised of individuals who are recognized as national experts in all areas of policy and research related to the project:

    - Strategic planning (and the conduct of needs assessments)
    - Finance
    - Accountability and student learning
    - Improving interrelationships between K-12 and postsecondary education
    - Governance and organizational arrangements
    - Compilation of data and creation of information to inform decisions in the specified areas
    - Policy formulation, alignment, and implementation

2. The organizations have a proven track record of conducting similar studies in other states—for example, North Dakota, Kentucky, Tennessee, Missouri. Work is currently underway in Virginia, West Virginia, Washington, Rhode Island, South Carolina, and Indiana. In each of these cases, NCHEMS has been the lead organization.

3. They have knowledge about the specific issues facing Nevada. Most recently, WICHE staff provided assistance to the UCCSN in the development of the System's strategic plan.

4. The organizations have a successful history of working with legislatures, governors, and Boards of Regents to not only develop recommendations but to translate these recommendations into forms that lead to implementation—changes to statute, policies, and procedures. The best examples of this capacity can be found in the work accomplished for North Dakota, Kentucky, and Arizona.

The breadth and depth of the talent housed at the three organizations provide the Committee with a resource capable of addressing the full range of topics facing the Committee.

B. GENERAL APPROACH

The Request for Proposal (RFP) indicates the five broad topics to be addressed and directs the consultants to rely on their own expertise "to determine how to best respond to those objectives within the timeframe and resources provided." Resources include not only fiscal resources but constraints on the time period within which recommendations must be forthcoming as well as the availability of data resources which can be marshaled to address some of the more specific questions raised by Committee members.

Based on considerable experience, we have learned that successful projects have certain characteristics. Specifically, they:

1. Artfully use a wide range of information to clearly describe the "state of the state" and to draw attention to issues requiring attention—in this case issues in which higher education necessarily plays a role. To be most useful, these data must place Nevada in a broader context (e.g., using comparisons with other states), identify region-to-region variations within the state, point to some conclusions about likely future conditions, and indicate the current condition of higher education in the state, especially the adequacy of resources and the efficiency with which these resources are employed.

2. Use the results of these analyses to build consensus about the problems to be addressed, a step that precedes the search for solutions. Experience indicates that promotion of favorite solutions before general acceptance and understanding of the problems to be solved results in very little progress.

3. Recognize that all institutions in the state, public and private, may be part of the solution and are considered in the search for answers to questions that arise when trying to reconcile response to need and affordable capacity.

4. Recognize that state policy significantly shapes the results achieved—and that policy can be both a help and a hindrance in achieving objectives. As a consequence, a thorough assessment of policies that shape the environment within which higher education functions is an essential component of a successful project.

5. Result in wholistic solutions—those that align vision, finance, accountability and governance—designed to fit a state's specific circumstances (not solutions borrowed from somewhere else). Recommended solutions must consider not only the problems to be addressed and the educational assets that can be deployed, but the political culture within which solutions must be crafted.

With these criteria in mind, we offer a project having the following phases/components:

Phase I—Project Initiation

Prior to beginning actual work on the project, members of the project team will come to Nevada for an initial meeting with Committee leadership, legislative staff and others to:

- Clarify and resolve any issues about either topics to be addressed or procedures for addressing them, and

- Begin the processes of locating and acquiring data from in-state sources that will contribute to subsequent phases of the project.

Phase II—Conduct Data Analyses

Develop information that serves to:

- Call attention to the unmet needs of the state (address items 1 and 2 in the charge to the Committee).

- Assess the capacity of the higher education system—numerically, programmatically, and financially—to address these needs (address items 3 and 4 in the charge).

Phase III—Conduct a Policy Audit

Review existing policies and procedures to identify:

- Areas in which existing policies create either incentives or disincentives for pursuit of key objectives.

- Barriers (other than lack of resources) that stand in the way of adequately responding to identified needs.

Phase IV—Conduct a Broad Review of Both the List of Identified Needs and Policy Audit Findings

In order to both gather additional information and to build wider understanding of the key issues facing the state of Nevada, project team members will make visits to 10-12 locations throughout the state. During these visits, the team members will:

- Discuss the results of the needs analyses with local business leaders, economic development officials, public sector employers, K-12 educators, and civic/political leaders to obtain more detailed/nuanced perspectives on regional needs.

- Meet with K-12 and higher education leaders to discuss both local needs and policy barriers and issues.

Phase V—Report Preparation

Based on data analyses, policy reviews, and discussions with leaders across the state, the project team will prepare a report summarizing findings and recommending actions. A draft of this report will be reviewed with the Committee prior to preparation of the report in its final form.

At each stage of the project, the project team members will meet with the Committee to:

- Report progress.

- Discuss next steps.

- Address any other topics of interest or concern to the Committee members.

C. PROJECT ACTIVITIES

In order to complete the five project phases listed above, the project team will conduct a longer list of specific project activities. These activities are described in the remainder of this section.

Activity 1 (Phase I)—Conduct Project Initiation Meeting

The timeline for this project is relatively short, effectively five months. In order to get project activities launched in a timely manner, we request the project initiation phase of the project be conducted as soon as possible after the consultant selection decision is made, preferably before the end of the calendar year. At this early date, project team members will travel to Nevada to:

1. Meet with the Committee leadership and legislative staff to discuss the project work plan and have initial conversations about the substantive topics of central concern to Committee members.

2. Meet with leadership and staff of the UCSSN to make arrangements for acquisition of data key to the success of the project.

3. Meet with representatives of other state agencies—elementary and secondary education, workforce development, economic development, etc.—to arrange for acquisition of reports and data of relevance to the project.

Activity 2 (Phase II)—Conduct Initial Round of Data Analyses

Using data available in NCHEMS' extensive databases, augmented by data from sources specific to Nevada, NCHEMS staff will conduct a variety of analyses focused on both unmet educational needs and the capacity of the higher education system to respond to these needs. The latter analyses include those analyses that will shed light on the efficiency of resource use within institutions and the possibility of reallocating resources to better meet the needs of the state and its citizens.

1. Analyses focused on state needs. In this arena, NCHEMS staff will undertake analyses focusing on the:

    - Needs of traditional high school graduates, specifically copying with the additional demand occasioned by:

        – Increasing numbers of high school graduates

        – Increasing rates of college participation of high school graduates

    - Needs of adults for part-time, career-oriented instruction.

    - Needs of employers for additional entrants to the workforce (especially in areas such as education and nursing) and for continuing education for the current workforce.

- State-level need to address issues of adult illiteracy—providing basic workplace skills to those adults in the population who have not completed their high school education.

Analyses in all of these areas can be performed using readily available data. Included in the analyses will be consideration of:

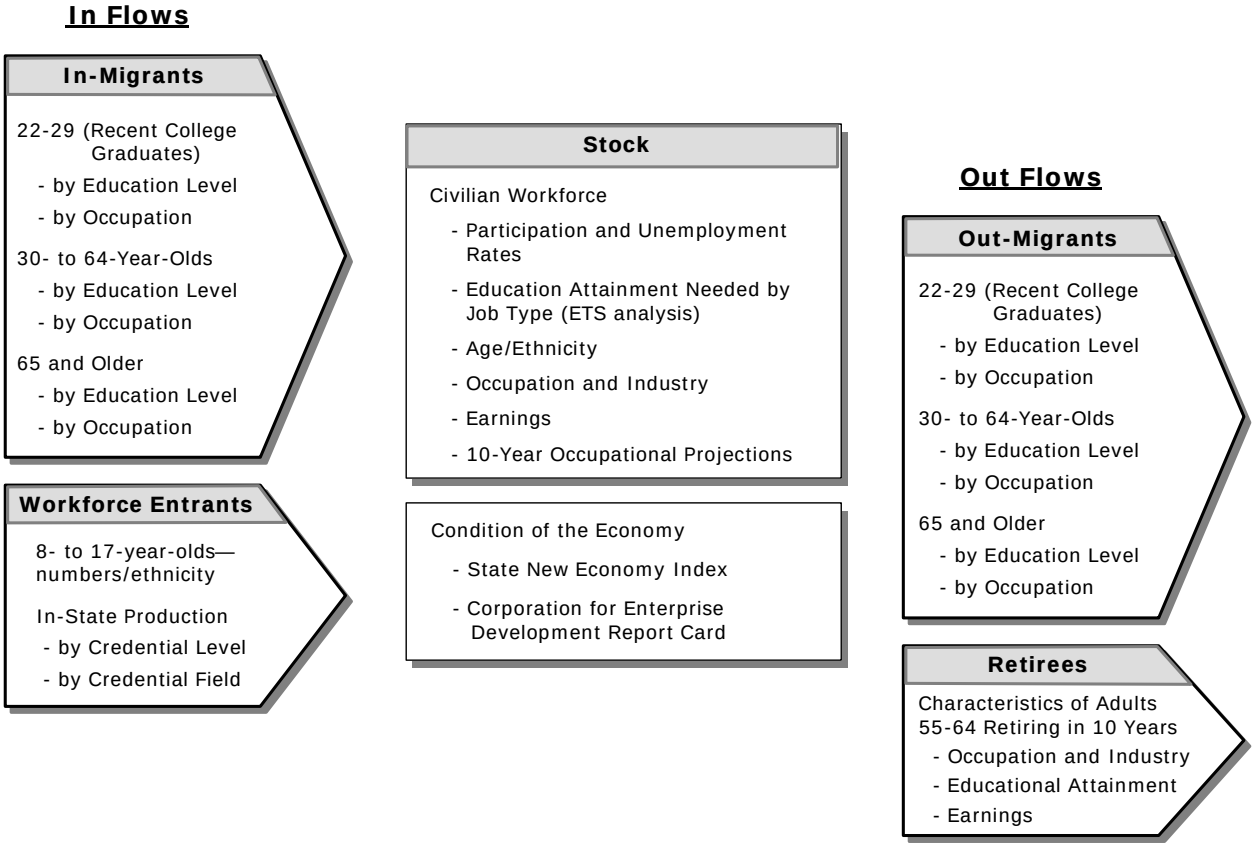
- Rates of participation as compared with other states.
- Rates of degree completion.
- Growth in the population and in numbers of high school graduates and assessment of their preparation for success in postsecondary education.
- Migration of students and workers into and out of the state.
- The nature of the Nevada economy and historical and projected changes.
- Projections of workforce need.

