

Higher Education Funding and Accountability Study

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

In September 2005 the North Dakota Legislative Council engaged MGT of America, Inc. to conduct a higher education funding and accountability study. The study was assigned to the Legislative Council's Higher Education Committee, Senator Ray Holmberg, Chairman.

As provided in Section 23 of 2005 Senate Bill No. 2003, the study made a comprehensive review of the areas listed below, identified findings, and made recommendations to be implemented by the North Dakota University System (NDUS), the State Board of Higher Education (SBHE), and the higher education institutions. The study also was intended to assist the Legislative Assembly and the Executive Branch in the monitoring of and budgeting for the NDUS.

The tasks of the study completed the following:

1. Evaluate the long-term financing plan (LTFP) for the University System and determine:
 - a. If the current method of funding for the University System and the method of determining and evaluating equity among the institutions is appropriate and, if so, the appropriateness of the peer institutions selected and the need to update peer institution funding comparisons.
 - b. If the LTFP is realistic based on historic funding increases and forecasted economic growth in North Dakota.
 - c. If the current SBHE method of setting funding priorities is appropriate.
 - d. If the LTFP adequately addresses the use of various sources of revenue and allocations, and the need for funding initiatives at the state's institutions.
 - e. If the current method of funding for the University System is not appropriate, develop an alternative method of funding using existing resources for the University System, including the allocation of funding to institutions and a comparison of the proposed allocation of funding to institutions to the funding provided for the 2005-07 biennium.
2. Describe the state of higher education in the United States and how North Dakota compares in finance and performance, national higher education trends, other states' per capita higher education funding, and trends in funding higher education from non-state revenue sources.
3. Evaluate previous Higher Education Roundtable recommendations, including:
 - a. Status of implementation of the recommendations.
 - b. Strengths and weaknesses of the recommendations as implemented.
 - c. Appropriateness of the recommendations to meet the expectations and needs of students, citizens, higher education entities, and the Legislative Assembly.
4. Evaluate the accountability measures and benchmarks in terms of appropriateness and adequacy.
5. Provide findings, identify alternatives and options, and make recommendations for the state of North Dakota to proceed with appropriate implementation of Roundtable recommendations, the LTFP, and the accountability measures.

This comprehensive review included broad-based input from public and private stakeholders, including the SBHE, higher education institutions, students, executive and legislative branches, and the private sector. MGT wishes to thank the hundreds of individuals who spent considerable time in focus groups, interviews, and meetings providing input on the process. MGT is especially grateful for the time devoted by the members of the Legislative Council, the Higher Education Roundtable, the State Board of Higher Education, the System Staff, private citizens, and the administration and staff of the institutions.

During the course of the study, MGT staff were impressed by the commitment of the college and university staff to the success of students and to improving the economy of North Dakota. System students enthusiastically provided anecdotes about faculty and staff who were especially helpful not only in assisting the student to succeed academically but also in dealing with personal crises. The System is to be commended for this dedication to the students, the institution, and to the state.

MGT also was impressed by the joint commitment of private business and industry and the colleges and universities to work together to meet the needs of businesses, and to generate additional revenues for the institutions. Many business persons commented positively on the increased outreach to the business community, not only to improve services to business and industry, but also to improve the relevance of the academic experience. The preparation of graduates who can work effectively in the 21st century economy has become a critical watchword for the colleges and universities.

The Higher Education Roundtable is perceived to be a “best practice” or model for other states. The Roundtable is credited with improving the perceptions of the quality of the North Dakota University System institutions and the performance of graduates of the system institutions.

A recent study funded by the Pew Charitable Trust called North Dakota’s higher education system one of the “five most productive state systems of higher education relative to its resources.” This means that the NDUS has been judged to leverage its resources to provide quality education to students, assist business and industry, and conduct important research.

The following sections summarize the findings and recommendations related to each of the four evaluation tasks of the study.

State of Higher Education

North Dakota ranks number 1 in the nation in the percentage of students going to college directly from high school. This distinction places a special burden on the state to provide a quality higher education to its students.

Personal income per capita is a measure of the ability of a state to pay for government services, including higher education. Compared to the neighbor states and the U.S. average, North Dakota per capita income is 11 percent below the national average and 7 percent below the contiguous states’ average per capita personal income. This means that North Dakota residents have less income to support higher education, or to pay tuition and fees. When coupled with the higher than average college continuation rates, the lower per capita income implies that North Dakota citizens face a greater burden to provide resources for higher education.

State and local tax collections are a measure of how much money the state has to appropriate for government services. North Dakota collections per capita are close to the national average for property, sales and gross receipts, and motor vehicle taxes. However, personal income tax collections in North Dakota are about 60 percent below the national average, and over 70 percent below the individual income tax per capita in Minnesota. On the other hand, North Dakota received almost twice as much per capita from Other Tax sources, including oil, mineral, and gas depletion taxes. North Dakota had \$425 less per capita income from tax collections than the national average per capita, and over \$1,000 less per capita than did Minnesota. The primary difference between Minnesota and North Dakota was individual income tax receipts. Having 13.7 percent less in total tax collections per capita than the national average means that North Dakota has significantly less total dollars to spend on government services including higher education.

The proportion of state appropriations allocated to higher education is a measure of the state's commitment to higher education in relation to other state services. North Dakota historically has appropriated a higher proportion of the state's tax dollars than the national average, although higher education's percentage share of North Dakota's general fund budget has declined in the last five years. However, this picture is somewhat different when examined from the perspective of funding per full-time equivalent (FTE) student. North Dakota net state dollars per FTE student, \$5,528, is 8 percent below the national average \$6,013 per FTE student.

When total educational revenues, including net tuition and education appropriations, are examined, North Dakota provided fewer revenues per FTE student than the national average, or the contiguous states. Although North Dakota appropriates a high percentage of the state budget to higher education, and more dollars per capita, that level of funding is offset by the extremely high college continuation rate.

Net tuition as a percentage of education revenues is a measure of the relative financial burden on the student, as opposed to the state's support for higher education. North Dakota students, and students in the contiguous states, pay a greater proportion of costs than the national average. North Dakota students pay 40.4 percent of costs compared to the national average 35.7 percent.

The percentage change in education appropriations per FTE student is a measure of how well a state has kept pace in increasing appropriations, after accounting for changes in enrollments. Over the time period 1990-91 to 2003-04, North Dakota has been losing ground compared to the national average. When these appropriations are adjusted to constant dollars to show the impact of inflation on buying power, North Dakota's appropriations per FTE declined 21.4 percent over the time period 1990-91 to 2003-04, compared to the national average decline of 11.9 percent. North Dakota ranks 42nd among the states.

In FY 2006, tuition and fees at the North Dakota institutions increased over FY 2005 at a higher rate than the national averages, but increased at a slower rate (except for two institutions) than the national average in FY 2005 over FY 2004. Tuition and fees at the four-year universities continue to be a "bargain" relative to the national average tuition rates, even with large increases. However, tuition and fees at the two-year campuses are significantly greater than the national averages. Tuition and fees at North Dakota two-year institutions are about 150 percent of the national average two-year tuition and fees. Since 2001, students have assumed a greater share of the costs of a higher education.

In summary, North Dakota's higher education system differs significantly from those in other states:

- North Dakota has the highest college continuation rates in the nation, a rate that is 130 percent of the national average.
- North Dakota residents have a lower ability to pay, as per capita personal income is 11 percent below the national average.
- North Dakota had \$425 less per capita income from tax collections than the national average per capita.
- North Dakota appropriated to higher education a 60 percent greater share of the state general fund budget than the national average.
- North Dakota expended \$258 per capita on higher education, compared to the U.S. average of \$199, or 30 percent more per capita.
- North Dakota net state dollars per FTE student, \$5,528, is 8 percent below the national average \$6,013 per FTE student.

Higher Education Roundtable

The Higher Education Roundtable is perceived to be a success, one that has improved the status of higher education and improved the state's economy. The 1999 Legislative Assembly directed that a study of the state's expectations and funding for higher education be completed. A group of 21 legislators and 40 additional state leaders from government, education, and the private sector formed the Roundtable to conduct the study and develop recommendations for the funding methodology and accountability system.

The Roundtable developed expectations that the North Dakota University System (NDUS) would promote the expansion and diversification of the state's economy and enhance the quality of life of the citizens of the state. The broad expectation of the Roundtable was that the NDUS would be an academically competitive system that is engaged at every level with the needs and problems of the state and its citizens; and accessible and responsive to all individual and corporate "citizens" of the state. To carry out these expectations, the Roundtable developed over 90 recommendations in a relationship characterized as **flexibility with accountability**; that is, the NDUS institutions must have the freedom to pursue the agreed-upon agenda but must also be accountable. The recommendations were arranged around 6 cornerstones and included related accountability measures. Since its inception, the Roundtable has met every year to update its recommendations and accountability measures.

Since its first meeting, the Roundtable has developed 167 recommendations, 50 of which were judged to be fully implemented, 114 partially implemented, and 3 not implemented. The 3 that have not been implemented relate to the share of the state general fund budget devoted to higher education and an increase in funding for student financial aid.

MGT staff interviewed over 100 individuals about the Roundtable, the strengths and weaknesses of the recommendations of the Roundtable, and the appropriateness of the recommendations to meet the needs and expectations of students, citizens, higher education entities, and the Legislative Assembly. There is general consensus that the Roundtable through its recommendations, has met the needs and expectations of the various North Dakota constituencies.

The Roundtable's recommendations are perceived to have been instrumental in improving the quality of public higher education in North Dakota, integrating higher education into the economy, and more than that, making higher education an economic engine and driver of the economy. Further, through the Roundtable, business and industry have come to the table as partners with higher education in many entrepreneurial endeavors that can only benefit the State. Annual meetings to update the Roundtable recommendations are considered the only effective way to permit a three-way conversation between legislators, the business community, and higher education on the best ways to meet the needs and expectations of North Dakota citizens.

There is general agreement among most stakeholder groups that MGT staff interviewed that the Roundtable's recommendations, and the implementation of those recommendations, have met the needs and expectations of the various North Dakota constituents.

Accountability Measures

The Higher Education Roundtable recommended a set of 84 accountability measures associated with its six cornerstones and recommendations. The Legislative Assembly and the State Board of Higher Education (SBHE) adopted a set of performance or accountability measures that have been revised every two years since 2001.

North Dakota's current set of 22 legislatively-mandated and 9 SBHE measures are similar to the measures used by other states. All 50 states have accountability measures and require accountability reports to track the progress of higher education in meeting the needs of citizens and the state.

In addition to state-specific accountability measures, the National Center for Public Policy and Higher Education issues state report cards on state higher education performance. The results of the 2004 Report Card for North Dakota higher education are shown in **Exhibit 1**. North Dakota received strong marks in "Preparation" and "Participation" but received a failing score in affordability.

EXHIBIT 1
NORTH DAKOTA SCORES IN MEASURING UP 2004

PERFORMANCE CATEGORY	GRADE	IMPROVEMENT OVER LAST DECADE
Preparation	B	even
Participation	A-	even
Affordability	F	declined
Completion	B	declined
Benefits	C	improved
Learning	I	?

Source: Measuring Up 2004.

Each year, the University System produces an accountability measures report *Creating A University System for the 21st Century Annual Accountability Measures Report*. The annual report is consistent with the Roundtable recommendations and documents the progress of the University System on the measures adopted by the Legislative Assembly and the State Board for Higher Education. The report is perceived to be a tool that measures or provides evidence on the system's performance as a whole. Data for individual campuses are not provided in the report, although separate reports for each campus are made available to the Legislative Assembly and to the SBHE. In the report, the measures are organized by the six cornerstones of the Higher Education Roundtable.

The five accountability measures associated with the **Economic Development Connection** cornerstone are appropriate for this cornerstone, especially as they relate to workforce training and continuing education. There is some question as to whether the workforce training measure adequately evaluates the economic development impact of the masters and research universities. Another measure such as the number of graduates in professional programs may be more appropriate for the graduate-degree-awarding universities. The measure on outside research funding is more appropriate for the research universities than for the two-year colleges.

None of the eight accountability measures associated with the **Education Excellence** cornerstone assesses the professional development and achievements of the NDUS faculty. Faculty achievement, as well as student achievement, is an important gauge of the System's educational excellence. Some assessment of the number of endowed professorships and chairs, the number of members of national academies and other professional organizations, faculty awards and honors, or other achievements should be included.

Other common measures of academic excellence that are not included in the Education Excellence cornerstone include average class size of lower-division classes, the percentage of classes taught by tenured or tenure-track faculty, and the percentage of students enrolling in graduate or professional schools after completing their undergraduate degrees. Graduation rates and persistence rates by ethnicity and gender also are not reported.

The two accountability measures associated with the **Flexible and Responsive System** cornerstone both are appropriate for the cornerstone and adequately address the Roundtable goals.

The five accountability measures associated with the **Accessible System** cornerstone are appropriate. The measures "student enrollment information" and "student participation levels" are not presented by ethnicity or gender, which does not allow for a complete assessment of whether the NDUS is truly accessible. North Dakota's population is largely homogenous in terms of ethnicity, but Native Americans are underrepresented. Because the Roundtable included several recommendations related to Native American populations, it would be beneficial to measure accessibility to this population group in particular.

The eleven accountability measures associated with the **Funding and Rewards** cornerstone are appropriate measures of this important cornerstone. The ratios related to income or revenues, net assets, and fund balances are common ratios used to assess viability of higher education institutions, but are generally thought of as being more appropriate for use with private institutions. Moreover, eleven is too many measures of progress toward achieving the Roundtable goals for this cornerstone.

The largest overall deficiency of the NDUS accountability measures is the lack of quantifiable goals and outcomes for each specific measure. It is difficult to measure the System's success if there are no defined goals for the NDUS to achieve. In addition, many of the measures do not have benchmarks against which progress can be measured. Most other states or systems of higher education include benchmarks for each of their accountability measures. Benchmarks may be established against a group of peer institutions, against national or regional averages, or by other means. For example, the South Carolina accountability measures are benchmarked against the average performance of peer institutions. Each institution has its own set of peers, from whom data for each accountability measure are collected and reported each year.

In addition, the measures are "revised" every two years, a reflection of the biennial nature of the Legislative Assembly. Although some measures have been included since the inception of the accountability reports, most have been changed in some way. If what is measured is what is important, then this implies that what is important changes every two years. Changing measures makes it difficult to track progress.

The collection and publication of these data elements require a significant time commitment from the institutions and the system office. There are too many measures and consequently, some are not perceived to be as important as others. Because the data are presented for the system as a whole, and not for the individual institutions, it is difficult for the faculty and staff of one institution to feel any ownership of or responsibility for achieving progress on that measure. Accountability systems used by other states typically report the measure for each institution in the system for which the measure is appropriate so that institutional progress can be tracked. System-wide measures may also be presented, but are supported by information for each institution.

ACCOUNTABILITY MEASURES RECOMMENDATION 1:

Establish benchmarks and goals for each measure.

It is difficult to assess "progress" if where you are relative to a benchmark and where you are going are not established. An old sailing expression says "If you don't know where you are, and don't know where you are going, no wind is favorable." The same is true for accountability measures. Each measure should have a benchmark against which it is assessed, and an established goal. For example, for the measure "ratio of faculty and staff to students," one year's data are shown by type of institution. The data are not shown over time, nor is there any comparison to any national average or benchmark, or any goal for what the ratios should be. For this particular measure, MGT recommends that the benchmarks be established by comparison to the faculty and staff ratios at the peer institutions. These data are available for at least five years from the National Center for Education Statistics (NCES) Integrated Postsecondary Education Data System (IPEDS), and can be aggregated by type of institution and for the system as a whole. In addition, goals should be set for each institution and for the system based on where the system and its institutions are relative to the peers.

ACCOUNTABILITY MEASURES RECOMMENDATION 2:

Include data for each institution in the annual report, in summary fashion.

Providing these data in one report will contribute to ownership and responsibility for achieving the goals at the institutional level.

ACCOUNTABILITY MEASURES RECOMMENDATION 3:

Reduce the number of accountability measures.

One or two system-wide measures should be linked to each cornerstone. In addition to the system-wide measures, each institution should recommend for the Legislative Assembly's and the SBHE's consideration measures for each cornerstone that are appropriate for that institution and which relate clearly to the institution's mission. For example, the measure on "research expenditures" is more appropriate for the two research universities than for the two-year colleges. Similarly, the measure "workforce training" has different measures of accomplishment at the two-year colleges than at the four-year.

ACCOUNTABILITY MEASURES RECOMMENDATION 4:

Once the number of accountability measures is reduced, retain those same measures for five or six years.

When measures are revised every two years, there is no continuity and no way to track progress. Keep the same measures for three biennia so that all can become familiar with the measures and progress can be measured adequately.

ACCOUNTABILITY MEASURES RECOMMENDATION 5:

Include a measure of faculty productivity that is appropriate for each institution.

Faculty productivity is an important component of education excellence. However, the measure of "productivity" is different for each institution. At the research universities, publications or grants received may be measures of productivity; these measures would not be appropriate for the two-year colleges, where a measure of workforce training may be more appropriate.

Peer Institutions

MGT evaluated the appropriateness of the peer institutions used in the Long-Term Finance Plan. A "peer" is a college or university that is "most like" another college or university based on similarities on a group of variables like mission, size, organization, control, location, mix of programs, and student body characteristics.

To select peer institutions, or to evaluate the appropriateness of a set of peers, criteria were established. Only public institutions were included in the sets of possible peers for the North Dakota institutions. Additional criteria were developed for each institution that related to that institution's role and mission within the North Dakota University System.

To develop an initial listing of "peers," a statistical technique called factor analysis was completed on the combined data file for each group. Factor analysis identifies underlying variables called "factors" that explain the pattern of correlation within a set of observed variables. Because there were over 100 variables in the data set, factor analysis permitted the reduction in the number of variables to a more manageable set of factors that enabled comparison among colleges or universities. Then, the factor scores for each institution in North Dakota were compared to the factor scores for each other institution in its "sector" to get distance scores. A

distance score is defined as the difference between one campus and another on each factor score. All institutions in the group then were rank-ordered based on their distance score, and arrayed in a list from low to high distance score. The institution with the smallest distance score is the institution most like the North Dakota institution.

The rank-ordered lists from MGT's factor analyses were then compared to the lists of peers currently in use in the Long-Term Finance Plan to validate whether the current peers would be considered peers in FY 2005-06. Most of the current peer lists could be validated, with the exception of the four private institutions listed as peers of Valley City State University and Mayville State University.

MGT suggested an initial list of 15 peer institutions for each North Dakota college or university. For this initial list, 10 of the institutions were selected from the 20 institutions most like the North Dakota institution; in the case of the five two-year North Dakota institutions, there were approximately 100 institutions that were so similar that the two-year colleges were permitted to pick 10 out of the first 100. Institutions were then able to suggest changes to the initial peer recommendations, and to provide reasons for the suggested changes. Each institution was to select at least 10 of the 20 institutions closest to them, and then the remaining five could be selected from any of the "actual" peers. As mentioned earlier, "actual" peer institutions are those for whom the sum of the distance scores was less than the number of factors in the factor analysis.

Each of the 11 North Dakota institutions suggested changes in their peer lists, with explanations for changes. After negotiations, all institutions agreed to their peer lists, which are shown in **Appendix B**.

PEER RECOMMENDATION 1:

Peer lists should be comprised of no fewer than 15 institutions.

PEER RECOMMENDATION 2:

For purposes of determining adequate funding levels in the LTFP, for each of the North Dakota institutions, use the sets of peer institutions delineated in Appendix B.

Long-Term Finance Plan

The majority of effort in this study was devoted to analysis of the Long-Term Finance Plan. The LTFP has three key components:

- Base Operating Funds;
- Capital Asset Funds; and
- Incentive Funds.

Base operating funds are designed to support core campus functions, such as instruction, research, and public service. In addition, these funds are designed to form the foundation upon which campuses may leverage other resources, such as funding from outside grants and contracts.

Capital asset funds are used in a system-wide funding model to provide for the repair and replacement of facilities, based on age of the facility, replacement value, and the deferred maintenance backlog at each campus. **Incentive funds** are intended to provide the State Board of Higher Education with some flexibility to fund special initiatives that support state and system priorities, and that are consistent with the goals of the Higher Education Roundtable.

Base operating funds are allocated to the institutions in two pools:

- **parity** which are funds needed to continue current programs and services and which may include funds for salary increases, benefits changes, and inflationary cost increases for items such as utilities and fuel costs. No more than 80 percent of all new funding may be allocated to parity.
- **equity** which are funds needed to move a campus closer to the peer benchmark level of funding. These funds are designed to move campuses funded at less than 85 percent of peer institution funding levels (including both state general funds and net tuition revenues) to 85 percent by the 2007-2009 biennium and all campuses to 95 percent by the 2013-2015 biennium.

State general fund appropriations are not reduced for any institution from the previous biennium until such time as the institution exceeds 105 percent of its peer benchmark or enrollment declines are sufficient to cause a re-evaluation of the benchmark.

Capital asset funds also are calculated in two pools:

- **current repair and replacement** funds which are needed for current repair and/or replacement of facilities and infrastructure, but does not include major capital projects funded through state bonding.
- **deferred maintenance** funds which are used for maintenance of facilities and infrastructure that has been delayed, and which can include health and safety concerns. ADA compliance, computer networking, utilities tunnels, or other major repairs.

Capital asset funds are designed to move campuses to 100 percent of the Office of Management and Budget's building and infrastructure formula by the 2011-2013 biennium and to address deferred maintenance needs by the 2015-2017 biennium. Funding provided to each institution is determined by the SBHE for projects greater than \$100,000. Institutions are given authority to allocate dollars for repair and replacement priorities, and may carry over unspent capital asset funds from one biennium to the next and to accumulate funds for large projects.

Incentive funds are used to provide incentives for collaboration, increasing access to education, incorporating entrepreneurial behavior, demonstrating accountability, or for other actions supported by the Higher Education Roundtable. Two percent of the NDUS state appropriation is to be dedicated to incentive funds by the 2007-09 biennium.

Funding under the LTFP is a shared responsibility among the state, students, and the institutions. Funds for parity and equity come from state general funds and net tuition revenues. Since the cost of education varies by type of institution, the targeted ratio or the share of the funds to be provided by each source of funding varies by type of institution.

One of the important features of the LTFP is equity. Equity is not a new issue for the North Dakota colleges and universities, and inequities in the distribution of resources were found when the NDUS used formulas to allocate resources. Equity was evaluated prior to implementation of the LTFP by comparing the percentage of the formula-determined “need” amount to actual appropriations. **This is considered an appropriate method of evaluating equity**, and many examples of this methodology may be found in the economics literature.

With the advent of the LTFP, the method of determining and evaluating equity was comparison of the percentage of the “needs” of the institution to the amount funded through appropriations. The comparison is expressed as a percentage, and if the percentages funded for the institutions were comparable, then equity would have been achieved. This calculation was made by comparing actual funding per student to the average funding per student at the peer institutions. By the 2003-05 biennium, this comparison showed that the disparity in the percentage funded had increased significantly, and it increased somewhat for the 2005-07 biennium. In the 2003-2005 biennium, the disparity had increased from 15.8 percent to 53.7 percent ($95.8 - 42.1$); and had increased even further in the 2005-07 biennium to 55.0 percent ($100.1 - 45.1$). Note that amounts allocated for the 2003-05 and 2005-07 biennia are under the LTFP, whereas amounts allocated for the 1999-2001 biennium are compared to the previous funding formula determinations of base funding.

Obviously, the choice of peers is of paramount importance in comparisons of funding. Including “aspirational” peers, that is, institutions chosen because their funding per student is significantly more than the North Dakota institution, will result in the percentage of “needs” funded by state general funds that is significantly lower than if aspirational peers are not included. This does not mean that the methodology of determining equity is inappropriate, but does mean that the results of the comparison can be skewed by inappropriate peer groups. Therefore, the selection of peers in a peer comparison model like that used in the LTFP requires careful consideration. The current peer groups were evaluated to determine the appropriateness of the peer institutions selected. **The peer groups in general were found to be appropriate, except for the private institutions that were peers of Mayville State University and Valley City State University.**

In the education finance arena, to determine if funding is distributed in an equitable manner, economists and education finance experts use a number of statistical measures of disparity to determine equity of the funding mechanism. Three of the simplest measures are the range, the restricted range, and the federal range ratio. The range is simply the difference between the highest and the lowest observations in a distribution. The smaller the value of the range, the smaller the variation and the better the equity. The formula for the range is: Highest – Lowest. The restricted range is defined as the difference between the observations at the 95th and 5th percentiles of the distribution. The restricted range is useful because it eliminates “outliers.” The formula for the restricted range is: value at 95th percentile – value at 5th percentile. For purposes of this study, the restricted range had to be calculated as the value at the 91st percentile – value at 9th percentile because there are only 11 institutions in the NDUS.

The federal range ratio was originally designed as a federal test to measure whether states met federal wealth neutrality guidelines in distributing federal funds. The federal range ratio is the restricted range divided by the observation at the 5th percentile. The formula for the federal range ratio is (value at 95th percentile – value at 5th percentile) divided by value at 5th percentile. The smaller the value of the federal range ratio, the less variation or inequity in the distribution. As above, the federal range ratio in this study was computed as the value at 91st percentile minus the value at the 9th percentile, divided by the value at the 9th percentile.

On all three measures of equity for all three time periods, **the funding for the NDUS institutions is not equitable, and the disparity has increased since the 1999-2001 biennium.** There are several reasons why the inequity in funding has increased since the inception of the LTFP. First, the Legislative Assembly has appropriated only limited additional revenues with which to address inequities in the allocation of resources. Since the LTFP has as one of its driving principles that the Plan “is used only for allocation of additional state general fund appropriations, not reallocation of existing state general funds,” there is no way for equity to increase unless new state general funds are appropriated.

Secondly, the manner in which funds are allocated between “parity” and “equity” increases the disparity, and therefore, increases the inequity in the allocation of resources. That is, 80 percent of all new state general funds are allocated using a base that was inequitable at the start, as evidenced by the 1999-2001 biennium equity measures. When the playing field is not level at the beginning of the game, then building on that base without adjustments to level the field will only make the field more uneven. Therefore, **if one of the major goals of the Long-Term Finance Plan is to distribute available resources equitably among the institutions, then the current State Board of Higher Education method of setting funding priorities with 80 percent going to parity and 20 percent to equity, will not achieve the goal.**

The LTFP includes as one component that funding for the NDUS is a shared responsibility among the students, the institutions, and the state. In the LTFP, the state share of base funding is to vary by type of institution from 75 percent at the two-year campuses to 60 percent at the two research universities. Similarly, the student share is supposed to support 40 percent of the cost of education at the research universities and only 25 percent at the two-year campuses. Over time students have taken on an increasing share of the costs so that during the 2003-05 biennium student shares varied from 35 percent to 61 percent.

Funding of the LTFP is a shared responsibility of the state, students, and the institutions. **The Long-Term Finance Plan adequately addresses the use of various sources of revenues.**

However, **the Long-term Finance Plan does not adequately address the need for funding initiatives at the state’s institutions.** In particular, the LTFP does not provide new program start-up funding, funding for state-of-the-art equipment and technology, or other items that are consistent with the Roundtable recommendations. The Roundtable was very clear in its recommendations to establish programs that meet the needs of the business community, for soft-skills programs, and for programs and research that would stimulate the state’s economy. All of these new initiatives require funding that is not included in the base funding of the institutions.

Although the LTFP adequately addresses the use of various sources of revenues, **the State has not provided its share of resources, in the base funding component, the Incentive Funding Component, or the Capital Asset Funding Component.** As a result, students have shouldered a significantly greater share, base funding is significantly below the “adequate” level, deferred maintenance has increased, and there has been little available for incentive funding to address system and state priorities consistent with the Higher Education Roundtable’s goals.

The majority of states use funding formulas to determine an adequate level of funding for their higher education institutions and to allocate existing resources equitably. Some states like Alabama and Oklahoma incorporate peer comparisons into the funding model, and provide base funding related to peer funding levels.

North Dakota historically has used funding formulas to determine the resource needs of the institutions. Formulas like those North Dakota had before the Long-Term Finance Plan are used by states and systems for a variety of reasons, including:

- Formulas provide an objective method to determine institutional needs equitably.
- Formulas reduce political competition and lobbying by the institutions.
- Formulas provide state officials with a reasonably simple and understandable basis for measuring expenditures and revenue needs of campuses and determining the adequacy of support.
- Formulas enable institutions to project needs on a timely basis.
- Workload based formulas address the uniqueness of each institution and special needs related to the differences in size, student body make-up, academic programs, and research activities.
- Formulas can adequately address economies and diseconomies of scale and scope.
- Formulas represent a reasonable compromise between public accountability and institutional autonomy.
- Formulas ease comparisons between institutions because each institution's formula amounts are calculated based on its unique characteristics.
- Formulas permit policy makers to focus on basic policy questions.

On the other hand, formula usage has disadvantages, including the following:

- Formulas may be used to reduce all academic programs to a common level of mediocrity by funding each one the same because quantitative measures cannot assess the quality of a program.
- Formulas may reduce incentives for institutions to seek outside funding.
- Formulas may perpetuate inequities in funding that existed before the advent of the formula.
- Enrollment-driven formulas may be inadequate to meet the needs of changing client bases or new program initiatives.
- Formulas cannot serve as substitutes for public policy decisions.
- Formulas are only as accurate as the data on which the formula is based.
- Formulas may not provide adequate differentiation among institutions.
- Formulas are linear in nature and may not account for sudden shifts in enrollments and costs.

Similarly, there are advantages and disadvantages to the use of peer comparisons to determine base funding levels. Among the advantages of a peer model are the following, some of which are similar to the advantages of funding formulas:

- Peer comparisons provide an objective method to determine institutional needs.
- Peer comparisons reduce political competition and lobbying by the institutions.
- Peer comparisons can provide state officials with a reasonably simple and understandable basis for measuring expenditures and revenue needs of campuses and determining the adequacy of support.
- Peer comparisons tend to appeal to a sense of state pride and enhance policy makers' awareness that the state's institutions must compete with colleges and universities in other states for faculty and other academic resources.
- Peer comparisons minimize inappropriate comparisons among institutions within the same state.
- Peer comparisons inform college and university leaders that differential missions may require different resources per student, leading to an acceptance of differential funding from the state.

Likewise, there are disadvantages to the use of a peer average-based funding model:

- Peer funding models assume that any change in the number of students has the same impact on the institution although cost studies demonstrate that some students cost much more than others.
- Over time, peer funding models discourages growth in programs that cost more than average.
- No two institutions are ever alike in program mix and other variables, and peer models cannot be as precise as measuring funding needs as a workload based model.
- Peer funding models may perpetuate inequities in funding.
- Peer funding models may be inadequate to meet the needs of changing client bases or new program initiatives in part because the data always are dated.
- Institutions in the state are at the mercy of economic conditions or policy changes that occur in states where the peers are located.
- Institutions are too dynamic in program mix and other variables to permit any stability over time in a list of appropriate peers.
- Most lists of peer institutions for institutions within a system do not control for relative funding levels by state so that a bachelor's college with peers in well-funded states could have a higher target funding average than a research university with peers in poorly funded states.

Use of funding formulas requires good data systems and significant amounts of data on student enrollments by course, discipline, and level. In addition, data are needed on other workload measures related to the physical plant, student services, libraries, and other components of institutional operations. In 2006 because of difficulties implementing ConnectND, the NDUS does not, in MGT's opinion, have the capability of collecting, retrieving, and using all the data needed to support a funding formula.

MGT recognizes that there are some unique characteristics of the North Dakota institutions that would make a funding formula appropriate for the system. In particular, there are some built-in inefficiencies in a system with eleven institutions to serve a state with less than 700,000 residents. The citizens of North Dakota voted in 1999 to maintain all eleven institutions in the state's Constitution. Because the public policy decision was to continue all eleven, with such a small state population, some institutions are too small to take advantage of economies of scale in their operations. Even the two largest institutions, North Dakota State University and the University of North Dakota, are relatively small for a land-grant institution or for an institution with a medical school. Lake Region State College, Mayville State University, Minot State University – Bottineau, Valley City State University, and Williston State College cannot take advantage of economies of scale, and could benefit from a fixed base allocation with a variable amount per student above the base. In addition, recent decisions that may alter the missions of several campuses will introduce even greater inefficiencies into the system.

Currently, there is unanimous agreement among the college and university presidents to retain the current peer benchmark funding model, with appropriate revisions. This was the decision of the presidents who met via conference call on July 19, 2005. In addition the presidents unanimously agreed that the model would be used consistently to allocate new funding, not to reallocate existing base state appropriations among the NDUS institutions. In addition, there was unanimous agreement that the current percentage of the total state general fund budget was not adequate to fund the NDUS at an equitable level to meet the needs of the state and fulfill the expectations of the Higher Education Roundtable.

Therefore, MGT determined that **the current method of funding using peer comparisons is the most appropriate base funding methodology at this time. However, components of the base funding methodology could benefit from changes that are more in line with the principles for a funding methodology suggested earlier.**

The current peer comparison model uses one year of student data to determine the amount of funding per student. Obviously, the student count is very important, and can vary from year to year, introducing an element of instability into funding. One of the guiding principles for a funding model is: The funding formula should not permit shifts in funding levels to occur more quickly than institutional managers can reasonably be expected to respond. A model that is based on one year's student count has the potential to shift funding levels more quickly than institutional managers can reasonably be expected to respond. Using a two-year average of students will smooth out changes in enrollment.

In addition, the student count currently used is full-time equivalent (FTE) students. Costs of student services, libraries, and physical plant are related more to headcount than to FTE.