These analyses will address specifically the questions about current and projected future workforce needs and the extent to which programs in the UCCSN institutions are responding to those needs. Figure 1 summarizes the key factors in the analysis:

- Needs of the workplace—including projected needs.
- Likely retirees from the workplace.
- In-state entrants to the workforce.
- Alignment of degree production with employment opportunities in those relatively few instances where there is a direct connection between training and employment (nurses and teachers being among these).
- Levels of in- and out-migration and the kinds of jobs being filled by those both arriving in and leaving the state. These in- and out-migration analyses will include attention to both ages and education levels of individuals coming into and leaving the state.

FIGURE 1

Workforce and Employment by State



2. Analyses of higher education capacity (and operating efficiencies)

   The RFP puts particular emphasis on operating efficiencies and suggests numerous very specific analyses that might be conducted in pursuit of obtaining answers to the question of whether or not resources are being used efficiently. Directly addressing most of these detailed questions will not be possible within the constraints of time, cost, and data availability. Nevertheless, the fundamental questions (whether institutions are operating efficiently and whether there is the possibility of internal reallocation) can be addressed within these constraints.

   In order to address this set of questions, NCHEMS will develop a set of comparison institutions for each Nevada public college and university (selected on the basis of similarity in size and mission) and compare each institution with its peers on measures such as:

   - Levels of revenues and the sources of those revenues.

- Levels of expenditures and the allocations of those expenditures across key categories of expenditures—instruction, student services, administration, etc.

- Staffing patterns—numbers of employees (faculty, administrative, clerical, technical, etc.) relative to numbers of students.

- Faculty salary levels.

- Tenure status of faculty (percent of full-time faculty who have been awarded tenure).

- Numbers of programs relative to size of student body (at the associate, baccalaureate, and graduate levels).

- Institutional performance—particularly success in getting students to complete degree programs within a reasonable period of time.

Analyses of this form can be done with data readily available in databases containing data for each institution in the nation. Using these data minimizes the costs associated with conducting this key set of analyses. If, after reviewing these data, it becomes evident that more fine-grained analyses are warranted, analyses using data specific to each Nevada institution can be collected and analyzed. The two kinds of analyses that are the most typical candidates for such follow-on work are:

- Analysis of the distribution of class sizes for each department and level (lower division, upper division, graduate) for each institution. These analyses point out the incidence of small classes (e.g., less than 10 students) and serve to identify areas where inefficiencies may be occurring.

- Analyses of faculty credit hour production—again by discipline and level. These factors can be compared against those used in funding mechanisms in other states to get another rough indication of major sources of inefficiency (if any).

These two forms of analyses are suggested because they rely on data that are typically available (or can be made so within reasonable cost and time limits) and because they illuminate the **reasons** why comparisons based solely on financial factors yield the results that they do.

This approach to the analyses will provide the Committee with sufficient information to address the policy questions of central concern—are the institutions being operated efficiently and are there resources available for reallocation to meeting unmet needs?—without getting entangled in analyses that are costly and unnecessarily create conflicts about the decision domains and authority of the various parties at interest.

All of these analyses will be informed by the observations and findings of recent studies that can contribute significantly to understanding the unique circumstances being faced by Nevada. Among such studies are:

1. The Statewide Master Plan for Higher Education

2. The Battelle Memorial Institute Report of 2000

3. The Rand Corporation Report of 2001

There are undoubtedly others. The identification of such studies is one of the tasks to be accomplished as part of Activity 1.

Activity 3 (Phase II)—Conduct First Progress Report Meeting

In early February (February 3), members of the project team will meet for a day with the Committee. The purposes of the meeting will be to:

1. Review the results of the unmet needs analyses and begin the process of identifying the key issues/priorities emerging from these analyses.

2. Review the results of the efficiency/capacity analyses and begin the process of drawing key conclusions from these analyses.

3. Identify further analyses required to provide more detail and a more thorough understanding of some of the issues that surfaced in the first round of analysis.

While in Nevada, project team members will also collect documents germane to the policy audit phase of the projects—key statutes pertaining to higher education, UCCSN policies and procedures, etc. This activity will require visits with legislative staff and with staff of the UCCSN.

Activity 4 (Phase II)—Conduct Additional Analyses

As a result of discussions with the Committee (Activity 3), it is probable that additional analyses of both unmet needs and "efficiencies" will be required. These follow-up analyses will be conducted in accordance with agreements reached with the Committee at the first progress report meeting.

Activity 5 (Phase III)—Conduct Document Review Stage of Policy Audit

Project team members will thoroughly review the key statutes, policies, and procedures that create the environment within which the higher education institutions in the state of Nevada function. Among those that will be reviewed are the ones dealing with:

1. Governance—What is the distribution of decision authority? Which individuals/groups are responsible for making which decisions—e.g., establishment of new campus or

programs, setting admission requirements, setting tuition, allocating resources among the campus, approving construction contracts, hiring personnel, etc.?

2. Finance—What are the mechanisms by which resources are allocated within the state? Included within this assessment of existing policies are those policies dealing with:

    - Determination of overall levels of funding for higher education.
    - The mechanisms for allocating state resources to institutions for support of instruction, research, and other necessary functions.
    - Setting of tuition levels.
    - Student financial aid, including the extent and nature of tuition/fee waiver programs at the institutions.
    - The acquisition and use of funds from sources other than the state and students.

3. Accountability—What are the mechanisms by which both fiscal and performance accountability are provided by the UCCSN to the legislature, the executive branch and the general public?

4. What are the key procedural rules and regulations that shape institutional behaviors?

The purpose of these reviews is to gain an understanding of the incentives and disincentives present in the system—conditions that would lead institutions to actively pursue responses to key unmet needs or to function more efficiently and, more important, conditions that serve as barriers for desirable behavior on the part of institutions.

This work is the initial step in developing a set of recommendations for the Board of Regents and the Legislature regarding actions that may be necessary to address the issues identified in activities 2 and 4.

Activity 6 (Phases II and III)—Second Progress Report Meeting

In late March (March 24), members of the project team will come to Nevada to make a second report of progress to the Committee. This report will cover:

1. Additional findings and detail with regard to unmet needs.

2. Additional analytic results concerning efficiency of operations and the extent to which unmet needs might be addressed through reallocation of available resources.

3. A discussion of the findings of the initial stage of the policy audit—preliminary discussions concerning policy barriers that should be removed or new policies that might be created to allow the UCCSN to more effectively and efficiently serve the needs of the citizens of Nevada.

4. A description of the next steps to be conducted as part of the project.

Activity 7 (Phase III)—Discuss Preliminary Policy Audit Conclusions with Selected State Officials

While in Nevada for the second progress report meeting, project team members will also seek meetings with selected state officials to discuss some of the policy audit findings in further detail. Among the individuals with whom meetings might be sought (depending on the questions that emerge in the policy audit process) are:

- Individual legislators (perhaps by phone)
- Legislative staff members
- The Chancellor and key staff of the UCCSN
- The Governor's chief of staff or director of education policy
- Key staff in other state agencies—department of education, workforce and economic development, etc.

The purpose of these visits will be to deepen understanding of the policies and procedures, the conditions that lead to their enactment/development, and the receptivity to change should modification emerge as a necessary step.

Activity 8 (Phase IV)—Conduct Regional Meetings

The previous activities will provide considerable information about needs, efficiencies and the possibilities for reallocation. They also will provide information about the policy environment that has lead to the current set of circumstances in Nevada. Considerable experience indicates that a crucial part of projects such as this one is visits to all regions of the state to have discussions with employers, civic leaders, economic development officials, K-12 educators, and with the leadership of the higher education institutions in the region.

A typical day would include meetings with education officials for half a day to get more detailed information about the policy environment. For example, we ask questions such as: "What policy changes (besides more money) would enable your institution(s) to respond to identified state needs more effectively?" "What prevents you from using resources more efficiently (presuming that analyses show the Nevada institutions are not already a national model for efficient resource use)?" "What would have to change to allow important reallocations within your institution?" Almost inevitably attention becomes focused on a very few policy areas as a result of these discussions—some policies may be ineffective in and of themselves, some may create unexpected responses because of the lack of alignment with a second policy, and some issues may arise because of perception and interpretation rather than actual fact.