The current methodology establishes a based operating funding benchmark for each North Dakota institution based on the review of peer state and local appropriations and net tuition revenues per student. Benchmarks are to be re-established every six years, and in the intervening years, are to

be inflated by a percentage amount equivalent to the change in the consumer price index. One of the consequences of this methodology of updating the peer institution data is that there is no confidence in the validity of the data.

The current method of allocating 80 percent of new money to parity and 20 percent to equity has exacerbated the inequity in funding. Currently, “parity” funding is related to the increases needed for salary funding, health insurance, and operating inflation. Increases in the costs of utilities are considered separately, but also are folded into the “parity” funding category. This current services budget is calculated based on estimates of operating inflation. Amounts calculated for the current services budget, or parity, are added to the base budgets at full face value, without regard to the differences in funding that already exist. These additions further exacerbate the previously-existing inequities in the funding distribution.

The issue is not how the parity adjustments are calculated. These are reasonable assumptions and a reasonable way to calculate the “current services budget.”

However, there are methods to distribute the parity funding that will not exacerbate the equity issue. Institutions do need to maintain current services budget, including adjustments that reflect differences in utilities costs. Estimates of increased utilities budgets should be included in the parity funding, even though those estimates will be vastly different for the campuses in the system. However, the allocation of parity should reflect that the base budgets are at different levels of equity. Consequently, institutions that were at higher percentages of the peer groups not only continue to be at higher percentages, but the disparity increases. At the current rate of change, the equity problem in funding will never be corrected. This has the potential to discredit the entire peer funding methodology.

At least two methods of ameliorating this problem can be suggested: change the percentages of the increased funding that is allocated to “parity,” and change the method of allocating parity. Of course, a third method is to both change the percentages and change the method. It should be noted that all of the NDUS institutions are under-funded relative to peers, and what is actually being done here is attempting to distribute inadequate resources as equitably as possible. The constraint that no institution shall receive less than the prior biennial appropriation makes this objective difficult to achieve.

Based on analysis using the current peer groups, not revised peers, as discussed above, state appropriations have not been sufficient to fund the NDUS institutions adequately, as measured by the percent of average per student peer group funding. Percentages of “adequate” funding varied from 45.1 percent at Lake Region State College to 100.1 percent at Valley City State University, for an overall NDUS average of 60.3 percent (before allocation of the \$2 million equity funding).

As a result, the student share of funding at every institution exceeds the target funding shares in the LTFP, as was discussed earlier. This disparity is especially critical at the two-year institutions where the disparity between the target funding shares and actual student funding are the greatest. For example, at Bismarck State College and Lake Region State College, the target student funding responsibility is 25 percent but the actual student funding share is 56 percent, over double the target.

The only solution to this, of course, is increased state funding. The question this raises is “is the LTFP realistic based on historic funding increases and forecasted economic growth in North Dakota?”

Up until the 21st century, the NDUS was funded at 21 percent or more of the state general fund budget. Since 2001 that percentage has declined to 19.5 percent or lower, depending on how the measurement is made and what is included in both the state general fund budget and the NDUS share of the budget. National figures place the percentage at 17.3 percent, which excludes certain funding for capital projects as well as other items.

A January 2006 article by Don Boyd of the Rockefeller Institute of Government at the State University of New York at Albany predicted that the North Dakota general fund would grow by 29.7 percent during the next 8 years, but that higher education's growth rate in that budget would be negative – that is, higher education would receive a smaller share than in 2006.¹

Nevertheless, if higher education funding were based on historical funding patterns, and if the recommendations of the Higher Education Roundtable to maintain higher education's share of the general fund budget at 21 percent, then the **Long-Term Finance is realistic, although it will take more than ten years to meet the current targets.**

Further, as their part of carrying out the Roundtable recommendations, the higher education institutions perceive that they have stepped up to the table and contributed to increases in the state's economy that have resulted in increased state revenues. Indeed, there is a projected \$200 million state surplus this biennium. It is reasonable for the institutions to assume that they would share in the increased resources from assisting the economy to expand, as the Higher Education Roundtable indicated. If the institutions were to receive 21 percent of the increased state general fund budget, there would be sufficient resources to begin to address the inequities in funding among the institutions. Raising higher education's share to 21 percent would generate at least an additional \$20 million per biennium.

This is not sufficient to eliminate the inequities for some time, or to eliminate the deferred maintenance backlog, but considerable progress would be made, especially with changes to the distribution of parity and equity funds discussed above. Balanced against this of course are the competing demands on the state budget from PK-12 education, Medicare, and the shifting of other programs from the federal government to the states. The challenge to the Governor and the Legislative Assembly is to balance all these demands and needs to find the optimal mix that will serve the citizens of North Dakota and improve the economy.

Tying the NDUS funding to 21 percent of the state general fund budget will permit the University System to share in and be rewarded for contributing to the state's economy, which is one of the major tenets of the Higher Education Roundtable.

A component of the current LTFP is that budget requests will move institutions currently funded at less than 85 percent of peer institution funding to 85 percent by the 2007-09 biennium and all institutions to 95 percent of peer institution funding by the 2013-15 biennium. In addition, in the Capital Asset Funding Component of the Plan, the goal is to phase in full funding of the OMB's buildings and infrastructure formula by the 2011-13 biennium and to address the current deferred maintenance backlog by the 2015-17 biennium. Additionally, 2 percent of the total state general fund appropriation was to be provided for Special Initiative Funding, phased in by the 2009-11 biennium.

¹ Donald Boyd, 2006. *State Fiscal Outlooks from 2005 – 2013: Implications for Higher Education*. Rockefeller Institute, State University of New York.

At the current rate of increase, these funding targets will not be achieved. Based on the 2005-07 appropriations levels, over \$150 million would be needed to bring all campuses to their 85 percent of the peer benchmarks, based on state share only. This amount does not include funding needed to address the backlog of deferred maintenance or the infrastructure formula.

Even if all the small colleges and universities were closed, there would not be sufficient resources to provide adequate funding for the two largest campuses. The closing of these institutions is not an option, given the vote of the state's citizens. Indeed, closing of any institution would negatively impact the state's economy in general, and the local economy in particular.

One option of course is to set a different target of peer level funding, and bring all institutions up to that level, holding constant the institutions above the target level of funding. Under this option, certain campuses will continue to be dissatisfied with funding.

Some have suggested that a second option is to disband the NDUS and revert to a system where each institution fends for itself and the general market prevails. This would result in closing of certain institutions, and would not be in the state's best interests in using higher education as drivers of the state's economy. It is likely that such an option would cost the state more in the long run.

No solution will make every institution happy. No level of funding will be sufficient to reach the satisfaction level for all institutions and be within the state's ability to support higher education, as well as other state services.

From this perspective, the **85 percent and 95 percent targets are unrealistic.**

LTFP RECOMMENDATION 1:

Determine the count of students for the base funding component of the plan by using an average of the two most current years' fall enrollment, with 25 percent of the count based on student headcount and 75 percent based on full-time equivalent students.

Basing 25 percent of the count on headcount will consider those components of institutional costs related more to the number of students served. In most college and university budgets, these costs comprise 25 percent of the budget. Using the average of the two most current years' enrollment counts will smooth out potentially large shifts in funding needs.

LTFP RECOMMENDATION 2:

Use the peer institutions listed in Appendix B to update the peer funding comparisons. Keep the same set of peer institutions for at least two biennia, unless there are major changes that suggest that a peer group may need revision.

LTFP RECOMMENDATION 3:

Update the data for the peers by using the most current IPEDS data available at the time the biennial budget request is prepared. Collect information on agriculture appropriations and net tuition revenues from peer institutions.

Updating data by using the most current will ensure the validity of the data. One of the guiding principles is “Based on valid and reliable data” and using the most current data will base the method on valid and reliable data. Surveying the peer institutions to collect current data on appropriations and net tuition revenues for agriculture programs will ensure that valid data are available to segregate these revenues at North Dakota State University.

LTFP RECOMMENDATION 4:

Revise the method of allocating parity and equity so that a minimum of 80 of the new funding is allocated to equity and 20 percent to parity. Further, allocate the 20 percent of parity dollars in inverse proportion to the percent of peer funding so that institutions that are the furthest from peer funding would get the greatest relative parity and equity increase.

Making these two changes to the allocation of base funding will result in increased equity in the distribution of resources. However, funding will not become equitable for some time unless sufficient appropriations are made to address the issue of adequate funding.

LTFP RECOMMENDATION 5:

Increase state funding to the NDUS to reach the goal of 21 percent of the state general fund budget.

LTFP RECOMMENDATION 6:

Establish more realistic targets for the percentage of peer funding.

Historically, North Dakota has not provided what could be called an “adequate” level of state funding for its institutions of higher education. Recognizing that fact, setting the goal at a lesser percentage will bring the goal to an achievable level. Some will contend that the bar should be set as high as possible to encourage high levels of achievement; others will contend that setting the bar too high makes the goal impossible to achieve, so why try? Perhaps one way of establishing targets is to increase funding by a specified percentage each biennium for those institutions below the peer funding level. The percentage could be set at 10 percent per year, or twice the percentage increase in the state general fund. This has the advantage of clearly tying increases in NDUS funding to increases in the state’s economy.

Exhibit 2 displays FY 2004 funding per student using the recommended set of peer institutions, with adjustments for Higher Education Computer Network (HECN), Interactive Video Network (IVN), the On-line Dakota Information Network (ODIN), flood-related expenditures, and technology fee revenues. Adjustments are not made for agriculture extension and experiment because similar adjustments could not be made for the peer institutions without a separate survey of the peer institutions. A peer survey could not be completed within the time frame of this report.

When compared to the appropriations levels at the peers, funding as a percent of the peer benchmark varied from a low of 40.3 percent at the University of North Dakota to a high of 84.0 percent at Valley City State University. Appropriations for the system were at 50.5 percent of the peer appropriations per student.

EXHIBIT 2
FY 2004 FUNDING PER STUDENT

INSTITUTION	NET TUITION			APPROPRIATIONS			TOTAL NET TUITION AND APPROPRIATIONS		
	North Dakota	Peers	ND As % Of Peers	North Dakota	Peers	ND As % Of Peers	North Dakota	Peers	ND As % Of Peers
Bismarck State College	\$3,050	\$2,275	134.1%	\$2,962	\$6,910	42.9%	\$6,012	\$9,185	65.5%
Dickinson State University	\$2,296	\$3,330	69.0%	\$3,319	\$8,006	41.5%	\$5,615	\$11,336	49.5%
Lake Region State College	\$3,073	\$2,056	149.5%	\$3,245	\$8,611	37.7%	\$6,318	\$10,667	59.2%
Mayville State University	\$2,087	\$4,121	50.6%	\$6,458	\$8,556	75.5%	\$8,545	\$12,672	67.4%
Minot State University	\$2,865	\$3,717	77.1%	\$4,423	\$6,855	64.5%	\$7,288	\$10,573	68.9%
Minot State University-Bottineau	\$1,450	\$1,586	91.4%	\$4,442	\$8,053	55.2%	\$5,892	\$9,639	61.1%
North Dakota State College of Science	\$2,582	\$2,683	96.2%	\$5,675	\$7,347	77.2%	\$8,257	\$9,949	83.0%
North Dakota State University	\$4,138	\$6,267	66.0%	\$6,424	\$10,699	60.0%	\$10,562	\$16,966	62.3%
University of North Dakota	\$6,298	\$6,801	92.6%	\$4,481	\$11,113	40.3%	\$10,779	\$17,914	60.2%
Valley City State University	\$2,161	\$3,058	70.7%	\$7,306	\$8,693	84.0%	\$9,467	\$11,751	80.6%
Williston State College	\$1,977	\$1,878	105.3%	\$3,637	\$6,829	53.3%	\$5,614	\$8,721	64.4%
Total	\$4,274	\$5,439	78.6%	\$4,994	\$9,882	50.5%	\$9,269	\$15,320	60.5%

Under the long-term finance plan, funding is a shared responsibility between the state, students, and the institutions. As was discussed earlier, there are targeted ratios or shares of funds that vary by type of institution. The state funding share is calculated by those ratios for the combination of appropriations and net tuition revenues. **Exhibit 3** displays the funding per student using the recommended set of peer institutions, with adjustments for Higher Education Computer Network (HECN), Interactive Video Network (IVN), the On-line Dakota Information Network (ODIN), flood-related expenditures, and technology fee revenues. Adjustments are not made for agriculture extension and experiment because similar adjustments could not be made for the peer institutions.

When compared to the appropriations levels at the peers, funding as a percent of the peer benchmark, using the state share of the total, varied from a low of 40.6 percent at Lake Region State College to a high of 88.8 percent at Valley City State University. Appropriations for the system were 53.6 percent of the targeted peer level of funding.

EXHIBIT 3
FY 2004 FUNDING PER STUDENT,
USING STATE SHARE OF BASE OPERATING FUNDS

INSTITUTION	NORTH DAKOTA APPROP PER FTE	PEER TOTAL APPROP AND TUITION PER FTE	STATE SHARE	STATE SHARE OF PEER TOTAL	ND AS % OF PEER BENCHMARK
Bismarck State College	\$2,962	\$9,185	75%	\$6,889	43.0%
Dickinson State University	\$3,319	\$11,336	70%	\$7,935	41.8%
Lake Region State College	\$3,245	\$10,667	75%	\$8,000	40.6%
Mayville State University	\$6,458	\$12,672	70%	\$8,870	72.8%
Minot State University	\$4,423	\$10,573	65%	\$6,872	64.4%
Minot State University- Bottineau	\$4,442	\$9,639	75%	\$7,229	61.4%
North Dakota State College of Science	\$5,675	\$9,949	75%	\$7,462	76.1%
North Dakota State University	\$6,424	\$16,966	60%	\$10,179	63.1%
University of North Dakota	\$4,481	\$17,914	60%	\$10,749	41.7%
Valley City State University	\$7,306	\$11,751	70%	\$8,226	88.8%
Williston State College	\$3,637	\$8,721	75%	\$6,541	55.6%
Total	\$4,994	\$15,320		\$9,310	53.6%

Exhibit 4 displays the benchmark funding for the 2005-07 biennium if the recommended peer comparison groups were used, together with actual funding. This exhibit is analogous to Exhibit 2. Special items have been excluded from the comparisons (adjustments for Higher Education Computer Network (HECN), Interactive Video Network (IVN), the On-line Dakota Information Network (ODIN), flood-related expenditures, and technology fee revenues). Adjustments are not made for agriculture extension and experiment because similar adjustments could not be made for the peer institutions without a special survey of the peer institutions, which could not be completed within the time frame of the study. **To use this model in determining and comparing funding levels, it is recommended that the NDUS do a survey of the NDSU peer institutions to be able to remove agriculture extension and experiment station expenditures.** MGT understands that North Dakota law prevents the commingling of funds appropriated especially for the agriculture programs at NDSU. However, MGT also recognizes that certain expenditures are made by the NDSU campus that benefit agriculture, and are not charged to these programs. The same is true for the peer institutions – it is extremely difficult to separate out the costs of institutional support attributable to agriculture programs, such as the proportion of the president's and vice presidents' time, accounting and human resources costs, maintenance of physical plant, and similar items.

This comparison also uses the recommended count of students, where 25 percent of the student count is based on headcount and 75 percent is based on FTE for the two most recent years of IPEDS data. Funding varies from 35.7 percent of the benchmark at Lake Region State College to 78.2 percent at North Dakota State College of Science.

EXHIBIT 4
COMPARISON OF BENCHMARK FUNDING USING RECOMMENDED PEERS
TO LEGISLATIVE APPROPRIATIONS FOR THE 2005-07 BIENNIUM

INSTITUTION	STUDENT COUNT	BENCHMARK FUNDING	BIENNIAL BENCHMARK	LEGISLATIVE APPROPRIATION	% OF BENCHMARK
Bismarck State College	2,899	\$6,910	40,064,180	17,265,547	43.1%
Dickinson State University	2,143	\$8,006	34,314,115	14,711,627	42.9%
Lake Region State College	941	\$8,611	16,205,902	5,789,989	35.7%
Mayville State University	762	\$8,556	13,039,344	9,003,630	69.0%
Minot State University	3,275	\$6,855	44,900,559	27,215,850	60.6%
Minot State University- Bottineau	492	\$8,053	7,924,152	4,334,460	54.7%
North Dakota State College of Science	2,207	\$7,347	32,429,658	24,956,828	77.0%
North Dakota State University	10,815	\$10,699	231,411,540	133,316,837	57.6%
University of North Dakota	12,088	\$11,113	268,678,587	124,212,604	46.2%
Valley City State University	913	\$8,693	15,873,418	11,806,526	74.4%
Williston State College	745	\$6,829	10,175,210	5,752,997	56.5%
Total	37,280		715,016,665	378,366,895	52.9%

Exhibit 5 displays the benchmark funding for the 2005-07 biennium if the recommended peer comparison groups were used, together with actual funding. This exhibit is analogous to Exhibit 3, which uses the percentage shares of state and tuition funding. Special items have been excluded from the comparisons (adjustments for Higher Education Computer Network (HECN), Interactive Video Network (IVN), the On-line Dakota Information Network (ODIN), flood-related expenditures, and technology fee revenues). Adjustments are not made for agriculture extension and experiment.