The second half of the day would be a group meeting (15-20 individuals) of employers and civic leaders in the region—business leaders, school superintendents, health care administrators, economic development officials, and city/county government leaders. The purpose of these meetings is to get more detailed in formation about unmet needs as that issue plays out in a local

context; the data will provide a general indication of local circumstances but nuances and special situations can only be obtained by:

1. Presenting local leaders with the analytical results as it pertains to their community/region.

2. Asking them to reflect on these findings and provide observations that provide more detail.

3. Soliciting their input regarding potential solutions.

These discussions lend credibility to the process—it makes the process open and not closed. The visits have the added benefit of beginning the process of developing a wider consensus about the statewide issues on which the Committee is focusing. While this is not the primary purpose of the regional meetings, this broader understanding is a very important by-product.

Project team members will conduct all of the visits. We ask, however, that someone in Nevada assume the responsibility for making the logistical arrangements—identify a local host (most often the local college or university), work with the host organization to identify invitees, and ensure that there is follow-through in the invitation process. Experience indicates that response is much better if the invitations come from a well-known local leader rather than an out-of-state consultant.

Activity 9 (Phases IV and V)—Third Progress Report Meeting

After the regional visits are completed, members of the project team will meet with the Committee a third time. The timeline for the project establishes the date for this meeting as April 29. At this meeting discussions will focus on:

1. Findings about both needs and policies gleaned from the regional interviews.

2. An outline of the final report. At this point in the process all of the information about the issues of interest will have been gathered. In order to ensure a smooth conclusion to the project, an outline of the final report—findings, observations, key environmental considerations, and recommendations—will be presented to the Committee and thoroughly discussed. This step helps to ensure that there are no surprises when the final report is presented.

Activity 10 (Phase V)—Prepare Draft Report

Subsequent to the third meeting with the full Committee, the project staff will develop a draft report. The report will be written with a policymaker audience in mind. Such reports typically are written against the following outline:

A. Introduction—genesis of the project

B. Methodology—very brief

C. Principal Findings—a summary of key findings with reference to the analyses (in an Appendix) that support these conclusions

D. Observations—about the environment in which solutions must be found

E. Recommendations for Action—steps that should be taken by the Board of Regents, the Legislature, institutional presidents, and other key participants

The findings and recommendations will cover the objectives identified in the legislation and the RFP.

Activity 11 (Phase V)—Final Project Meeting

A final project meeting (late May) will be held to review the draft report (which will be submitted to Committee members in advance of the meeting). This meeting will provide an opportunity for Committee members to:

- Correct any errors in fact.
- Provide suggestions as to improvements in presentation.
- Discuss specific recommendations.

Activity 12—Submit Final Report

After the final project meeting, the project team will revise the final report in ways agreed-upon during the meeting and submit the report in its final form.

APPENDIX B

Memoranda

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M E M O R A N D U M

TO: Members of the Committee to Evaluate Higher Education Programs

FROM: Dennis P. Jones

SUBJECT: Participation Rates and the Impact of Millennium Scholarships

DATE: March 15, 2004

The participation rate data that we presented to you at the February 3 meeting revealed a difference in calculated participation rates between the rates we calculated using nationally available data and the rates calculated by UCCSN staff using data compiled from sources within Nevada. The comparisons are revealed in the attached table.

These data reflect total consistency for the years 1992, 1994, and 1996 (data are not collected in odd numbered years). The data diverge beginning in 1998.

We have reviewed the basic data and discussed the discrepancies with UCCSN staff. The results are that:

- Both of us intend to calculate this rate in exactly the same way—that is:
  - Number of first-time freshmen who graduated from high school no more than one year previously, divided by
  - Number of high school students graduating with standard diplomas.
- The number of **standard** diplomas reported to NCES was consistent with the definitions used internally to Nevada through 1996.
- Since 1998, the number of standard diplomas reported to NCES (excluding adult and adjusted diplomas) has varied from the definition of standard diploma used historically in Nevada. The reasons for this change are inexplicable—no combinations of numbers lets us reconcile the differences. This variation is the cause of almost all the discrepancy.

- The only other variation of any magnitude is a discrepancy of 200 Nevada first-time freshmen in 2000.

The conclusions of all this are that:

1. No one acted in bad faith or in ways designed to skew results.

2. However calculated, the results show a jump between 1998 and 2000—the size varies but the increase is consistently revealed. Since Millennium Scholarships took effect in this period, one can argue that the scholarships had an effect. We would note the substantial increase in the period 1992-98, a period without the Millennium Scholarships.

3. We would also note that the full increase was not sustained from 2000 to 2002.

4. Finally, we would observe that, even granting the higher number calculated by UCCSN, Nevada remains substantially below the U.S. average and near the bottom in comparison to other states.

	1992	**1994**	**1996**	**1998**	**2000**	**2002**
High School Graduates						
Standard Diplomas	9,074	10,131	11,038	12,414	13,427	14,805
Public	8,811	9,485	10,374	11,975	12,953	14,282
Private	263	646	664	439	474	523
Adult Diplomas	1,167	451	620	535	792	982
Adjusted Diplomas		204	367	443	708	926
Subtotal	1,167	655	987	978	1,500	1,908
All Nevada Diplomas	10,241	10,786	12,025	13,392	14,927	16,713
Mortenson/NCES HS Graduates	9,074	10,131	11,038	13,491	15,190	
Nevada First-Time Freshmen	2,980	3,804	4,287	5,001	6,321	6,680
Mortenson/IPEDS FT Freshmen	2,980	3,807	4,275	5,000	6,127	
Nevada Calculation	32.8%	37.5%	38.8%	40.3%	47.1%	45.1%
Mortenson Calculation	32.8%	37.6%	38.7%	37.1%	40.3%	
Nevada with All Diplomas	29.1%	35.3%	35.6%	37.3%	41.0%	40.0%
Without Adults	32.8%	36.8%	37.5%	38.9%	43.3%	42.5%

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M E M O R A N D U M

TO: Members of the Committee to Evaluate Higher Education Programs

FROM: Dennis P. Jones

SUBJECT: Space Utilization

DATE: April 15, 2004

In a letter to me dated March 2, the chairman wrote that, "Your evaluation and input on UCCSN space utilization issues, including research space and the use of partnerships, would be greatly appreciated." This memo is written in response to that request.

My comments are based on a review of the following materials:

- UCCSN, Utilization of Instructional Space, Fall 2003
- UCCSN, 2003 and 2013 Institutional Space Inventories and Projected Space Needs
- MGT of America, Inc., Space Analysis Study for the UCCSN, May 2000

Based on my review of the materials provided, I would observe that:

5. The procedures for calculating space utilization and facilities needs reflect accepted best practice in the field.

6. The space standards for various types of rooms—classrooms, class labs, offices, etc.—are those typically used.

7. The room utilization rates used to calculate utilization of classroom and class laboratory space are somewhat higher than I usually find. This reflects an expectation that teaching spaces at all campuses will be used during the evenings as well as during the day.

Presuming that the current inventories are correct—and they should be since MGT made an assessment of this four years ago—and that the "drivers" for the calculations (FTE students,

FTE faculty, number of library volumes, etc.) are also correct, then the UCCSN calculations of surplus and shortages of various types of space at each of the campuses yield credible results. The calculations indicate that:

- Classroom space needs are generally confined to the newest campus (NSC) and to CCSN where growth has been sufficiently rapid to keep the institution scrambling to keep up.

- Class laboratory needs are found in these same institutions.

- Research lab space is needed in significant amounts at both of the universities. In this instance, it should be noted that needs are based on the factors typically associated with mature research universities. Since UNLV has not yet reached this position, the calculations may well overstate the immediate need somewhat.

- The community colleges show a need for additional office space. This is likely a consequence of a calculation based on FTE faculty and campus construction designed to accommodate full-time faculty without adequate accommodation of their part-time counterparts. Most community colleges in the county are ill-prepared to adequately house their part-time workforces.

- Almost all the institutions show a deficiency in library space. This may be a possible indicator that the space factors are slightly "richer than needed." It is equally plausible that library space has been converted to other uses in an effort to meet growing demand and that library space really is in short supply on each of the campuses.

The data suggest that Dr. Richardson has a legitimate concern when he notes that research space is in short supply and may be hampering the further development of the research missions at the two universities. This condition is not unusual in other institutions and is a consequence of several complicating factors. First, research space needs (like class laboratory needs) are specialized by discipline. Even if the calculations say you have enough space, the "fit" may be wrong—too much space in some disciplines, not enough in others, and lack of resources to make any necessary conversions. Second, there is a tendency to meet needs for instructional space for students—often because the proof of need is easier and **all** institutions need this type of space—and to assign research space a lower priority. I would note that, as the universities become more focused on research, the primary space "drivers" on the campuses will become faculty/employees rather than students. As evidence, research and office space at UNR and UNLV represent a larger share of the facilities inventory than do the combination of classroom and class laboratory spaces at these campuses. As the universities place more emphasis on their research missions, this variance will become even more pronounced.

As a final note, I would like to open a discussion with you about the state's approach to capital budgeting. As I understand the current practice, both construction of new facilities and renewal and renovation of old facilities are treated on a project basis in the capital budgeting process. I would like to suggest that there would be both more accountability and more flexibility in the system if:

- The capital budget were confined to construction of new facilities.

- Base budgets of institutions were given a one-time enhancement and, thereafter, they were responsible for annually investing the depreciation amounts on their campuses (say 2% of replacement value) in renewal and renovations. This would provide institutions with the capacity to renovate or convert space to meet emerging needs and, at the same time, create a requirement that priority facilities needs be attended to every year.

I will be pleased to discuss these and any other facilities-related questions with you at the meeting.