This comparison also uses the recommended count of students, where 25 percent of the student count is based on headcount and 75 percent is based on FTE for the two most recent years of IPEDS data. Funding varies from 38.5 percent of the benchmark at Lake Region State College to 78.6 percent at Valley City State University.

EXHIBIT 5
COMPARISON OF BENCHMARK FUNDING USING RECOMMENDED PEERS
TO LEGISLATIVE APPROPRIATIONS FOR THE 2005-07 BIENNIUM
USING STATE SHARE OF BASE OPERATING FUNDS

INSTITUTION	STUDENT COUNT	BENCHMARK FUNDING	BIENNIAL BENCHMARK	LEGISLATIVE APPROPRIATION	% OF BENCHMARK
Bismarck State College	2,899	\$6,889	39,940,973	17,265,547	43.2%
Dickinson State University	2,143	\$7,935	34,009,503	14,711,627	43.3%
Lake Region State College	941	\$8,000	15,056,471	5,789,989	38.5%
Mayville State University	762	\$8,870	13,518,490	9,003,630	66.6%
Minot State University	3,275	\$6,872	45,012,483	27,215,850	60.5%
Minot State University-Bottineau	492	\$7,229	7,113,582	4,334,460	60.9%
North Dakota State College of Science	2,207	\$7,462	32,936,165	24,956,828	75.8%
North Dakota State University	10,815	\$10,179	220,178,354	133,316,837	60.5%
University of North Dakota	12,088	\$10,749	259,857,109	124,212,604	47.8%
Valley City State University	913	\$8,226	15,020,128	11,806,526	78.6%
Williston State College	745	\$6,541	9,745,718	5,752,997	59.0%
Total	37,280		692,388,974	378,366,895	54.6%

If the goal is set to reach 65 percent of the benchmark funding level of the peers, then Mayville State University, North Dakota State College of Science, and Valley City State University would be the only institutions to receive no equity funding. A total of \$85.0 million in new funding would be required to reach that level. It is unlikely that this level will be achieved during the next biennium.

Further, if the new dollars were appropriated in the ratio of 80 percent to equity and 20 percent to parity, the distribution of the 2005-07 biennial funding would change markedly, as shown in **Exhibit 6**. The calculation for this exhibit assumes that student counts are calculated as recommended, and that \$16.8 million of the \$21 million new funding in the biennium is allocated to equity and the remaining \$4.2 million to parity. In addition, the assumption is made that equity is distributed in proportion to the total distance from peer funding. Funding for agriculture programs have been excluded from North Dakota State University and from the peers at the same ratio to get an appropriation level for non-agriculture programs that was equal to 60.6 percent of the funding for peers. This amount was calculated by dividing the non-agriculture appropriations for NDSU (\$76,704,650) by .606 to get the peer benchmark total funding of \$126,575,330; which was then divided by the number of students (10,815) to get a dollar amount of funding for the biennium (\$11,704).

EXHIBIT 6
COMPARISON OF 2005-07 LEGISLATIVE APPROPRIATIONS TO
ALLOCATIONS UNDER RECOMMENDED CHANGES

INSTITUTION	BASE	PARITY	EQUITY	TOTAL	ACTUAL APPROP.	DIFFERENCE
Bismarck State College	15,612,327	222,289	1,284,327	17,118,943	17,265,547	-146,604
Dickinson State University	13,669,533	194,628	1,093,597	14,957,758	14,711,627	246,131
Lake Region State College	5,032,682	71,656	484,150	5,588,488	5,789,989	-201,501
Mayville State University	8,602,335	122,481		8,724,816	9,003,630	-278,814
Minot State University	25,890,346	368,629	1,447,404	27,706,379	27,215,850	490,529
Minot State University-Bottineau	4,102,856	58,417	228,742	4,390,014	4,334,460	55,554
North Dakota State College of Science	23,839,431	339,428		24,178,859	24,956,828	-777,969
North Dakota State University	70,694,066	1,006,547	5,446,133	77,146,746	76,704,650	442,096
University of North Dakota	116,633,402	1,660,635	6,427,590	124,721,627	124,212,604	509,023
Valley City State University	11,304,672	160,957		11,465,629	11,806,526	-340,897
Williston State College	5,436,977	77,412	241,061	5,755,450	5,752,997	2,453
Total	300,818,627	4,283,077	16,653,004	321,754,708	321,754,708	0

Under this assumption the only institutions whose allocations would not increase would be Bismarck State College, Lake Region State College, Mayville State University, North Dakota State College of Science, and Valley City State University. Likely another method of distributing equity funding would provide additional dollars to other extremely under-funded institutions.

A methodology that distributed new funding based on 80 percent equity and 20 percent parity achieves some additional equity in the distribution of resources because the variance in the percent of the peer benchmark decreases markedly from 55.0 percent to 40.1 percent. The percent of peer funding using this method is displayed in **Exhibit 7**. Please note that funding for agriculture programs has been subtracted from the peer benchmark and the actual funding for North Dakota State University. The actual FY 2005-2007 agriculture appropriations were subtracted from the funding level; and the per student agriculture appropriations at NDSU were subtracted from the peer funding to get a similar level. This enabled comparison of “apples to apples.”

EXHIBIT 7
COMPARISON TO PEER BENCHMARK UNDER RECOMMENDED METHOD

INSTITUTION	BENCHMARK FUNDING	BIENNIAL BENCHMARK	REVISED FUNDING	% OF BENCHMARK
Bismarck State College	\$6,889	39,940,973	17,265,547	43.2%
Dickinson State University	\$7,935	34,009,503	14,711,627	43.3%
Lake Region State College	\$8,000	15,056,471	5,789,989	38.5%
Mayville State University	\$8,870	13,518,490	9,003,630	66.6%
Minot State University	\$6,872	45,012,483	27,215,850	60.5%
Minot State University- Bottineau	\$7,229	7,113,582	4,334,460	60.9%
North Dakota State College of Science	\$7,462	32,936,165	24,956,828	75.8%
North Dakota State University	\$5,862	126,784,245	76,704,650	60.5%
University of North Dakota	\$10,749	259,857,109	124,212,604	47.8%
Valley City State University	\$8,226	15,020,128	11,806,526	78.6%
Williston State College	\$6,541	9,745,718	5,752,997	59.0%
Total		598,994,865	321,754,708	53.7%

The challenges to improving funding and the Long-Term Finance Plan are great. The Governor and Legislative Assembly will be faced with difficult decisions in the allocation of limited state resources among all the competing demands in the state budget. However, given the progress made toward achieving the vision of the Higher Education Roundtable over a relatively short time, the goals are achievable if all stakeholders work to operationalize the recommendations of the Roundtable.

Response to Comments Received

MGT appreciates the insightful comments and constructive critiques made on the draft report, and the willingness of individuals and groups to respond in a timely manner. Changes have been incorporated into the final report to address specific data issues and to explain more clearly what was included or excluded from the various exhibits. Four additional exhibits were added to the report to provide additional clarification.

MGT understands the SBHE and institutional concerns over the distribution of parity and equity funds, and recognizes that institutions require funding for mandatory cost increases. Moreover, MGT found that no institution was “overfunded” compared to the level of funding at the peer institutions. However, the current method of distributing parity and equity funding has contributed to further inequity in the allocation of resources to the 11 institutions, and should be modified to ameliorate the underlying inequity in the Long-Term Finance Plan. Inequity does extend to Capital Assets Funding. Equity will not be achieved without infusion of new state resources, or very drastic changes in the NDUS.

Achieving state funding equal to 21 percent of the state’s general fund budget will not solve the underfunding problem for the NDUS. MGT calculated that 21 percent of the 2005-07 biennium would generate at most \$20 million additional. Since the deficit below the 65 percent level of peer funding is at least \$85 million, it will take some time to reach even that level of funding.

MGT disagrees with the contention that the peer model is “complicated and complex” and would “continue to exacerbate the inequity without creating a solution,” and that a formula driven model “is much simpler to understand, the data used are easier to validate, and any deviations can be explained in a straight-forward manner.” The peer model is much simpler than a funding formula, and easier to explain to many constituent groups. Both models have advantages and disadvantages which are discussed in the report. The data used for a peer model are as accurate and valid as those used in a formula model, or as inaccurate.

MGT also disagrees with the suggestion that funding to support common information systems should be distributed among the 11 institutions and included in comparisons to peers. Such common systems are not included in the data from the peers; most state systems keep similar funding in a “system” budget and do not allocate those and other costs out to campuses.

Differences in the funding per student among the peer groups are related to differences in the student body, and more importantly, to the mix of disciplines and levels of classes offered. In general, it is more costly to provide a senior-level engineering course than a freshman-level rhetoric course. The peers were selected based on their similarities in student and staff make-up, and similarities in the programs and courses offered. Simply taking the number of credit hours times an appropriation per credit hour does not recognize the differences in the costs of providing various disciplines and services. Therefore, a simple comparison of appropriations per student credit hour would exacerbate the inequity in the system. Funding is only “fair to students” when the funding recognizes the different costs of providing services to different “types” of students with different preparations taking different courses.

1.0 INTRODUCTION

1.0 INTRODUCTION

In September 2005 the North Dakota Legislative Council engaged MGT of America, Inc. to conduct a higher education funding and accountability study. The study was assigned to the Legislative Council's Higher Education Committee, Senator Ray Holmberg, Chairman.

As provided in Section 23 of 2005 Senate Bill No. 2003, the study was to make a comprehensive review of the areas listed below, identify findings, and make recommendations to be implemented by the North Dakota University System (NDUS), the State Board of Higher Education (SBHE), and the higher education institutions. The study also was intended to assist the Legislative Assembly and the Executive Branch in the monitoring of and budgeting for the NDUS.

The tasks of the study were to complete the following:

1. Evaluate the long-term financing plan (LTFP) for the University System and determine:
 - a. If the current method of funding for the University System and the method of determining and evaluating equity among the institutions is appropriate and, if so, the appropriateness of the peer institutions selected and the need to update peer institution funding comparisons.
 - b. If the LTFP is realistic based on historic funding increases and forecasted economic growth in North Dakota.
 - c. If the current SBHE method of setting funding priorities is appropriate.
 - d. If the LTFP adequately addresses the use of various sources of revenue and allocations, and the need for funding initiatives at the state's institutions.
 - e. If the current method of funding for the University System is not appropriate, develop an alternative method of funding using existing resources for the University System, including the allocation of funding to institutions and a comparison of the proposed allocation of funding to institutions to the funding provided for the 2005-07 biennium.
2. Describe the state of higher education in the United States and how North Dakota compares in finance and performance, national higher education trends, other states' per capita higher education funding, and trends in funding higher education from non-state revenue sources.
3. Evaluate previous Higher Education Roundtable recommendations, including:
 - a. Status of implementation of the recommendations.
 - b. Strengths and weaknesses of the recommendations as implemented.
 - c. Appropriateness of the recommendations to meet the expectations and needs of students, citizens, higher education entities, and the Legislative Assembly.
4. Evaluate the accountability measures and benchmarks in terms of appropriateness and adequacy.
5. Provide findings, identify alternatives and options, and make recommendations for the state of North Dakota to proceed with appropriate implementation of Roundtable recommendations, the LTFP, and the accountability measures.

This comprehensive review was to include broad-based input from public and private stakeholders, including the SBHE, higher education institutions, students, executive and legislative branches, and the private sector.

Methodology

MGT carried out the study through eight tasks:

- *Task One: Finalize Work Program*
- *Task Two: Develop Consensus on Guiding Principles for Funding Guidelines and for Designation of Peer Institutions, and Obtain Broad-Based Input*
- *Task Three: Identify Sources of Information, Describe the State Of U.S. Higher Education, and Compare North Dakota to Other States*
- *Task Four: Assess the Long-Term Financing Plan, Including Appropriateness of Peers*
- *Task Five: Evaluate Previous Higher Education Roundtable Recommendations*
- *Task Six: Evaluate Accountability Measures and Benchmarks*
- *Task Seven: Develop Options and Recommendations*
- *Task Eight: Prepare Reports*

Major project activities are shown in **Exhibit 1–1**.

EXHIBIT 1-1 MAJOR STUDY ACTIVITIES

Developed Consensus on Guiding Principles and Criteria – MGT project team met with the Higher Education Committee to reach consensus on guiding principles to evaluate any funding models and to develop criteria for peer selection, determination of appropriateness, and validation. **Exhibit 1-2** and **Exhibit 1-3** display the guiding principles and criteria for peer selection. Specific criteria were applied to select peers for each North Dakota institution.

Obtained Broad Input through Interviews and Focus Group Sessions – Project team members conducted focus group sessions and interviews to get input on the long-term financing plan, the Higher Education Roundtable, the accountability measures, and the overall governance and operation of the North Dakota University System. Team members visited each campus in the NDUS, and talked with citizens, students, faculty and staff members, as well as local legislators. In addition, team members conducted interviews with members of the SBHE and the executive staff.

Collected and Analyzed Data on the State of Higher Education – MGT data from a variety of sources, including the National Conference of State Legislatures, National Governors' Association (NGA), the State Higher Education Executive Officers (SHEEO), *Grapevine* which is a publication of the Center for the Study of Higher Education at Illinois State University, the *National Report Card* which is produced biennially by the National Center for Public Policy and Higher Education, and the National Center for Education Statistics (NCES) Integrated Postsecondary Education Data System (IPEDS). NGA, in cooperation with the National Association of State Business Officers (NASBO), publishes an annual report on state funding. SHEEO and *Grapevine* provide information on per capita funding and other issues; and IPEDS provides expenditure and revenue data for all colleges and universities in the U.S. In addition, MGT used its own annual report on the state of higher education funding that identifies trends in funding.

Reviewed and Analyzed the Accountability Measures – MGT collected information on the accountability measures used across the Nation and analyzed the NDUS' 30 accountability measures, including the 21 accountability measures required by the 2005 Legislative Assembly, as well as the 9 performance and accountability measures that the State Board for Higher Education has adopted.

Reviewed and Analyzed the Work of the Higher Education Roundtable – MGT reviewed the recommendations of the Higher Education Roundtable, and determined whether the recommendations as implemented were appropriate to meet the expectations and needs of students, citizens, higher education entities, and the Legislative Assembly.

Analyzed the Long-Term Financing Plan – MGT assessed the current method of funding for the University System to determine if the method of funding and the method of determining and evaluating equity among the institutions is appropriate by analyzing allocations related to national equity measures. MGT determined if the institutions were funded equitably and adequately and which institutions were in need of an adjustment to bring their funding levels to a level equitable with other institutions. This assessment also addressed whether the long-term financing plan is realistic based on historical North Dakota funding and economic growth, and if the plan addressed the use of various sources of revenues.

Developed Options and Recommendations – MGT developed options and recommendations for funding the institutions, for the use of peers, for the Higher Education Roundtable, and for the accountability measures, for the consideration of the Legislative Council's Higher Education Committee.

Final Report – MGT prepared this Final Report.

EXHIBIT 1-2
GUIDING PRINCIPLES FOR FUNDING METHODOLOGIES

CHARACTERISTIC	SUMMARY DESCRIPTION OF PRINCIPLES
A. Goal-Based	The funding model should incorporate and reinforce the broad goals for the state's system of colleges and universities as expressed through approved missions, quality expectations, and performance standards.
B. Mission-Sensitive	The funding model should be based on the recognition that different institutional missions (including differences in degree levels, program offerings, student readiness for college success and geographic location) require different rates of funding.
C. Adequacy-Driven	The funding model should determine the funding level needed by each institution to fulfill its approved mission.
D. Size-Sensitive	The funding model should reflect the impact that relative levels of student enrollment have on funding requirements.
E. Responsive	The funding model should reflect changes in institutional workloads and missions as well as changing external conditions in measuring the need for resources.
F. Adaptable to Economic Conditions	The funding model should have the capacity to apply under a variety of economic situations, such as when the state appropriations for higher education are increasing, stable or decreasing.
G. Concerned with Stability	The funding model should not permit shifts in funding levels to occur more quickly than institutional managers can reasonably be expected to respond.
H. Simple to Understand	The funding model should effectively communicate to key participants in the state budget process how changes in institutional characteristics and performance and modifications in budget policies will affect funding levels.
I. Equitable	The funding model should provide both horizontal equity (equal treatment of equals) and vertical equity (unequal treatment of unequals) based on size, mission and growth characteristics of the institutions.
J. Adaptable to Special Situations	The funding model should include provisions for supplemental state funding for unique activities that represent significant financial commitments and that are not common across the institutions.
K. Reliant on Valid & Reliable Data	The funding model should rely on data that are appropriate for measuring differences in funding requirements and that can be verified by third parties when necessary.
L. Flexible	The funding model should be used to estimate funding requirements in broad categories; it is not intended for use in creating budget control categories.
M. Incentive-Based	The funding model should provide incentives for institutional effectiveness and efficiency and should not provide any inappropriate incentives for institutional behavior.
N. Balanced	The funding model should achieve a reasonable balance among the sometimes competing requirements of each of the criteria listed above.

**EXHIBIT 1-3
VARIABLES/CRITERIA FOR USE IN DETERMINING PEERS
FOR FUNDING EQUITY ANALYSES**

- 1. Public Control**
- 2. Carnegie Classification**
- 3. Number of headcount students by level and part-time or full-time status**
- 4. Percent part-time and percent full-time students**
- 5. Location in urban/rural/suburban area**
- 6. Number of full-time equivalent students**
- 7. Number of degrees awarded**
- 8. Number of associates degrees awarded**
- 9. Number of bachelor's degrees awarded**
- 10. Number of master's degrees awarded**
- 11. Number of doctoral degrees awarded**
- 12. Number of first professional degrees awarded**
- 13. Degrees awarded by field and percent degrees awarded by field**
- 14. Total sponsored research expenditures**
- 15. Land grant status**
- 16. Medical school**
- 17. Highest level degree awarded**
- 18. Program mix: Technical, 2 year, Undergraduate only, Undergraduate and masters, Undergraduate, masters, and doctoral**
- 19. Discipline mix and number of disciplines**
- 20. Number of staff by category**

The remainder of this report is organized into chapters that address each of the study components. Chapter 2 provides information on the state of higher education in the United States and how North Dakota compares in finance and performance, national higher education trends, other states' per capita higher education funding, and demographic characteristics. Chapter 3 provides an analysis of the Higher Education Roundtable and its recommendations, including the strengths and weaknesses of the recommendations as implemented, and the appropriateness of the recommendations to meet the expectations and needs of students, citizens, higher education entities, and the Legislative Assembly.

Chapter 4 evaluates the accountability measures and benchmarks in terms of appropriateness and adequacy. Chapter 5 evaluates the peer institutions used in the Long-Term Financing Plan, and describes the process of selecting new peer institutions. Chapter 6 evaluates the LTFP for the NDUS and determines if the method of determining and evaluating equity among the institutions is appropriate. Chapter 7 summarizes the findings and recommendations for funding the NDUS, and for improving the accountability measures.

Appendix A describes peer studies in general while Appendix B provides a listing of the peers and criteria used in selecting peers for each of the 11 NDUS institutions. Appendix C provides data used in calculations of peer funding, and Appendix D includes comments on the draft report received by Legislative Council.

2.0 STATE OF HIGHER EDUCATION

2.0 STATE OF HIGHER EDUCATION

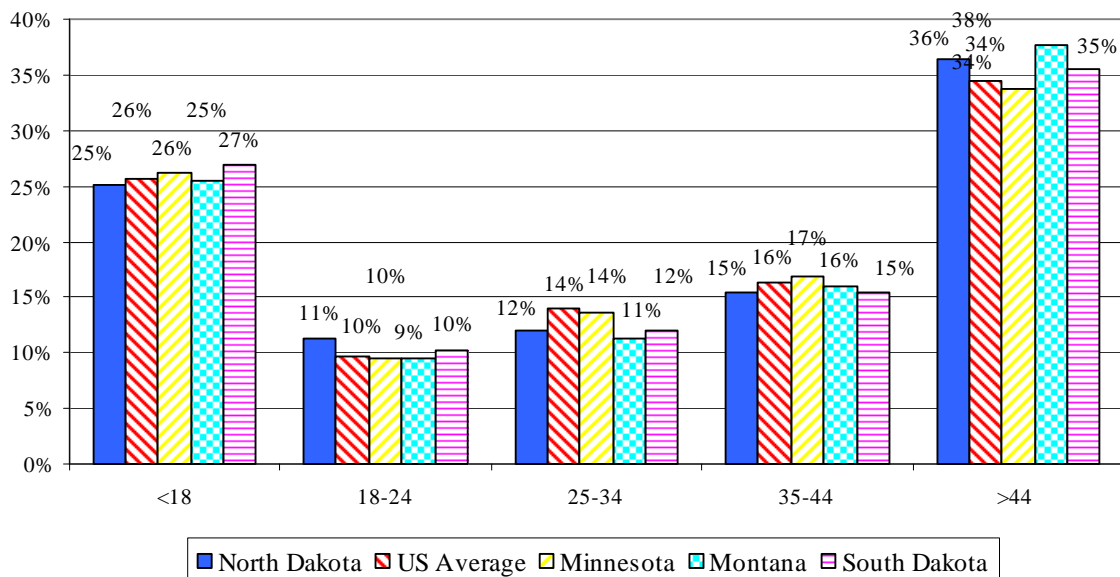
This chapter describes the state of higher education in the United States and how North Dakota compares in finance, national higher education trends, other states' per capita higher education funding, and trends in funding higher education from non-state revenue sources. Performance or accountability will be addressed in Chapter 4.

Demographic Characteristics

Population

Exhibit 2-1 displays the population by age level for North Dakota, the contiguous states, and the United States. North Dakota's mix of population is very similar to that of the contiguous states and the entire nation, with 25 percent of the population under 18, 11 percent in the 18-24 age group, 12 percent in the 25 to 34 year old age group, 15 percent in the 35 to 44 year old group, and 36 percent over age 44.

EXHIBIT 2-1
STATE MIX OF POPULATION BY AGE LEVEL FOR NORTH DAKOTA,
UNITED STATES AND CONTIGUOUS STATES



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

College Continuation and Graduation Rates

Exhibit 2-2 displays the college continuation and bachelor's degree graduation rates for North Dakota and the United States. The percentage of students that continue directly from high school to college is a measure for recent high school graduates that attend anywhere in the nation. North Dakota ranks number one among the 50 states in the percentage of high school students going directly on to college. Recent high school graduates in North Dakota are 130 percent more likely than their national cohort to continue onto college. This high college continuation rate places a greater burden per capita on the citizens of North Dakota to provide higher education.

While North Dakota exceeds the national average continuation rate, North Dakota falls below the national average for the percentage of students graduating with a bachelor's degree within 6 years. This suggests that a larger percentage of students are starting college, but not completing within 6 years, compared to the national average. Among the contiguous states, Minnesota and South Dakota exceed the national average in the percent of high school graduates going directly to college and the Bachelor's degree graduation rate.

EXHIBIT 2-2
COLLEGE CONTINUATION AND BACHELOR'S DEGREE
GRADUATION RATES, NORTH DAKOTA AND U.S.

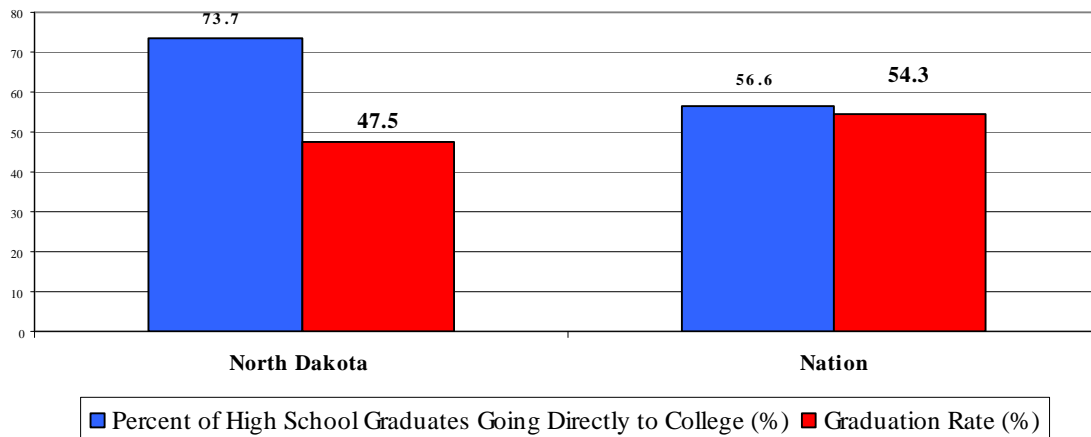
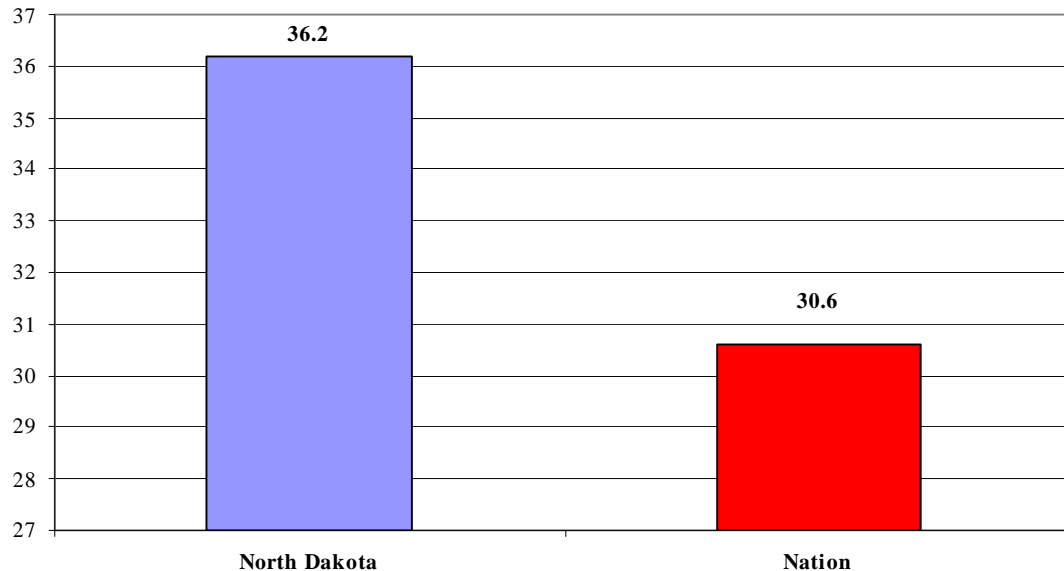


Exhibit 2-3 displays the associates' degree graduation rates for North Dakota and the United States. Although students in North Dakota trail the nation in Bachelor's degree completion rates, a higher percentage complete an Associate Degree within 3 years than the national average.

EXHIBIT 2-3
ASSOCIATE DEGREE THREE-YEAR GRADUATION RATES
NORTH DAKOTA AND THE NATION

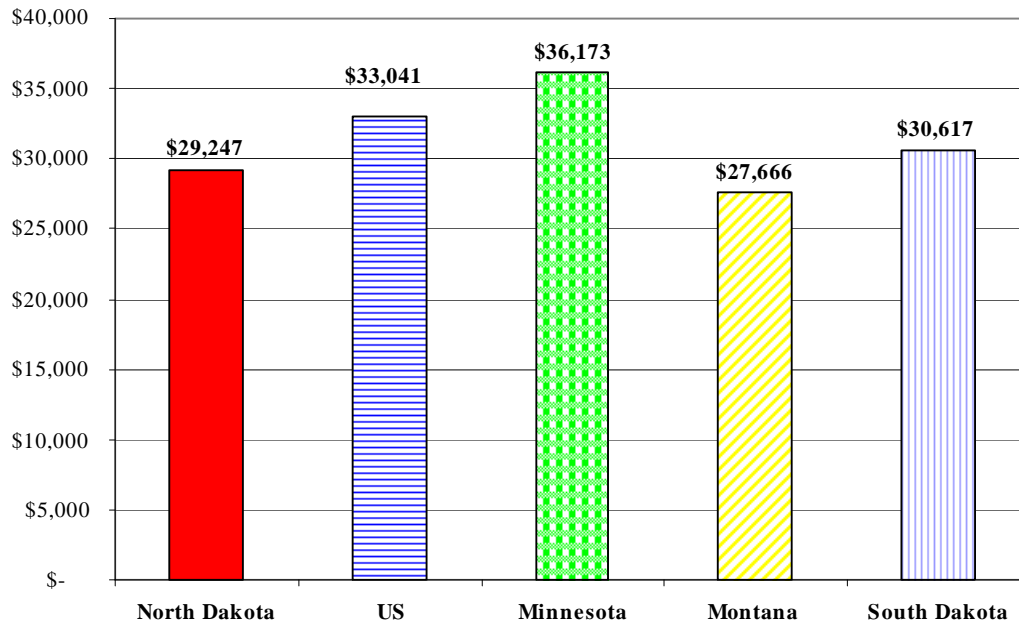


Source: Postsecondary Opportunity, 2003; IPEDS 2003 Graduation Survey.

Income and Taxing

Personal income per capita is a measure of the ability of a state to pay for government services, including higher education. Personal income is the income received by all persons in the state or nation; income includes employment in government, business transfer payments, and government interest. **Exhibit 2-4** displays 2004 personal income per capita for North Dakota, contiguous states, and the United States. Compared to the neighbor states and the U.S. average, North Dakota per capita income is 11 percent below the national average and 7 percent below the contiguous states' average per capita personal income. This means that North Dakota residents have less income to support higher education, or to pay tuition and fees. When coupled with the higher than average college continuation rates, the lower per capita income implies that North Dakota citizens face a greater burden to provide resources for higher education.

EXHIBIT 2-4
2004 STATE PERSONAL INCOME PER CAPITA
NORTH DAKOTA, CONTIGUOUS STATES, AND THE U.S. AVERAGE

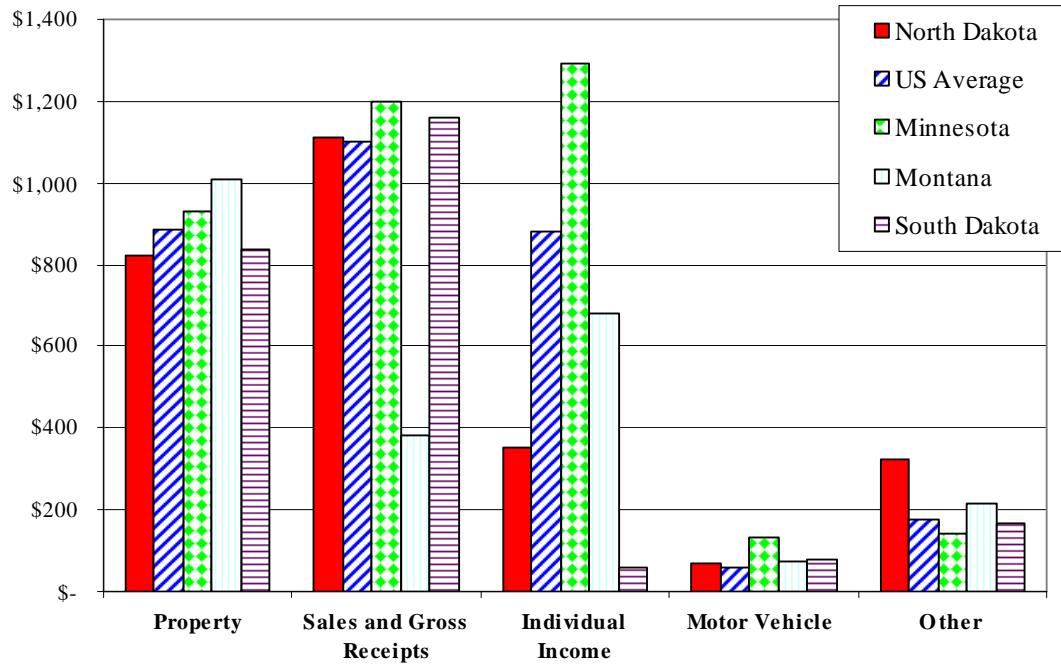


Source: BEA, 2004.

State and local tax collections are a measure of how much money the state has to appropriate for government services. **Exhibit 2-5** displays information on 2000 state tax collections per capita by source for North Dakota, the contiguous states, and the U.S. average, while **Exhibit 2-6** displays 2000 total tax collections per capita. North Dakota collections per capita are close to the national average for property, sales and gross receipts, and motor vehicle taxes. However, personal income tax collections in North Dakota are about 60 percent below the national average, and over 70 percent below the individual income tax per capita in Minnesota. On the other hand, North Dakota received almost twice as much per capita from Other Tax sources, including oil, mineral, and gas depletion taxes.

North Dakota, the contiguous states, and the Nation all rely heavily on property taxes as a source of tax revenues. “Sales and Gross Receipts” per capita provided the largest amount of tax income for North Dakota, \$1,111 per capita, and the Property Tax provided \$820 per capita. “Sales and Gross Receipts” represented 41 percent of North Dakota’s total 2004 tax revenue per capita, and Property Tax provided 31 percent of revenues.