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M E M O R A N D U M

TO: Members of the Committee to Evaluate Higher Education Programs

FROM: Dennis P. Jones

SUBJECT: Allocation of Indirect Cost Reimbursement Funds

DATE: April 15, 2004

In an earlier meeting of the Committee, I was asked to provide information concerning practices in other states regarding the allocation of reimbursed overhead (indirect cost) funds received as part of contract and grant payments. In searching for information to respond to this question, I discovered that the State Higher Education Executive Officers (SHEEO) had queried their members with regard to this matter in August of 2002. Thirty-one (31) state agencies responded to their inquiry (including Nevada).

The results are as follows:

8. Of the states that responded, twenty-five (25) allow the institutions to retain 100% of the reimbursed overhead funds. These states are:

Alabama	Indiana	Ohio
Arizona	Iowa	Oklahoma
California	Kentucky	Oregon
Colorado	Louisiana	Pennsylvania
Connecticut	Maryland	South Carolina
Florida	Massachusetts	Utah
Georgia	Minnesota	Virginia
Illinois	North Carolina	Washington

These funds can be used at the discretion of the institutions.

9. One state (Texas) allows the institutions to keep 50% of indirect cost reimbursements with the other 50% being returned to the state. The exception is that 100% of funds reimbursed as part of Health Sciences grants can be retained by the institution.

10. One state (Nevada) allows institutions to retain 75% and another (Nebraska) allows retention of 80% (with the remaining 20% being deducted from the state's appropriation to the institutions).

11. Three other states—Rhode Island, Virginia, and Wisconsin—allow the institutions to retain 100% of the reimbursed amount but put constraints on its expenditure.

    - Rhode Island requires that 20% be returned to institutional E&G accounts to pay for administrative costs.

    - Virginia follows the same general policy as Rhode Island but requires that 30% be directed to administration.

    - Wisconsin institutions contribute approximately 1% of their indirect cost revenues to their Global Network Academy; the other 99% stays with the institutions.

In reality, twenty-eight (28) of the thirty-one (31) states allow all reimbursed indirect cost funds to remain with the institutions that obtained the grant and contract funds. Nevada is one of a small minority of states that employs a different policy.

I will be pleased to discuss the results of the SHEEO survey and any other matters regarding indirect cost reimbursement with you at the April 29 meeting.

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M E M O R A N D U M

TO: Members of the Committee to Evaluate Higher Education Programs

FROM: Dennis P. Jones

SUBJECT: Four-Year Programs at Community Colleges

DATE: April 15, 2004

At the March 24 meeting, a question was raised about the conditions under which it is reasonable or justifiable to add four-year programs at baccalaureate institutions. This memo is written in response to that question.

As a general rule, this is a situation that should be avoided. It creates a set of internal institutional dynamics that erode the community college mission and foster expectations that the institution as a whole move to full four-year status. There are certain realities involved in this situation:

- Rightly or wrongly, status is important regarding institutions of higher education—and four-year institutions have more status than community colleges. Most faculty would prefer to teach at four-year institutions and most communities will push to have a four-year college or university in their midst. Once the door is opened by placing a four-year program in a two-year institution, it is almost inevitable that pressure will build for more and more such programs.

- When four-year programs are offered by an institution, it is hard to sustain an emphasis on occupational programs, especially those in the blue-collar skilled trades (auto mechanics, construction trades, etc.). Four-year programs are the status hallmark of a "real" college and real colleges do not offer programs that require their students to get their hands dirty in the normal course of events. Over time emphasis on such programs diminishes and they may be phased out completely.

- Faculty that teach baccalaureate programs almost always have different teaching loads than faculty who teach at the two-year level—four courses versus five being typical.

It is very difficult to maintain two classes of faculty within the same institution—and the pressure will always be toward the teaching loads typical of a four-year institution. In the end this means that the cost per FTE student increases (by approximately 15-25%).

Having said this, there are conditions under which adding four-year programs at a two-year institution may indeed be justified. The clearest cases are those in which either requirements of licensure or the sheer expansion of content to be covered necessitates the change from associate to baccalaureate level. The former case is exemplified by some of the allied health professions in which licensure that once was offered to graduates of associate programs becomes restricted to graduates of baccalaureate programs (nursing and physical therapy assistants in some states). The second case is exemplified by some of the engineering technology fields. In some of these fields, the content to be covered has grown beyond the bounds of an associate degree program.

It should be noted that both of these instances build on the strengths of typical community college cultures—a focus on "horizontal relationships" that tie the programs to needs of employers, regional economies, needs of diverse client groups, and the integration of experiential/hands-on practical learning with academic skills. In contrast, most programs at four-year institutions tend to be focused on "vertical relationships" with the disciplines and other academic enterprises being the primary touchstones. It is in such circumstances that delivery of four-year programs by community colleges is most problematic.

The other case in which baccalaureate programs could justifiably be offered by a two-year institution is one in which:

- There is a compelling need for graduates of the program in the geographic area of the college.
- There is no other logical provider of the program in the region.
- It is not feasible to have another institution in the state system deliver the program on the community college site.

The advent of enhanced distance delivery capacity has made the latter a more valid option (although it may still be necessary to assign a limited number of full-time faculty to teach and mentor students at the remote site).

We will be happy to discuss this topic with you at the April 29 meeting.

APPENDIX C

Financing in Sync Paper

NCHEMS

Financing in Sync:
Aligning Fiscal Policy with State Objectives

Dennis P. Jones

Prepared for

Western Interstate Commission for
Higher Education

February 10, 2003

National Center for Higher Education Management Systems
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Financing in Sync:
Aligning Fiscal Policy with State Objectives

A. INTRODUCTION

While the priorities and methods vary from state to state, state leaders hold common aims for the citizens of their states. They seek a high quality of life for these citizens. They want them to be safe in their homes and on the streets; they want them to breathe clean air and drink pure water; they want them to have ready access to affordable health care. They also seek economic stability and self-sufficiency for the citizens of the state—they want them to have the means to enjoy the benefits of a middle-class lifestyle.

The achievement of these desired ends is increasingly dependent on the education levels of the population. In order to reach the objectives of economic and societal well-being, more and more citizens must have at least some level of education beyond high school. Certainly, the kinds of jobs associated with advanced earning power require levels of knowledge and skill associated with postsecondary education. But the need for advanced education extends beyond the realm of economics. It also extends to the requirements of personal and civic life. Day-to-day life is becoming increasingly complicated—note the sophistication required to make informed selections among the available health care options or telecommunications providers. Similarly, a functioning democracy requires a citizenry able to make informed, personal decisions about such complicated topics as global warming, international trade, and energy production/conservation—and about selection of elected officials who must deal with these issues as matters of national policy. All these topics require a citizenry educated well beyond the levels of the populace of even a generation ago.

These conditions create situations in which states have a substantial interest in achieving:

- High rates of high school completion of students who have taken an academically rigorous curriculum.
- High levels of college participation of both recent high school graduates and adult learners.
- High rates of college degree completion.
- An economy that employs a high proportion of college graduates.

In pursuit of these objectives, states can (and do) employ a variety of the policy tools that are available to them. They create systems of higher education institutions and put in place governance structures and mechanisms designed to ensure that these institutions attend to those aspects of the public agenda which they can substantially influence. They establish performance goals and accountability mechanisms intended to focus attention on—and achievement of—these objectives. At the moment, this policy tool is being applied primarily at the elementary and secondary levels, but momentum is gaining at the postsecondary level as well. They establish

regulatory devices intended to ensure particular institutional behaviors of a sort believed to affect the ultimate attainment of these desired ends.

Finally, and most importantly, they use the power of the purse to influence institutions, students and employers to behave in ways consistent with the broader public purposes. Funding—with regard to both levels and the methods by which resources are distributed—is the dominant policy tool used to affect higher education institutions and the outcomes they produce. Financing policy has risen to this preeminent status for several reasons. First, it sends the strongest signals. Regulations can be bent (or ignored) and accountability requirements advantageously interpreted; their implementation is largely at institutional discretion. But the money flows get everyone's attention—and they are very much under the control of the providers, not the recipients. Secondly, finance decisions are revisited each time the legislature meets, making them (potentially) a very flexible tool. Further, in many states there are structural reasons for this prominence. The only legislative committees that consistently deal with higher education issues in some states are the money committees. In some states, there are no substantive committees that regularly deal with governance, regulatory, or accountability devices as they specifically affect the nature and performance of the higher education enterprise. In some other states, the Education Committees handle both elementary/secondary and postsecondary issues; in these settings, K-12 education typically receives most if not all the attention. Finally, financing is the one policy that can be viewed as more carrot than stick; it can provide incentives in an environment in which the other tools are viewed as constraining and negative.

While financing policy is potentially the most potent of the policy tools, it is seldom wielded effectively. It tends to be applied with a focus on means (institutional well-being) without concomitant attention to the ends to be achieved. And it tends to be focused on institutions as recipients of funds to the exclusion of other beneficiaries, especially students, that could be more instrumental in achieving desired consequences. Or, the policies are so diffuse that the cumulative affects are negated. Whether for lack of purposive design or absence of alignment of the components, states seldom gain the level of impact through use of finance policy that they might. The purposes of this paper are to:

- Identify the distinct elements of financing policy.
- Describe alternative forms of these elements.
- Illustrate the alignment of these policies in the context of alternative state priorities.

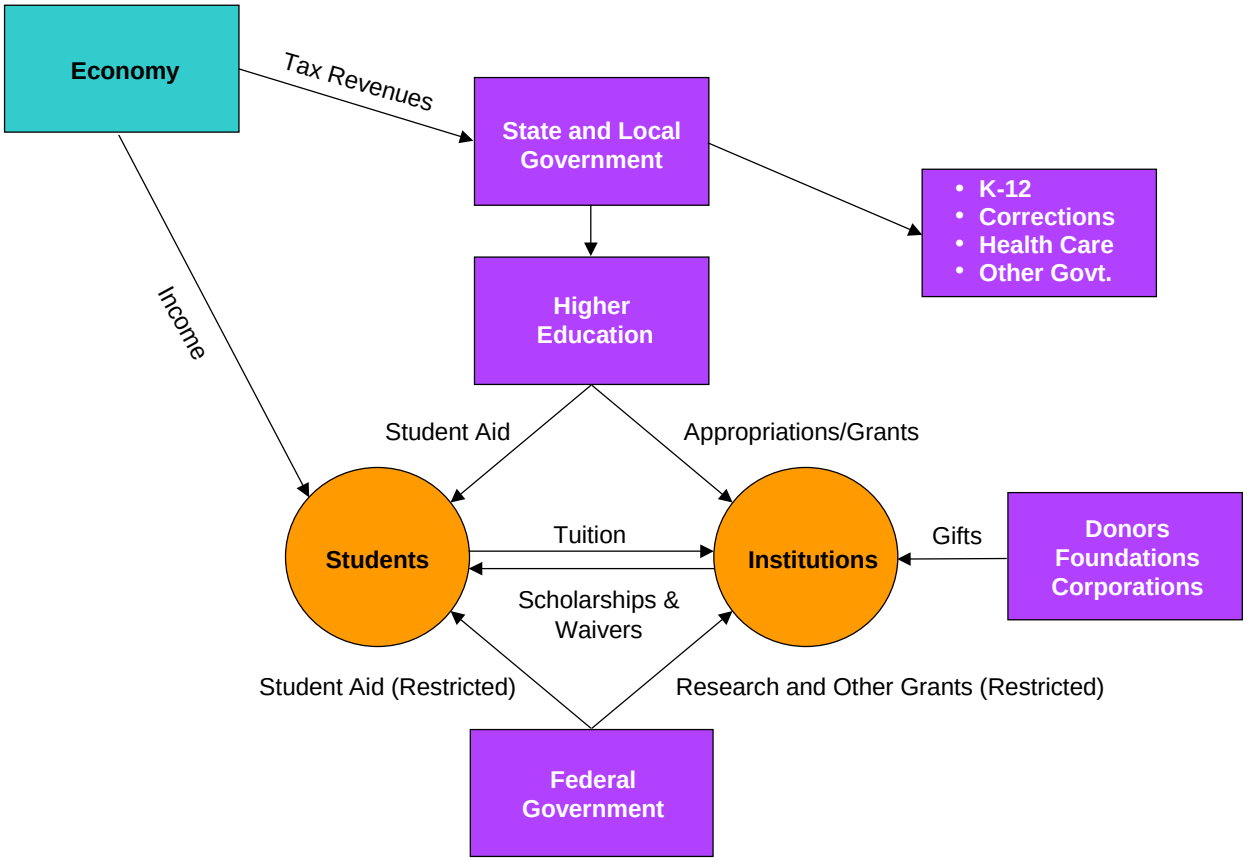
The intent is to provide guidance to the formulation of policy that encourages educational outcomes consistent with economic benefits and an enhanced quality of life for the citizens of a state.

B. THE ELEMENTS OF FINANCING POLICY

Figure 1 describes the various entities having a role in the financing of higher education and the nature of the primary relationships among them. This figure calls attention to the fact that most public institutions get the vast majority of their unrestricted operating revenues from only two sources—the state and students. The dotted line connections between institutions and the federal

government and private sources (individual donors, foundations, and corporations) acknowledges their roles as important funders, while recognizing that they are typically **not** major providers of resources for the general operating support of institutions. Funds from these sources most often are provided to institutions with the stipulation that they be used only in ways specified by the donor—the funds are restricted. The exception is private gift money provided to institutions for (restricted) use in providing financial aid to students. These funds are included in the diagram as institutional aid to students.

FIGURE 1: FLOW OF FUNDS



With this bit of explanation, it becomes clear that state-level financing policy as it relates to funding higher education must focus on the following components:

1. **Appropriations** made directly **to institutions** for support of general operations. Such appropriations may be made in two categories:

    - Base institutional funding for creation and maintenance of the educational capacity of the institution.

    - Special purpose funding intended to promote utilization of this capacity in ways designed to achieve state priorities (performance or incentive funds).

Note: Appropriations for capital additions or renewals are typically made separately and are not included as part of the discussion in this paper.

2. **Tuition and fee policy**—establishing "sticker prices" for different categories of students as well as policies regarding a variety of fees.

3. **State student financial aid policy**—state policies regarding funds made available to students meeting certain criteria to reduce the price of college attendance to those students. These criteria may be based on:

    - Economic factors affecting the student—need-based aid

    - Other factors (typically excellence in academics or other pursuits)—merit-based aid

4. **Institutional student financial aid policy**—institutional support to students for purposes of reducing price of attendance. This support may take the form of either direct payments to students (use of "real dollars" in the form of scholarships—in which case the funds become **expenditures** by the institution) or of waivers of tuition and/or fees (in which case no "real money" changes hands and the institutions realize less net tuition income). As with state and student financial aid, allocations can be based on either need or merit, or a combination of the two.

In addition to these four areas over which states have direct control or strong influence, the importance of federal student financial aid policy must be recognized. While the states have little control over these policies, federal programs are so large that states must consider their provisions in order to make wise choices about the design of their own programs. By taking advantage of the federal programs (specifically the Pell need-based aid program), states can leverage their own programs. By ignoring the federal programs in the process of designing their own, states run a very high risk of reducing the cost-effectiveness of whatever programs they establish.

While the prescription is straightforward—**formulate policy in the four areas (within the context of federal policy) in concert rather than independently**—it is seldom followed. These policies are typically made independently. On occasion, appropriations and tuition decisions are made simultaneously. Or tuition and student aid decisions. But very rarely are all these (appropriations, tuition, and student aid) considered as a package. And in most states, institutional financial aid is treated as something above, and separate from, those decisions more directly under the state's purview.

The reasons for this lack of congruence are quite simple. First, policy decisions in these areas tend to be made by different actors. State governments make the decisions about appropriations to institutions and to state student aid programs. Decisions about tuition levels are frequently made by institutional boards, although these decisions are reserved for the legislature in some states. Decisions about institutional aid are most frequently left to the institutions—although some state mandate the level and nature of fee waivers. Even when the state is involved in all four policies, integration of decisions is rare. Each policy area is considered separately

(especially the student aid components), sometimes by different committees, and almost always at different times. And sequencing is important—the order of the decisions often affects the nature of the decisions (see the Mortimer paper).

More importantly, the actors often have different objectives behind the decisions they are making. State decisonmakers are trying to control expenditures while improving broad access and achieving one or more of the priority objectives noted earlier. Institutions often have the objectives of maximizing revenues and achieving higher status among their institutional peers.

Different objectives and different roles in the decision processes often lead to decisions that have counterproductive results. As examples:

- In an effort to constrain expenses, states reduce student aid funding as well as institutional support at a time when institutions are rapidly raising tuitions in order to maintain revenue streams.

- Student financial aid is administered as fee waivers—and as a consequence makes the recipients ineligible for federal tax credits.

- States fail to intentionally integrate federal Pell grants into the state need formula.

- The design of many state merit-based student aid programs is such that they reduce the price of attendance to a set of students who would enroll in (and pay for) college anyway and often do not contribute to the broader agenda the states are pursuing (i.e., they do not yield improved participation, retention, or graduation rates or retention of students in-state after they graduate).

- Tuition levels are held well below what most students could afford and, in this process, institutions are deprived of the resources they need to provide students with a high quality education.

- Absent good tuition policy, changes in tuition tend to be countercyclical with tuitions increasing when students can least afford it and decreasing when they can most afford it. This has the potential of leading to political interference—pressure to hold tuition down in both good times and bad because there is no publicly understood rationale for not doing so.

- Conversely, participation and retention rates can be negatively affected when the price exceeds the ability (or willingness) of students to pay the bills

The net effect when funding policies are not aligned and get out of balance is that one or more of the major participants in the process are put at a serious disadvantage; taxpayers pay more than their fair share, students find higher education becoming unaffordable and opt out (to their long run detriment); or institutions fail to acquire the resources needed to adequately fulfill their missions. The bottom line is that the funds that are spent on higher education do not yield the results that they might if financing policy were more purposive and more integrated.

Effective financing policy should simultaneously meet several criteria:

1. It should be reinforcing of (consistent with) stated priorities (e.g., better high school graduation and preparation, improved college participation, enhanced retention and graduation rates, and more "educational capital" in the state's population). In states where the objectives are not clear, institutions have the luxury of establishing their own priorities, the sum of which are not necessarily in line with state needs.

2. The institutional capacity necessary to meet the avowed priorities must be created and sustained. Policies that make it economically possible for students to attend college are of little use if the institutions in the state do not have the capacity to accommodate them.

3. The contributions required must be within the means of those who must foot the bill. The combination of tuition and student financial aid policies must be such that price of attendance is kept affordable for all students. Simultaneously, the level of state support to higher education must be within the capacity of the state to raise taxes from various kinds of taxpayers.