EXHIBIT 2-5
2000 STATE TAX COLLECTIONS PER CAPITA BY SOURCE
NORTH DAKOTA, THE U.S., AND CONTIGUOUS STATES

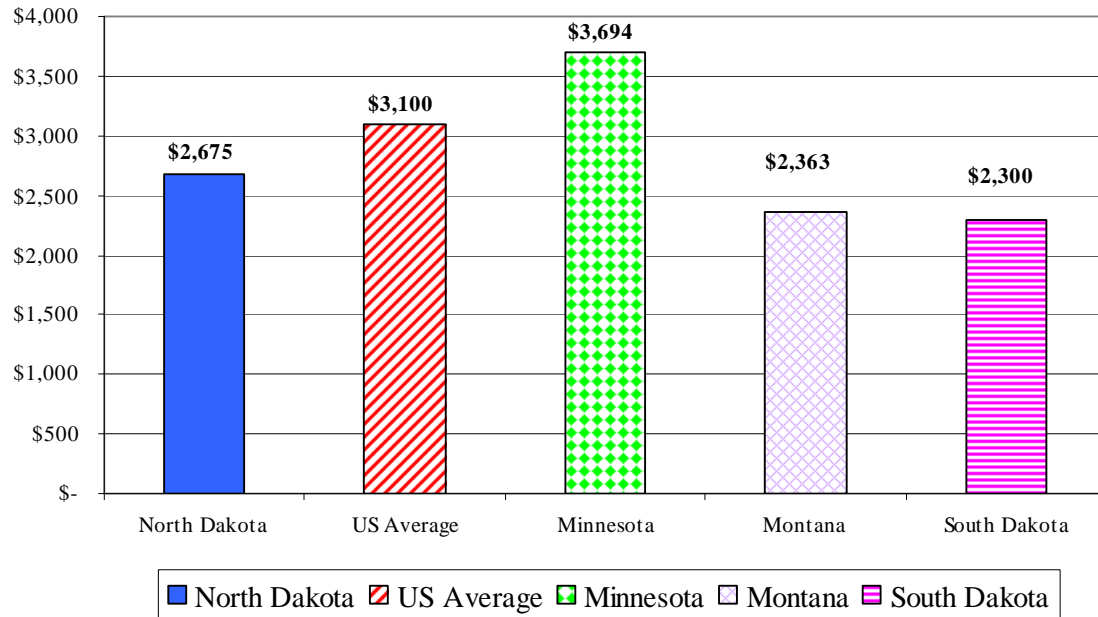


Source: Census Statistical Abstracts, 2000; Census Population Report, 2000.

North Dakota had \$425 less per capita income from tax collections than the national average per capita, and over \$1,000 less per capita than did Minnesota. The primary difference between Minnesota and North Dakota was individual income tax receipts.

Having 13.7 percent less in total tax collections per capita than the national average means that North Dakota has significantly less total dollars to spend on government services including higher education. These data are displayed in **Exhibit 2-6**.

EXHIBIT 2-6
2000 STATE TAX COLLECTIONS PER CAPITA
NORTH DAKOTA, THE U.S. AND CONTIGUOUS STATES

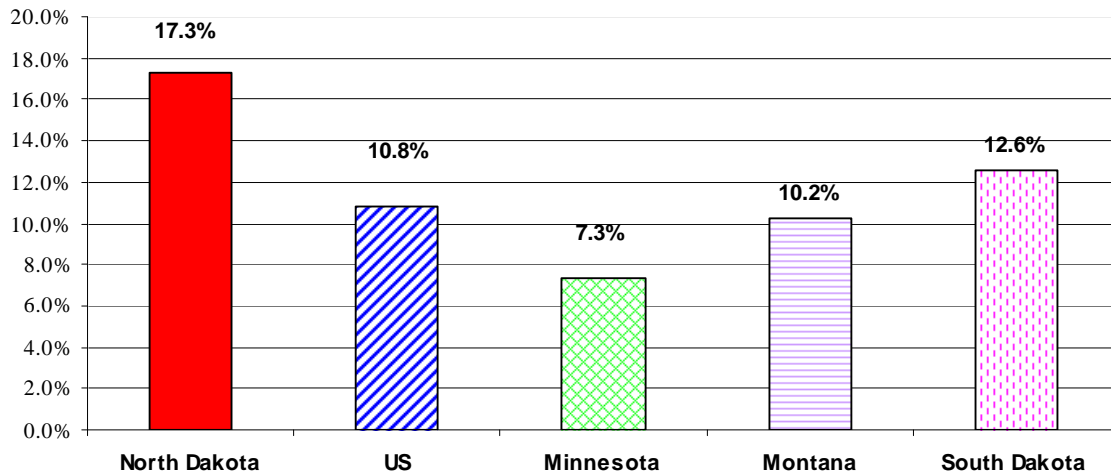


Source: Census Statistical Abstracts, 2000; Census Population Report, 2000.

Support of Higher Education

The proportion of state appropriations allocated to higher education is a measure of the state's commitment to higher education in relation to other state services. North Dakota historically has appropriated a higher proportion of the state's tax dollars than the national average, although higher education's percentage share of North Dakota's general fund budget has declined in the last five years. **Exhibit 2-7** displays the percent of the state general fund budget allocated to higher education in North Dakota, the contiguous states, and the national average. North Dakota appropriated to higher education a 60 percent greater share than the national average, and 72 percent more than the average of the contiguous states.

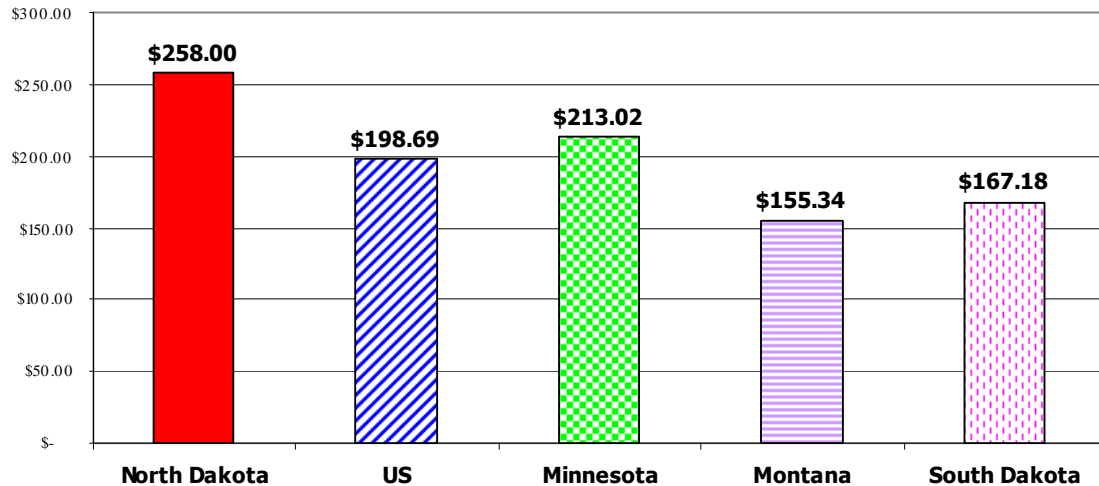
EXHIBIT 2-7
PERCENT OF STATE GENERAL FUND BUDGET
ALLOCATED TO HIGHER EDUCATION
NORTH DAKOTA, CONTIGUOUS STATES, AND U.S. AVERAGE



Source: NASBO, 2005 Fiscal Estimates; SHEEO, SHEF 2003-04 Higher Education Appropriations

State general fund dollars per capita for higher education is one measure of the state's commitment to higher education. **Exhibit 2-8** displays 2004 state general fund per capita funding of higher education for North Dakota, the contiguous states, and the U.S. average. North Dakota expended \$258 per capita on higher education, compared to the U.S. average of \$199 and Minnesota's \$213 per capita. North Dakota's per capita spending exceeded the U.S. average by 30 percent. While North Dakota appropriates 60 percent more from the general fund than the national average, North Dakota spends only 30 percent more than the national average per capita. This apparent difference is due to the low – compared to the U.S. average – tax collections per capita displayed in **Exhibit 2-6**.

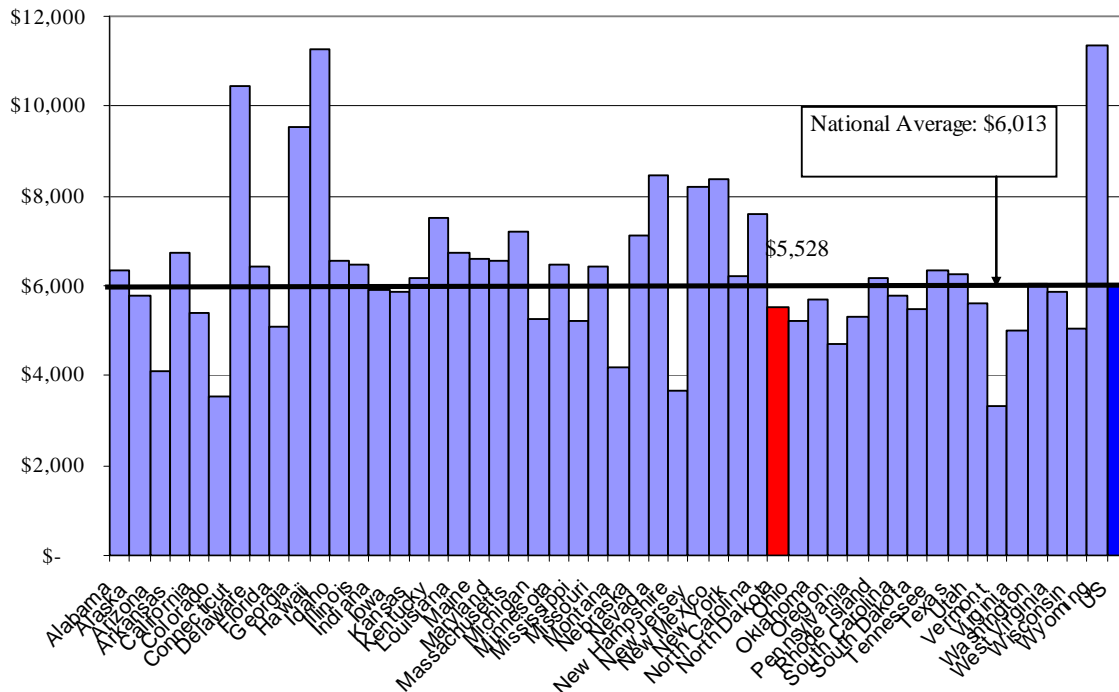
EXHIBIT 2-8
STATE GENERAL FUND SUPPORT PER CAPITA FOR HIGHER EDUCATION
NORTH DAKOTA, CONTIGUOUS STATES, AND THE U.S. AVERAGE



Source: SHEF 2003-04 Higher Education Appropriations; Census 2004 Population Estimates.

However, this picture is somewhat different when examined from the perspective of funding per full-time equivalent (FTE) student. As shown in **Exhibit 2-9**, North Dakota net state dollars per FTE student, \$5,528, is 8 percent below the national average \$6,013 per FTE student. Net state dollars include state appropriations, plus tuition and fee income, less student financial aid. Funding per student is less than funding per capita because North Dakota enrolls a greater proportion of the population in higher education.

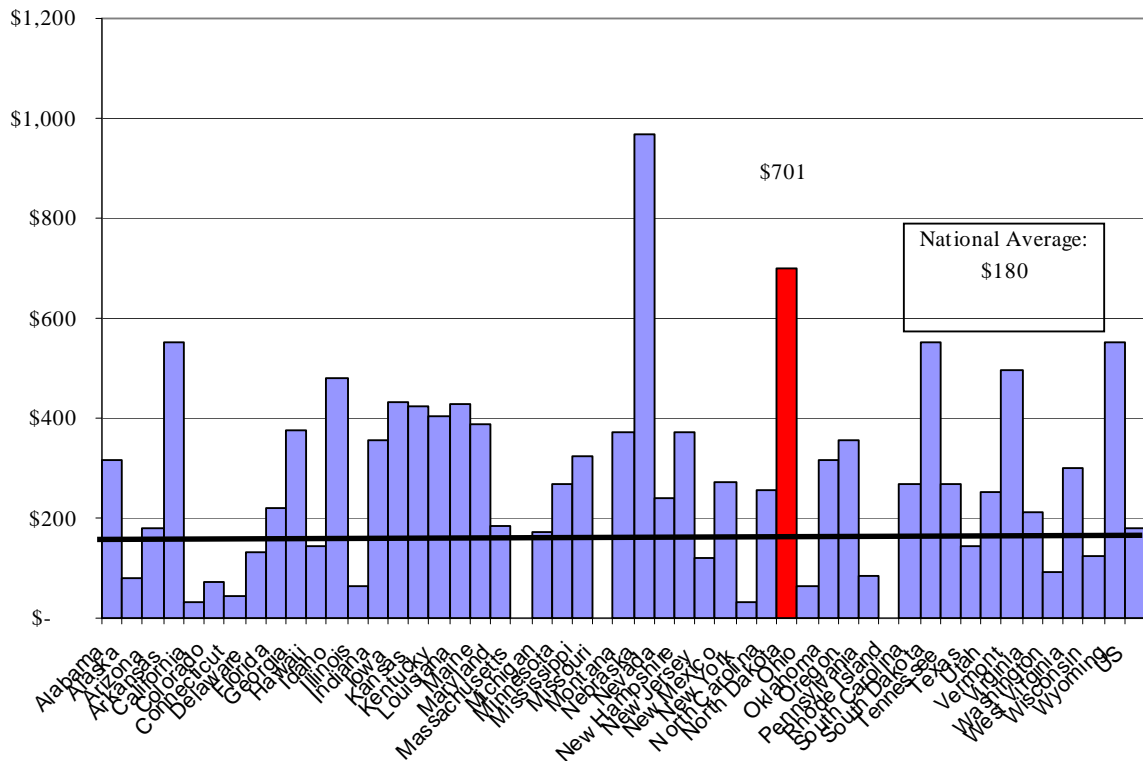
EXHIBIT 2-9
2003-04 STATE NET DOLLARS PER FTE STUDENT
BY STATE



Source: SHEF, 2004.

State appropriations for research, agriculture, and medical programs (RAM) is separate from state appropriations for higher education because funding for these areas is usually calculated on a basis other than full-time equivalent students. These special purpose appropriations usually are targeted by legislative budgets in line items for the direct operation and administrative support of research centers and institutes, agricultural experiment stations, cooperative extension services, teaching hospitals, health care public services, and sometimes to osteopathic, medical, dental, and veterinary schools. In the majority of the states, funding for all four types of medical schools is not appropriated separately from a campus' budget. North Dakota ranks second in the nation in RAM appropriations per FTE student, \$701, 290 percent above the national average per FTE expenditure of \$180. The contiguous states also rank high on this measure, as shown in **Exhibit 2-10**.

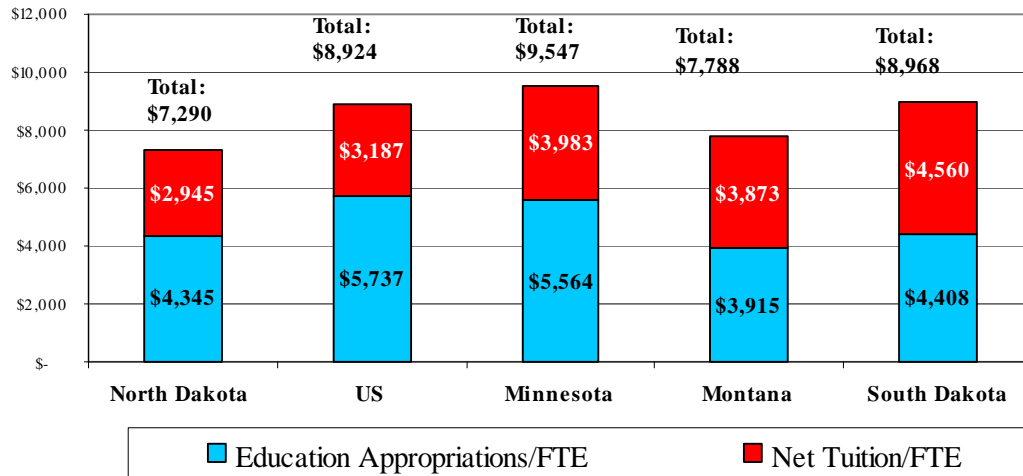
EXHIBIT 2-10
RESEARCH, AGRICULTURAL, AND MEDICAL PROGRAM (RAM)
APPROPRIATIONS PER FTE, 2003-04, BY STATE



Source: SHEF, 2004.

When total educational revenues, including net tuition and education appropriations, are examined, North Dakota provided fewer revenues per FTE student than the national average, or the contiguous states. Although North Dakota appropriates a high percentage of the state budget to higher education, and more dollars per capita, that level of funding is offset by the extremely high college continuation rate. North Dakota's total educational revenues per FTE were \$7,290 compared to a national average of \$8,924, \$9,547 in Minnesota, \$7,788 in Montana, and \$8,968 in South Dakota. These data are displayed in **Exhibit 2-11**.

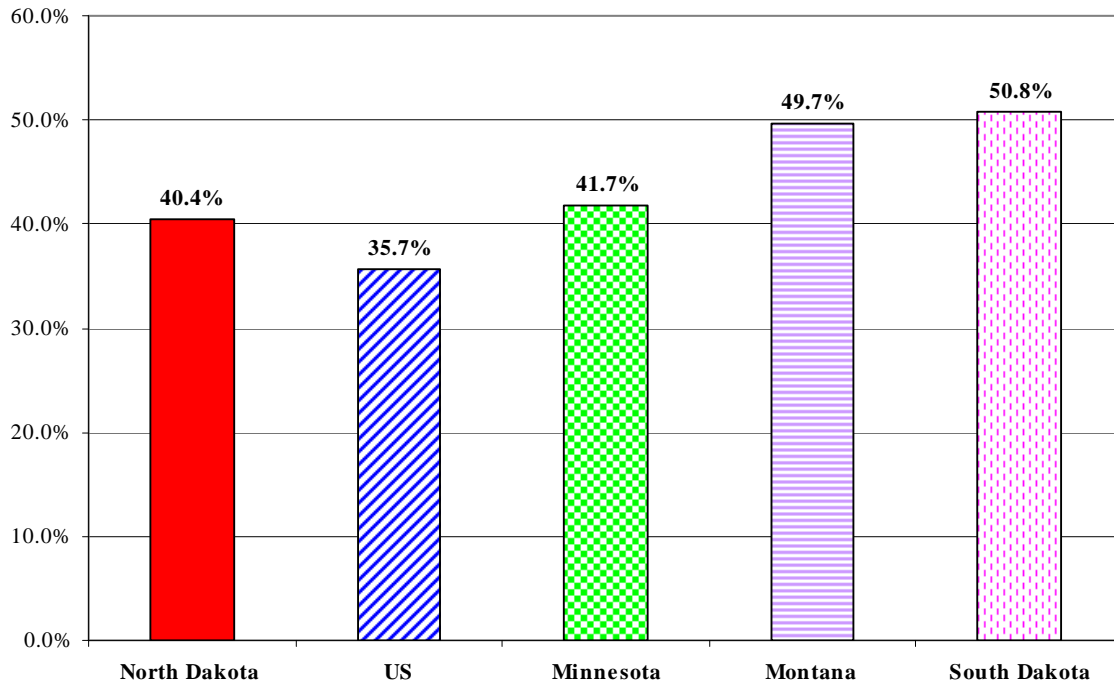
EXHIBIT 2-11
TOTAL EDUCATION REVENUES PER FTE (NET TUITION AND APPROPRIATIONS)
NORTH DAKOTA, CONTIGUOUS STATES, AND THE U.S. AVERAGE



Source: SHEF, 2005.

Net tuition as a percentage of education revenues is a measure of the relative financial burden on the student, as opposed to the state's support for higher education. North Dakota students, and students in the contiguous states, pay a greater proportion of costs than the national average. North Dakota students pay 40.4 percent of costs compared to the national average 35.7 percent. However, this percentage is less than the contiguous states: students in Minnesota shoulder 41.7 percent of costs; 49.7 percent in Montana, and 50.8 percent in South Dakota, as shown in **Exhibit 2-12**.

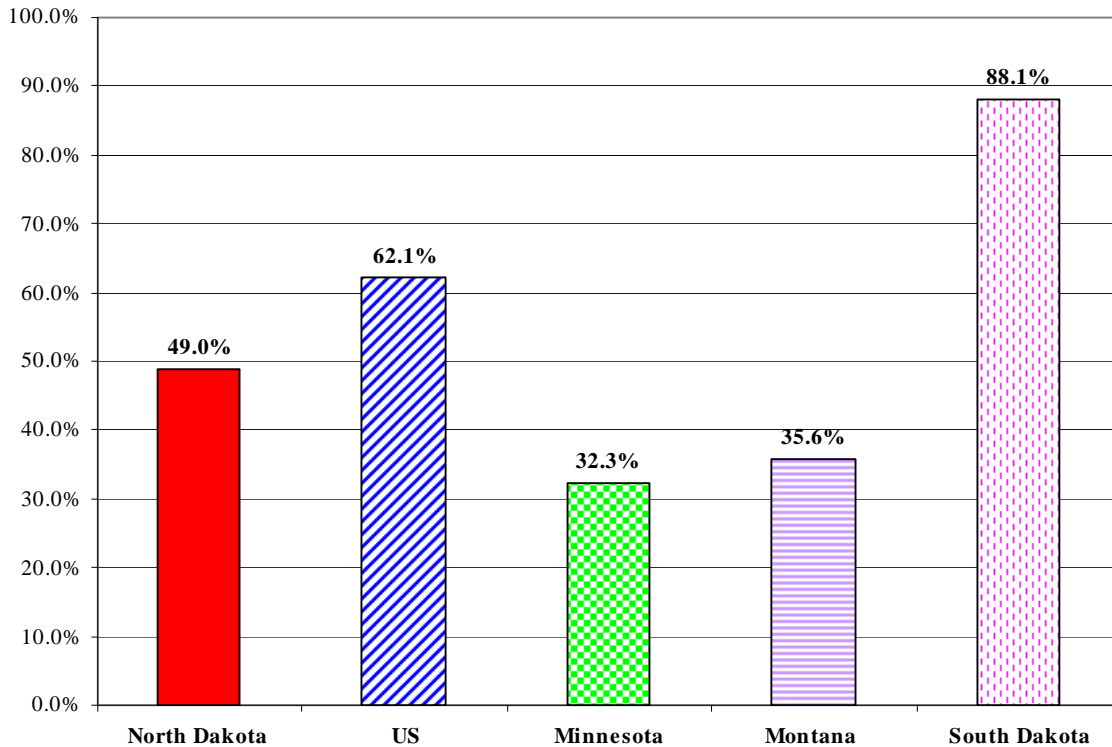
EXHIBIT 2-12
2003-04 NET TUITION AS A PERCENT OF PUBLIC HIGHER EDUCATION
REVENUES, NORTH DAKOTA, CONTIGUOUS STATES, AND THE U.S. AVERAGE



Source: SHEF, 2005.

The percentage change in education appropriations per FTE student is a measure of how well a state has kept pace in increasing appropriations, after accounting for changes in enrollments. As shown in **Exhibit 2-13** over the time period 1990-91 to 2003-04, North Dakota has been losing ground compared to the national average. North Dakota's increase of 49.0 percent represents an average annual increase of 3.1 percent.

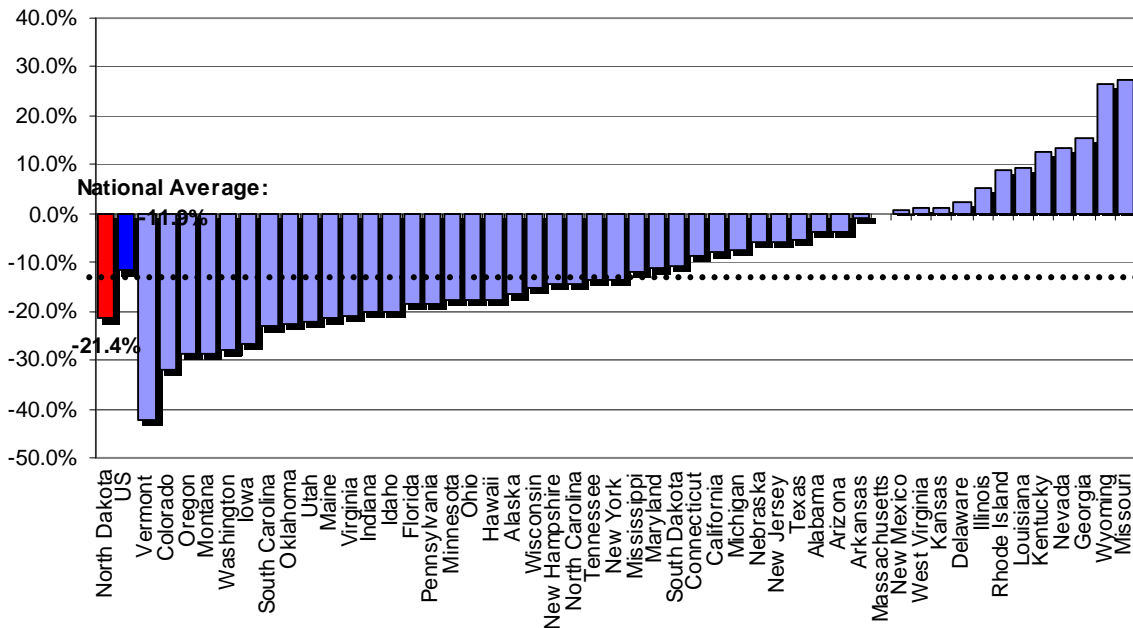
EXHIBIT 2-13
PERCENT CHANGE IN HIGHER EDUCATION APPROPRIATIONS PER FTE,
1990-91 TO 2003-04
NORTH DAKOTA, CONTIGUOUS STATES, AND THE NATIONAL AVERAGE



Source: SHEF, 2005.

When these appropriations are adjusted to constant dollars to show the impact of inflation on buying power, North Dakota's appropriations per FTE declined 21.4 percent over the time period 1990-91 to 2003-04, compared to the national average decline of 11.9 percent. North Dakota ranks 42nd among the states. As shown in **Exhibit 2-14**, the higher education cost adjustment factor is used to convert to constant dollars. North Dakota was not alone in declines: appropriations per student decreased in 38 states. Enrollment trends influence the support per student; eight of the eleven states with increases in appropriations per student had less than the national average enrollment growth.

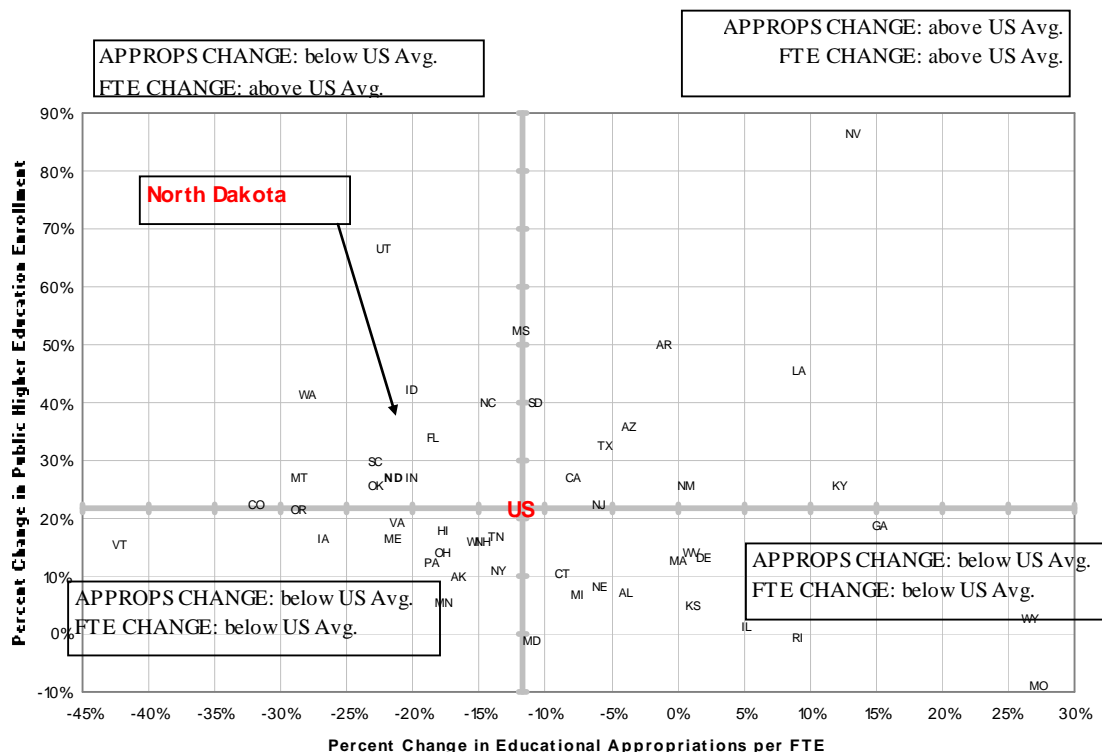
EXHIBIT 2-14
PERCENT CHANGE IN EDUCATIONAL APPROPRIATIONS PER FTE
IN CONSTANT DOLLARS, 1990-91 THROUGH 2003-04



Source: SHEF, 2005.

Each of the next four exhibits is plotted along two dimensions to provide a different vantage point on trends in funding. In **Exhibit 2-15**, the vertical axis displays public higher education enrollment growth in each state between 1990-91 and 2003-04. The horizontal axis represents each state's percentage change in educational appropriations per FTE student for the same time period. States in the upper right quadrant are those whose changes in public enrollments and in educational appropriations per FTE both exceeded the national average while states in the lower right quadrant exceeded the national average change in appropriations while enrollments lagged the national average. Similarly, states in the lower left quadrant are those where both enrollment and changes in appropriations were below the national average change. States in the upper left quadrant, including North Dakota, had enrollment increases above the national average, but changes in educational appropriations per FTE were below the national average.

EXHIBIT 2-15
PERCENT CHANGE IN ENROLLMENT AND IN EDUCATIONAL APPROPRIATIONS
PER FTE, FISCAL 1991 THROUGH FISCAL 2004



Source: SHEF, 2005.

Exhibit 2-16 displays changes in each state's constant dollar educational revenues per FTE since 1991. Data points along the horizontal axis compare each state's total educational revenues per FTE in fiscal 2004, adjusted for state cost of living and public system enrollment mix, to the national average. Data points on the vertical axis indicate the extent to which constant dollar public institution educational revenues per FTE grew or declined. States in the upper right quadrant had total educational revenues per FTE that exceeded the national average, and increased faster than the national average. States in the lower right quadrant had educational revenues per FTE student that exceeded the national average, but increased slower than the national average. States in the upper left quadrant had educational revenues per FTE less than the national average but increased faster than the national average over the time period 1991-2004. And states in the lower left quadrant, which includes North Dakota, had revenues per FTE lower than the national average, and increased slower than the national average between 1991 and 2004. The contiguous states all have a positive percent change from 1991 to 2004 while North Dakota does not. This indicates that the change in North Dakota's total education revenues per FTE student were below the national average, and its neighbors were above.

Percent Change, FY 1991-2004

Indexed to the U.S. Average in FY 2004

North Dakota

**% CHANGE: above US Avg.
Current: below US Avg.**

**% CHANGE: above US Avg.
Current: above US Avg.**

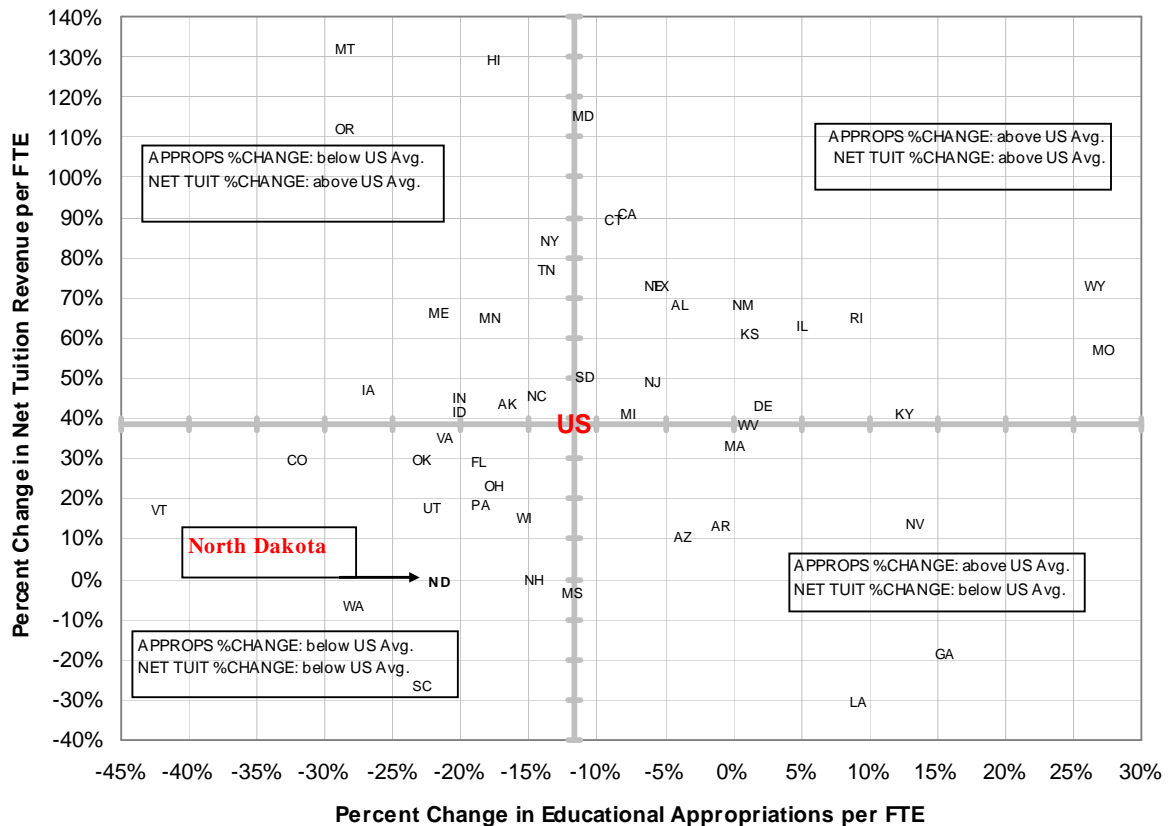
**% CHANGE: below US Avg.
Current: below US Avg.**

**% CHANGE: below US Avg.
Current: above US Avg.**

State	Indexed to the U.S. Average in FY 2004	Percent Change, FY 1991-2004
AK	0.65	-8
FL	0.70	-10
MS	0.75	-12
NH	0.80	-5
CQ	0.85	-5
LA	0.85	-5
UT	0.85	-15
OK	0.90	-15
ID	0.90	-15
WA	0.85	-25
SC	0.95	-25
CA	0.90	2
VA	0.95	-2
OH	1.00	-2
WI	1.00	-10
AZ	1.00	0
WV	0.95	15
NE	1.00	15
K9	1.00	18
TX	1.05	10
SD	1.10	10
IA	1.05	-5
NC	1.10	-5
HI	1.10	-5
VT	1.15	-5
PA	1.20	-5
ME	1.20	2
MA	1.10	8
OR	1.10	8
GA	1.15	5
NY	1.15	5
MI	1.25	12
NJ	1.30	8
RI	1.25	30
MD	1.20	28
AL	1.25	20
KY	1.10	20
TN	1.10	12
MO	1.30	35
DE	1.40	22
CT	1.40	15
WY	1.55	32
ND	0.85	-15

Exhibit 2-17 displays the rate of change in the two components of revenue per FTE student – educational appropriations and net tuition. Data on the horizontal axis indicate the extent to which educational appropriations per FTE grew or declined in constant dollars from 1991 to 2004. The vertical axis indicates the percentage change in net tuition revenue over that period. States in the upper right quadrant exceeded the national average in both educational appropriations and net tuition revenue changes. States in the lower right quadrant exceeded the national average in educational appropriation changes but lagged the national average in net tuition revenue changes. States in the upper left quadrant lagged the national average in appropriations changes and exceeded the national average change in net tuition charges. States in the lower left quadrant, including North Dakota, lagged the national average in both appropriation and net tuition revenue changes.