4. All parties in the equation must feel that they are being treated fairly and are getting (and giving) their fair share.

5. The mechanisms must be transparent. The funding flows among the entities must be discernible so that decisions made by the different parties can be mutually reinforcing.

Achieving financing policy that meets all these criteria is by no means easy; but it is not impossible either. In the following sections, some basic principles are provided.

C. FACTORS TO BE CONSIDERED

The primary actors in the financing policy formulation and implementation processes—the state, students, and institutions—will judge the results in different ways, each according to their own priorities. While it is risky to presume others' motives, the following are probably close to the mark.

1. States

   From the perspective of states, financing policies have to:

   - Result in maintenance of a system of educational institutions that have the capacity to accommodate demand and yield the desired educational outcomes

   - Promote explicitly the achievement of specified outcomes (these were listed in a prior section)

   - Be affordable. Taxes and their allocation must reflect the tax capacity of the state and the priorities of the citizens. The realities of tax capacity and tax

effort—combined with a realistic view of state priorities—may lead to conclusions that more tax revenues, not fewer, are in order.

- Be easily understood and defensible.

States have two direct tools available to them—direct appropriations to support institutional operations and allocations to students in the form of financial aid. The real trick is to balance these two and to design the specifics of each in ways that yield the most effective results.

In addition to direct decisions, states can influence, if not outright control, institutional decisions about tuition levels and the level and nature of institutional financial aid.

2. Students

   Students judge finance policy according to:

   - Affordability—Is net price (price of attendance less student aid from all sources) reasonable relative to their personal or family income? The important point here is that net price has to be viewed in terms of students' ability to pay. Wealthier students can afford more than poor students and tuition and financial aid policies should be tailored accordingly.

   - Value—Are they buying access to something worth the price? A low price is no bargain if it buys access to a less than adequate education.

3. Institutions

   The criteria from the perspective of institutions are quite different from those of the resource providers. They typically seek:

   - Adequacy of funding. They want to be assured that the revenues available—primarily from students and the state—will be sufficient to allow them to fulfill their missions at high levels of quality. And because there are no upper bounds on aspirations for quality, it is difficult to achieve funding levels admitted to be adequate.

   - Equity of funding. Are all institutions being treated fairly—not equally, but the same relative to their different needs? If there are too few resources to meet all requirements, is the shortfall spread fairly among all?

   - Stability of funding. Does the funding mechanisms yield results that are fairly predictable from year to year and that are free from large variations (especially on the down side).

Since the objective is to create coherent state policy about the financing of higher education, it is useful to adopt the state perspective, and investigate the basic elements of financing policy within the context of their decisionmaking domain.

D. THE STATE PERSPECTIVE

States allocate resources to higher education for essentially two purposes. First, they view higher education as being in the "general" public interest and seek to create and maintain a system of higher education that can respond to the demands of the state's citizens. This focus on building capacity has been, and continues to be, the dominant focus of state interest. It largely explains the institution-centric nature of most state higher education policy, finances and otherwise. For the most part, the creation and sustenance of a public system of higher education has been considered an end in its own right. More recently, some states have come to see higher education as a critical means to important state goals (of the kinds indicated earlier in the paper). In this context, states provide resources to higher education in amounts and ways intended to promote **utilization** of the created capacity in pursuit of specified state priorities. In sum, states fund higher education to:

- Build core capacity—general purpose funding.
- Utilize capacity to achieve stated goals—special purpose funding.

In pursuit of these objectives, states can focus their policy attention on either institutions (the likely choice) or on students, or both. This combination of policy objectives and policy focus can be described by the simple matrix presented in Figure 2.

FIGURE 2:

STATE FINANCING OF HIGHER EDUCATION—THE POLICY OPTIONS

POLICY OBJECTIVES	POLICY FOCUS	
	Institutions	**Students**
Capacity Building	– Base Plus – Formulas	Tuition and Aid Policy Focused on Revenue Generation
Capacity Utilization/ The Public Agenda	Performance Funding	Tuition and Aid Policy Focused on Attainment of Specified Outcomes – Need-Based – Merit-Based

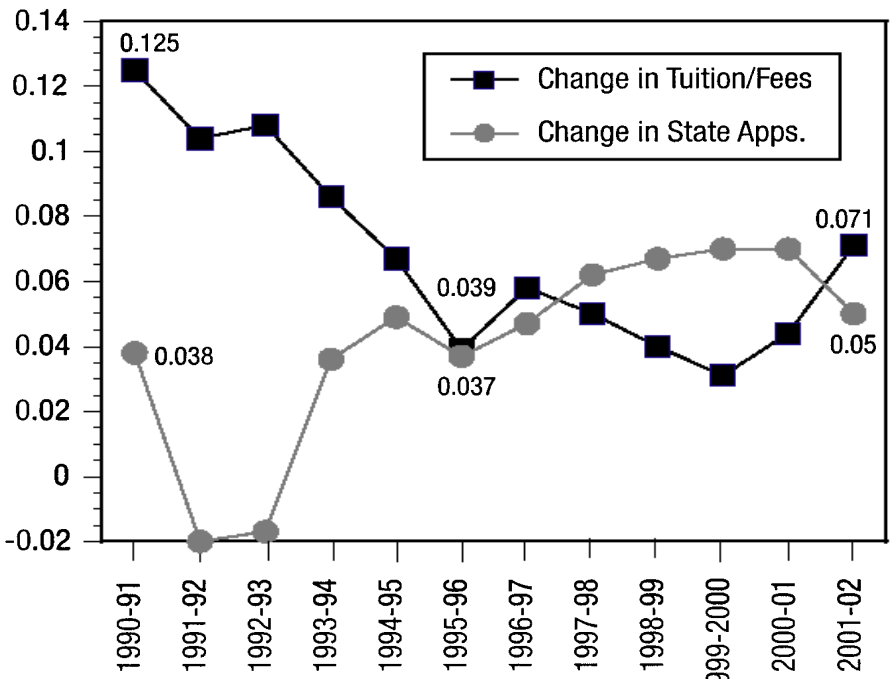
As a way into the discussion, it is useful to view funding for capacity building separate from that for capacity utilization. In each case, the approaches to financing and the incentives associated with each are briefly described.

1. Funding for Capacity Building

As "owner-operators" of the state's public system of higher education, the states have considerable interest in ensuring an adequate level of funding for these institutions. As reflected in Figure 1, funding for institutions comes from the state through appropriations for general institutional support and from students through tuition. As a general rule, the higher the level of state support, the lower the amount of tuition revenue and vice versa. This relationship at the national level is revealed by the data in Figure 3 which is drawn from a recently released Institute for Higher Education Policy report entitled *Accounting for State Student Aid: How State Policy and Student Aid Connect*.

FIGURE 3

CHANGE IN RESIDENT UNDERGRADUATE STUDENT CHARGES AND STATE APPROPRIATIONS, PUBLIC COLLEGES AND UNIVERSITIES 1990-91 TO 2001-02



Source: AASCU/NASULGC 2001

The complete equation (again as reflected in Figure 1) includes funding for student aid that serves to affect the price of attendance, recognizing that student aid comes from the federal government and the institutions themselves as well as from the state. The balancing act that states engage in requires them to ensure adequate funding for institutions while:

- Limiting taxpayer costs insofar as is possible.

- Creating financial aid mechanisms that ensure that college attendance remains affordable for all citizens of the state.

The last element is especially tricky in that it requires consideration of federal and institutional student aid programs as well.

The question facing states is not just **how much** money to allocate to institutional support and to student financial aid, but also **how** that money flows—what are the decision rules that govern its distribution. These decision rules are critical, not just because of their effect on the bottom lines to all the parties at interest, but because of the incentives for behavior buried in these allocation mechanisms. These incentives (or disincentives) apply to students as well as to institutions.

By far, the majority of funds that flow from states to higher education take the form of state appropriations to institutions (the upper left-hand box in Figure 2). While the specific mechanisms through which these funds are allocated are as numerous as the states themselves, at root they are of two general forms. First is the **base-plus** method in which the prior year's funding is taken as the starting point and adjustments are made to reflect changes in cost of living and in demand levels, especially numbers of students served. This method is fundamentally a recipe for maintaining the status quo. Any incentives for changed behavior depend on the mechanisms by which "new money" is allocated. Since enrollment increases are the primary rationale for base funding enhancements (except for cost of living adjustments), there can be modest incentives for improving participation and retention rates. However, unless funding for growth is both predictable and reasonably generous, institutions may well eschew growth for a comfortable status quo. As a corollary, for there to be **any** incentives in base-plus approaches, there has to be some "plus" in the equation.

The generic alternative is a formula approach to the allocation of state resources to institutions. The general form is:

units of base factor 1 x $/unit of base factor 1 +
units of base factor 2 x $/unit of base factor 2 +
.
.
.
units of base factor *n* x $/unit of base factor *n* =
TOTAL

In these formulations, the typical base factors are such things as FTE students taught (with distinctions made for different course levels and disciplines), head-count students served, size of the physical plant to be maintained, etc. Formulas do create incentives for growth, although not always in ways considered desirable or important in the broader context of state priorities. For example, as typically constructed, formulas create incentives for increased course enrollments rather than course completions and for expansion of a physical plant rather than for its efficient utilization. Because the weighting factors (the $/unit of instructional activity) are usually derived from historical

data rather than established as intentional policy levers, formulas can unwittingly create incentives that yield unintended consequences—for example, mission creep or program proliferation prompted by an interest in teaching courses that are more richly rewarded in the formula (usually graduate rather than undergraduate courses in the same field). There are ways to make formulas much more intentional and related to state priorities (for example, by rewarding course completion rather than course enrollment and by establishing weighting factors as a matter of policy, not history), but this would require a substantial deviation from common practice.

There is also a set of policies focused on students—tuition and student financial aid/fee waiver policies—that are intended specifically to yield the revenues necessary to provide an adequate level of funding for the state's public system of higher education. Among the decisions in this arena are:

a. **Base institutional tuition for undergraduate students.** Since the very large proportion of public institution operating funds comes from state appropriations and tuition, revenue required from tuition often—intentionally or otherwise—is derived as:

   institutional requirement – state appropriation = required tuition revenue

   Tuition is most likely to be a derivative of appropriations when they are changing significantly. When appropriations have risen sharply, tuition levels are often stabilized and, in some cases, reduced (the experience of Virginia and California in the mid-90s is illustrative). When appropriations are sharply curtailed, tuition increases are the norm. The fact is that states (and institutions) "back into" tuition policy as a derivative of decisions about levels of state appropriations.

b. **Mandatory fees.** Fees represent an additional source of revenues from students, the distinction being that the proceeds from fees are typically set aside for specified uses. Thus fees become designated or restricted forms of tuition, whereas base tuition is typically unrestricted. Regardless of designation, the distinction is lost on the student; it all looks the same to the individual paying the bill. From the institutional point of view, these resources are essentially fungible. Use of restricted fees for the designated purpose often frees up resources to be allocated elsewhere. As a result, it is useful to think of fees as an additional form of tuition rather than as something separate.

c. **Out-of-state tuition.** There are many instances in which institutions are deemed particularly attractive by out-of-state students. In such circumstances, institutions are in a position to charge what the market will bear. This creates conditions in which tuition revenues from out-of-state students can be considerably increased with no associated additional costs of instruction.

d. **Differential tuition.** In this arrangement, institutions charge higher rates of tuition for enrollees in selected programs. This strategy works only when there is more demand for these programs than can be met. This, too, is a form of charging (up to)

what the market will bear, allowing institutions to increase revenues with no additional costs of instruction. Within limits, this is often viewed positively by legislators and governors as well since these tuition revenues can offset requirements for additional taxpayer support.

e. **Scholarships and waivers.** There is a class of aid that is allocated on the basis of neither need nor special talent. Such aid is a discount to tuition, utilized only to boost net tuition revenues to the institution. A frequent application is to reduce out-of-state tuition to students living just across a nearby state line—effectively treating local students who happen to live across the border as in-state students.

All of the above are variables that can be adjusted in an attempt to increase the level of revenues flowing to institutions. There can be unintended consequences to these decisions, however, particularly as these decisions affect affordability of education to citizens of the state. In judging affordability, the determining factor is price of attendance (tuition plus other costs of attendance less scholarships and waivers) relative to ability to pay. Note that tuition levels, by themselves, are only one piece of the puzzle. Low tuition does not necessarily equate to affordability—the associated costs of attendance may push the overall price beyond some students' ability to pay. Similarly, high tuition does not preclude affordable education, but a good financial aid program is required in order to bridge the gap for some students.

It can be argued that high price of attendance discourages access. This is especially true among first generation/low income families that are often averse to borrowing to pay for a college education. As an alternative, they work more, thus lowering their chances of successfully completing college. Low prices of attendance can improve participation by removing the economic barriers to college attendance. Economists might argue that cheap education has a potential downside—it can remove some of the incentive for timely completion of courses and degrees. If a low price of attendance translates into low net tuition revenues for institutions, it creates conditions under which colleges or universities either a) become overly dependent on the state as a source of revenue and become particularly susceptible to the vicissitudes of the economic health of state government, or b) have inadequate resources.

The question of price of attendance becomes even more complicated when differential tuition rates come into play. Without the safety net of student aid, this strategy can limit programmatic access for low-income students. States employ the concept of differential tuition on a systemwide basis—frequently acting to minimize the price of attendance at the lowest cost institutions (frequently community colleges) while allowing the price of attendance at higher cost institutions to rise. Depending on enrollment patterns, this can moderate student aid costs statewide.

2. Funding for Capacity Utilization

While most attention has been given to funding for capacity building—primarily on direct appropriations to institutions—some states have taken steps designed to influence the use of this capacity in pursuit of key state goals. In this arena, student-oriented

funding tends to be a larger piece of the action than institution-oriented funding, although the institutional component tends to have a clearer focus. The institutional component takes the form of performance funding—payment to institutions that is conditional on their achieving (or making demonstrable contributions to) identified state priorities. Such mechanisms can be tailored to specific priorities, for example by rewarding institutions that:

- Recruit and enroll students from underrepresented groups (as defined by race, socioeconomic status, geographic origin, etc.).
- Improve retention and graduation rates.
- Respond effectively to workforce development needs of in-state employers.
- Partner with local schools to successfully improve graduation rates and learning outcomes of the K-12 system.

Theoretically, the design is straightforward. However, performance funding has yet to prove to be fully effective. This is partially a function of poor specification—and underlying rationale—of the objective to be pursued. It is also a function of the very limited resources typically allocated on this basis. The capacity-building/base funding component is so large that it swamps the performance component. All institutional energy gets focused on maximizing base-funding revenues; if they do well there, the performance component is of little consequence.

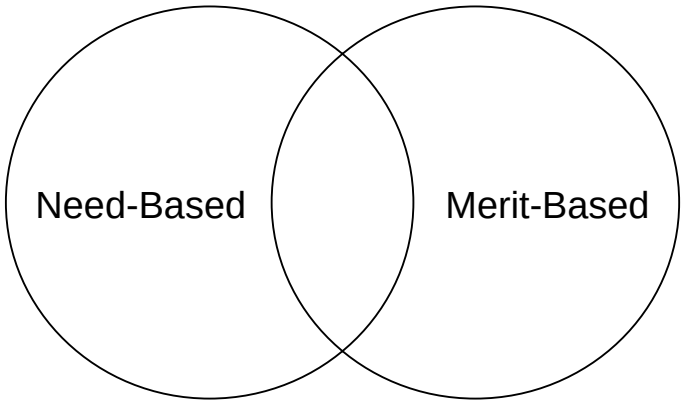
The student-focused counterpart to performance funding is student financial aid of various forms. State student aid programs are typically dichotomized as either need-based or merit-based. It is perhaps more useful to treat them both as forms of aid designed to achieve particular—but different—objectives. So-called need-based aid is designed to ensure that students are not denied access because of their financial circumstances. The objective is to ensure that the poor as well as the wealthy can (and do) gain access to the state's public colleges and universities.

So-called merit-based student financial aid is a smaller—but much more rapidly growing—component of state funding for higher education. It is also a very popular component. Historically, it has been used to attract students having particular talents—in athletics, music, or other pursuits of particular importance to the state and/or institution. However, this component can be tailored in many different ways to address specific needs. One construct provides loan support to students in specific fields of study that are forgiven if graduates practice their profession in the state for a specified period of time. The much more prevalent version features programs modeled after the Georgia HOPE scholarship program in which students are rewarded for good academic performance in high school and maintenance of that level of performance in college (typically a B average). Their political popularity may in fact be justified; they may create incentives for improved academic performance in high school and remove psychological barriers to college attendance among students who previously considered college out of the question. Depending on the specifics, however, they may also:

- Go to students who would have attended college anyway.
- Reduce the price of attendance for students who can afford full price.
- Keep students in-state who would normally have attended an out-of-state institution. This is directly beneficial to the state only if these students remain in-state after graduation. It may be indirectly beneficial if excellence in the student body enhances the quality of the state's educational enterprise.
- Create conditions under which institutions can freely raise tuition.

In short, these programs are probably more effective in altering patterns of attendance than changing overall **rates** of attendance. They also serve to shift costs from students and parents to taxpayers. Even if they do not have these negatives, they should not be viewed as a **replacement** for need-based aid. Just as performance-based funding is an adjunct to core institutional funding, so is merit-based aid an adjunct to aid directed at ensuring affordability. It is probably best to think of these two different types of aid as illustrated in Figure 4.

FIGURE 4
RELATIONSHIPS BETWEEN "NEED-BASED" AND "MERIT-BASED" AID



This diagram indicates that typical need-based programs also apply to a subset of students who have a sought-after academic record or other talent and some merit-based aid goes to students who have real financial need. The design objective should probably be to achieve greater overlap—for example, by combining need- and merit-based factors.

Before leaving this section, it is important to quickly note the impact of institutional aid. First, it is predominantly merit-based aid. McPherson and Shapiro argue that, even when advertised as need-based, it has become increasingly merit-focused within the need-based component. Thus, it may reshape attendance patterns across institutions, but is unlikely to substantially improve either participation or affordability. The exception is for those students who are both uniquely talented **and** poor. Some students, but seldom the majority, fall into this category. A larger problem is that such funds reallocate resources **within** a single institution rather than across

institutions. It is likely that the largest, richest institutions also have the highest proportion of students who need no financial assistance while the poorest students attend institutions with the least capacity to provide institutional aid. Delegating the state responsibility for assuring affordability to the collective actions of individual institutions does not yield the same result as a statewide student assistance program.

When all is said and done, the requirement is not to choose one component of policy and ignore all others; rather the requirement is for policy alignment and integration. Only one piece needs to be out of sync to jeopardize the whole framework. If financial aid is too generous, it lends encouragement to unnecessarily large increases in price of attendance (tuition). If too limited or too focused on "merit," it can make participation unrealistic for low-income students. If tuition is too low, the state can leave federal money on the table—and without some form of need-based aid may still not ensure that overall price of attendance is affordable. Finally, unless the combination of appropriations and net tuition revenues is sufficient to generate adequate levels of institutional funding, students may be provided access to an inferior education.

E. ALIGNING FINANCING POLICIES WITH STATE OBJECTIVES

In the previous section, various approaches to funding were discussed along with the kinds of behaviors that these different approaches typically elicit. This section starts with the objectives to be achieved and describes financing policies that are consistent with these ends. The listing of state objectives is the same as that enumerated in the Introduction.

1. High Rates of High School Completion of Students Who Have Taken an Academically Rigorous Curriculum

   Achievement of this objective is pursued almost entirely through measures associated with capacity utilization components of financing policy. As a consequence, there is an underlying expectation that basic capacity exists. As examples of ways in which performance funds could be allocated in support of this objective:

   - Institutions could be rewarded for increasing dual enrollments and increasing the numbers of high school students in a "responsibility area" who successfully complete an advanced academic curriculum.

   - Region P-16 councils could be rewarded for the collective efforts of K-12 schools and colleges when an increasing proportion of students in the region:

     – Are taught by teachers certified in the field.

     – Complete an academically rigorous curriculum.

     – Graduate from high school.

     – Enter college.

   Note that in this case, incentives have to be provided to an entity other than a higher education institution, since colleges acting unilaterally cannot have a significant effect

on these outcomes. Only in partnership with K-12 schools can they impact this set of desired outcomes.

2. High Levels of College Participation of Both Recent High School Graduates and Adult Learners

   The strategies for accomplishing this objective are more complex and involve both capacity-building and capacity-utilization components of financing policy. Among the elements of the strategy are:

   - Through state appropriations and tuition revenue, ensure that there is sufficient capacity to accommodate the desired levels of demand. The nature of this capacity needs considerable deliberation, as it may consist of creation of learning centers and distance delivery capacity in addition to (or in place of) enhancing capacity at existing institutions. The obvious point is that participation rates cannot be improved if access is denied for lack of either basic capacity or appropriate capacity (i.e., the excess capacity is in the wrong place or of the wrong kind). It should be noted that capacity can be expanded by contracting (or making other financial arrangements) with either independent or out-of-state institutions to provide access to students who would otherwise be denied. Arrangements that are intentional and developed as a matter of state policy—such as the student exchange programs operated by WICHE and other regional compacts—can be very cost-effective, particularly in episodic or exceptional demand cycles.

   - A combination of tuition and financial aid policies that ensures affordability is maintained for low-income students. Financial aid for part-time students must be a consideration if improving participation of adult learners is a consideration. Further, if capacity is an issue, financial aid for students attending private institutions should be considered.

   - Performance funding is aligned with this objective. There are variations on this theme. For example, institutions can be rewarded for increasing:

     – Numbers of students from underrepresented groups (race, SES, county of origin) enrolled, or

     – The level of contract education services provided to employers.

   - Create features in the base funding component that give institutions incentives to enroll underrepresented groups. If base-plus funding is the mechanism, the enrollment growth numbers can be adjusted by weighting additional enrollment of some kinds of students more heavily than others. The same idea can be applied in formula funding states.

3. High Rates of (Retention and) Degree Completion

   There is a wide range of potential tools that can be employed to encourage both students and institutions to put a higher priority on degree completion. They cut across all quadrants of the diagram in Figure 2. Among the elements are:

   - Ensuring that limited capacity is not a barrier to successful progress. At the institutional level, this means, for example, ensuring that core lower-division courses have enough sections so that no students are turned away. At the system level, it means ensuring that there are sufficient slots in four-year institutions to accommodate community college transfers as well as native freshmen.

   - Ensuring that affordability is maintained and that net price of attendance does not create an economic barrier to continued enrollment.

   - Incentives for institutional attention to this objective can take several forms. Performance funds can be allocated to institutions that improve (or maintain high) retention and graduation rates. A more radical possibility is to count only course completions rather than course enrollments in calculating base funding for institutions—an idea nowhere embraced in the U.S., but in practice in the U.K. It must also be recognized that this is not necessarily the answer; high course completion rates may not translate into similarly high rates of program completion.

   - Similarly, incentives for completion focused on students as well as on institutions. Performance requirements can be built into all forms of student aid, including need-based aid. As an alternative, institutional performance funding programs can be designed in such a way that funds are shared by institution and students (for example, students who enter as "at-risk" students receive a cash rebate at time of program completion).

   There are many ways to configure finance policy in this arena. The necessity is that the objective be clear and that the incentives in the various mechanisms be consistent and lead in the intended direction.

4. An Economy that Employs a High Proportion of College Graduates Resulting in High Levels of Education Attainment in the State's Population

   In many ways this objective depends more on finance policy as it aligns with economic development than with higher education. Educational institutions can accomplish the prior three goals in states that have economies incapable of absorbing the graduate. The result is a mass out-migration of highly educated citizens. In this environment, the challenge to higher education is to effect steps designed to diversify and expand the economy of the state. In some cases this may be a capacity question—do the institutions have the wherewithal to provide entrepreneurship programs or to compete for research funding that has the potential for economic development spin-offs?

In more cases, such benefits are prompted through performance funding mechanisms of various kinds. As an example, institutions can be rewarded for:

- Increased employment in spin-off companies.
- Increased levels of business and industry training.
- Increasing graduates of selected fields who remain in the state for at least "x" years.

A more direct incentive is to allocate a fixed percent of state revenues (or revenues from a particular source) to higher education. This provides a direct link between an improved economy and benefits to higher education.

5. Affordability

The notion of affordability has run through all the prior discussions. It is not an end unto itself, but it is a linchpin to the real ends that the state deems most important. The other objectives are unlikely to be achieved if substantial portions of the state's population cannot afford to go to college. The available options and some comments about each are listed below.

a. **Low prices of attendance.** This avenue places a substantial burden on taxpayers and subsidizes the high proportion of students who could afford to pay more. It removes the economic barrier to access. At the same time, it provides no impetus to high performance and timely completion.

b. **Need-based financial aid.** Need-based grants improve affordability for low-income students. As a consequence they remove economic barriers to participation. Their presence allows institutions to raise the price of attendance. This is not necessarily bad; the result may be an increase in net tuition revenue that assures availability of needed capacity without a diminution of affordability. Without special design features, typical need-based programs provide no incentives for high performance, retention or completion.

c. **Merit-based student financial aid.** As noted earlier in the paper, broad-brush merit aid programs typically channel resources to students who do not have financial need. They are devices for channeling students to particular (types of) institutions rather than enhancing participation by students who otherwise would not attend. Their provisions can create incentives for higher performance since they usually require maintenance of a B average for continuation. This feature, however, may discourage students from some of the more challenging academic pursuits. This approach, if widespread, can encourage institutions to raise tuition, a particularly unfortunate consequence if need-based aid is inadequate to maintain an affordable price of attendance for students who do not qualify for merit aid.

   Also as noted earlier in the paper, it is possible to narrowly tailor such programs to achieve particular manpower development and employment objectives. Such

narrowly construed problems seldom require heavy financial investments and do not provide a substantial impetus to increased tuition levels. As a consequence, the negative implications for need-based programs are smaller.

d. **Loans.** Loans are an alternative form of self-help rather than a form of aid. If loans are used as a replacement for work—at least work beyond 15-20 hours a week, the level at which work becomes an obstacle to successful retention and completion—they may be a positive factor. Because most students who drop out do so early in their college careers, reliance on loans at that stage may be problematic; it may create conditions in which there is a high likelihood that they will acquire debt but not a degree—the worst of all circumstances. Loans make more sense in an academic context if they are used to fund students' participation after they have developed a successful academic track record.

   There is much conventional wisdom, but not a lot of research, that indicates that the necessity to rely on loans dissuades participation of some groups, particularly low-income students and students of certain cultures. If the alternative is increased self-help through work, the ultimate state objective of retention, completion, and entrance into high-end employment is unlikely to be achieved.

e. **Work-study.** Work-study is the largely forgotten form of financial aid. Like loans, it is a form of self-help rather than true aid. However, it can be an important "performance enhancer" if it serves to focus work time on meaningful, academically-related tasks rather than unrelated tasks. Ways of linking work-study funding to more meaningful jobs inside the institutions and in places of employment where students can engage in internships and other forms of work related to their academic fields is an avenue that deserves much more attention than it has heretofore received.

F. CONCLUSIONS

This paper has outlined the broad array of financing options—both institution-focused and student-focused—available to states. Hopefully, it has led the reader to the conclusion that there is no single right answer. Design of funding policy depends in a very substantial way on a state's circumstances and its agenda for change and improvement. But generic rules hold; cost-effective policy requires:

- Clear understanding of priorities to be pursued.
- Creation and maintenance of the capacity that allows pursuit of these goals.
- Careful alignment of funding policies dealing with appropriations for institutional support, tuition, and appropriations for student financial aid (recognizing the involvement of both the federal government and institutions in the latter).

Only if these policies are structured in such a way that they are mutually reinforcing around a common objective (or related set of objectives) will their full benefits be realized.