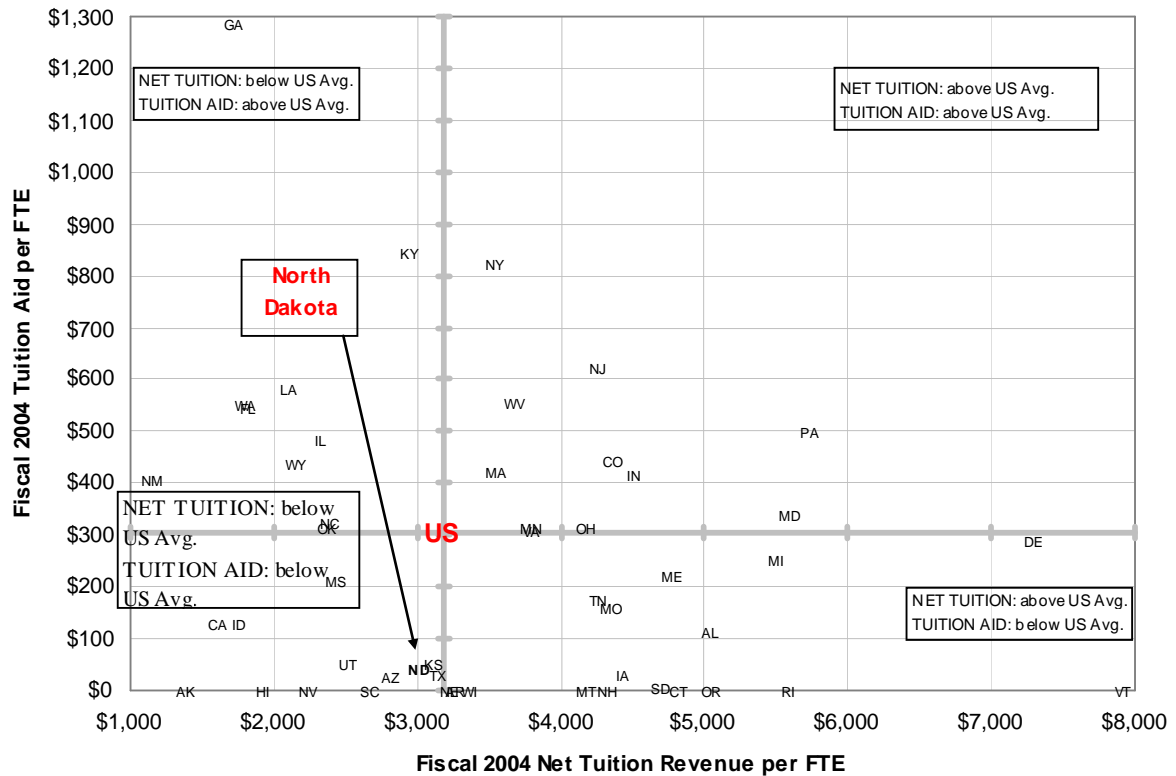
EXHIBIT 2-17
PERCENT CHANGE IN EDUCATIONAL APPROPRIATIONS AND
NET TUITION REVENUE PER FTE STUDENT, FISCAL 1991-2004



Source: SHEF, 2005.

Many states fund student financial aid programs both to supplement federal grants, loans, and work-study programs, and to offset tuition increases so that access to a higher education is maintained. A state that relies largely on net tuition revenues to fund public colleges and universities might also fund a balanced state financial aid program. In **Exhibit 2-18**, data on the horizontal axis represent Fiscal Year 2004 net tuition revenues per FTE student for each state, while the data on the vertical axis represent state aid for tuition and required fees. States in the upper right quadrant exceeded the national average in both net tuition revenue and tuition aid while states in the upper left quadrant lagged the national average net tuition but exceeded the national average in tuition aid. States in the lower right quadrant exceeded the national average in net tuition revenue but lagged in tuition aid. North Dakota is among the states in the lower left quadrant and lagged the national average in both net tuition revenues and tuition aid. While these data show the relative position of the states on tuition rates and state-funded financial assistance, it is important to remember that these net tuition data include only public institutions and institutional aid is excluded.

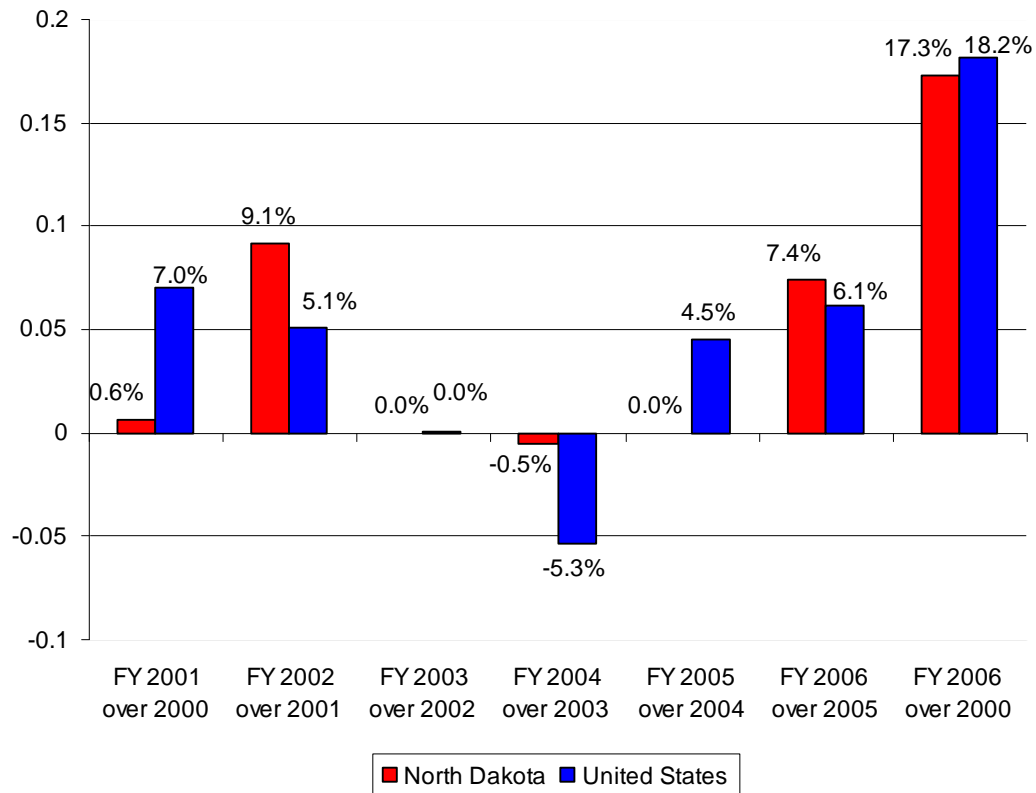
EXHIBIT 2-18
NET TUITION REVENUE PER FTE AND STATE FUNDED TUITION AID PER FTE
FISCAL 2004



Source: SHEF, 2005.

North Dakota state appropriations for higher education increased from \$183.5 million in FY2000 to \$201.5 million in FY2003, but dropped to \$200.4 million in FY 2004 and 2005 before increasing to \$215.3 million in FY 2006. FY 2006 funding for the U.S. totals \$66.9 billion, an increase of 6.1 percent over the \$63.0 billion appropriated in FY 2005. **Exhibit 2-19** displays the annual change in appropriations from FY 2000 to FY 2006, as well as the six-year change from FY 2000 to FY 2006. Over this time period, North Dakota general fund appropriations for the current operations of higher education increased 17.3 percent compared to the national average increase of 18.2 percent.

EXHIBIT 2-19
ANNUAL CHANGE IN APPROPRIATIONS FOR HIGHER EDUCATION
FY 2000 TO FY 2006



Source: Calculated by MGT from Grapevine.

Tuition

Tuition and fees at the North Dakota institutions have been increasing over the last several years, as was shown in Exhibits 2-17 and 2-18. **Exhibit 2-20** displays information on the tuition and fee rates at the North Dakota colleges and universities, and the national averages as measured both by the College Board and the Washington Higher Education Coordinating Board. In FY 2006, tuition and fees at the North Dakota institutions increased over FY 2005 at a higher rate than the national averages, but increased at a slower rate (except for two institutions) than the national average in FY 2005 over FY 2004.

Tuition and fees at the four-year universities continues to be a “bargain” relative to the national average tuition rates, even with large increases. However, tuition and fees at the two-year campuses is significantly greater than the national averages. Tuition and fees at North Dakota two-year institutions is about 150 percent of the national average two-year tuition and fees.

EXHIBIT 2-20
TUITION AND FEES AT NORTH DAKOTA INSTITUTIONS AND NATIONAL AVERAGES

INSTITUTION	2005-06		% INCREASE OVER 2004-05		2004-05		% INCREASE OVER 2003-04		2003-04	
	Resident	Non-Resident	Resident	Non-Resident	Resident	Non-Resident	Resident	Non-Resident	Resident	Non-Resident
Bismarck State College	3,356	8,010	7.2%	6.5%	3,129	7,519	27.1%	29.0%	2,462	5,830
Dickinson State University	4,154	9,713	9.3%	9.4%	3,799	8,876	21.0%	19.9%	3,139	7,405
Lake Region State College	3,333	3,333	8.7%	8.7%	3,065	3,065	12.6%	12.6%	2,723	2,723
Mayville State University	4,943	10,454	9.0%	9.3%	4,533	9,566	13.9%	15.5%	3,981	8,283
Minot State University	4,092	9,870	10.2%	9.8%	3,712	8,989	15.0%	15.4%	3,228	7,787
Minot State University - Bottineau	3,202	7,502	9.0%	9.0%	2,938	6,883	15.0%	15.4%	2,554	5,964
North Dakota State College of Science	3,268	7,990	6.3%	6.1%	3,074	7,533	28.0%	29.3%	2,402	5,828
North Dakota State University	5,264	12,545	10.2%	9.8%	4,776	11,424	20.5%	19.0%	3,965	9,600
University of North Dakota	5,327	12,659	10.3%	9.9%	4,828	11,522	16.2%	16.4%	4,156	9,902
Valley City State University	4,932	10,656	8.2%	8.9%	4,558	9,785	13.2%	15.7%	4,026	8,455
Williston State College	2,850	3,950	8.0%	7.5%	2,638	3,675	11.1%	10.2%	2,374	3,334
National Average										
Four-year	5,491		7.0%		5,132		24.7%		4,115	
Two-year	2,191		5.5%		2,076		24.0%		1,674	
National Averages Per Washington Higher Education Coordinating Board Annual National Comparison of Tuition and Fees										
Flagship Universities					5,724				5,218	
Comprehensive Colleges & State Univ (We use this for MiSU and 4-year campuses)					4,545				4,169	
Community Colleges					2,324				2,155	

3.0 HIGHER EDUCATION ROUNDTABLE

3.0 HIGHER EDUCATION ROUNDTABLE

This chapter of the report provides an evaluation of previous Higher Education Roundtable recommendations, including:

- a. Status of implementation of the recommendations.
- b. Strengths and weaknesses of the recommendations as implemented.
- c. Appropriateness of the recommendations to meet the expectations and needs of students, citizens, higher education entities, and the Legislative Assembly.

Background

The 1999 Legislative Assembly directed that a study be conducted to

“address the expectations of the North Dakota University System in meeting the state’s needs in the twenty-first century, the funding methodology needed to meet these expectations and needs, and an accountability system and reporting methodology for the University System.”¹

A group of 21 legislators and 40 additional state leaders from government, education, and the private sector formed the Roundtable to conduct the study and develop recommendations for the funding methodology and accountability system.

The Roundtable developed expectations that the North Dakota University System (NDUS) would promote the expansion and diversification of the state’s economy and enhance the quality of life of the citizens of the state. The broad expectation of the Roundtable was that the NDUS would be an academically competitive system that is engaged at every level with the needs and problems of the state and its citizens; and accessible and responsive to all individual and corporate “citizens” of the state.

To carry out these expectations, the Roundtable developed over 90 recommendations in a relationship characterized as **flexibility with accountability**; that is, the NDUS institutions must have the freedom to pursue the agreed-upon agenda but must also be accountable. The accountability measures that arose from this agreement are discussed in Chapter 4.

The goal of the Roundtable was stated as “enhance the economic vitality of North Dakota and the quality of life of its citizens through a high quality, more responsive, equitable, flexible, accessible, entrepreneurial, and accountable University System.”²

Based on this goal, the Roundtable established six key cornerstones under which all recommendations are organized:

¹ Report of the Roundtable, May 25, 2000, Executive Summary.

² Ibid. p. 7.

- Cornerstone 1: Economic Development Connection** – Direct connections and contributions of the University System to the economic growth and social vitality of North Dakota.
- Cornerstone 2: Education Excellence** – High quality education and skill development opportunities that prepare students to be personally and professionally successful, readily able to advance and change careers, be life-long learners, good citizens, leaders, and knowledgeable contributing members of an increasingly global and multi-cultural society.
- Cornerstone 3: Flexible and Responsive System** – A University System environment that is responsive to the needs of its various clients and is flexible, empowering, competitive, entrepreneurial, and rewarding.
- Cornerstone 4: Accessible System** – A University System that is proactively accessible to all areas of North Dakota and seeks students and customers from outside the state. It provides students, business, industry, communities, and citizens with access to educational programs, workforce training opportunities, and technology access and transfer – and does so with the same performance characteristics as described in the “Flexible and Responsive System” Cornerstone.
- Cornerstone 5: Funding and Rewards** – A system of funding, resource allocation, and rewards that assures quality and is linked to the expressed high priority needs and expectations of the University System – assures achievement of the expectations envisioned.
- Cornerstone 6: Sustaining the Vision** – A structure and process that assures the University System for the 21st century, as described by these cornerstones, remains connected, understood, relevant, and accountable to the present and future research, education, and public service needs of the state and its citizens – sustaining the vision.

Roundtable Recommendations

For the first Roundtable, a separate task force each chaired by a legislative committee member, developed recommendations and accountability measures related to a Cornerstone, and the reports, recommendations, and accountability measures developed by each of the six task forces are summarized in the Report of the Roundtable. A total of 92 recommendations were developed by the Roundtable meeting in the 1999-2000 interim. In addition to the 92 recommendations, over 70 accountability measures or data items were identified.

During the 2001-02 Interim, the Higher Education Roundtable reconvened the six task forces to develop by consensus high-priority action items related to the six Cornerstones. The task forces developed 20 items for action, most of which were extensions and consolidations of the 92 recommendations of the 1999-2000 interim.

Similarly, during the 2003-04 Interim, the Higher Education Roundtable convened six task forces that were similar to those formed for the first Roundtable during the 1999-2000 Interim. The purpose of the task forces was to develop meaningful recommendations for enhancing the economy and other appropriate issues concerning higher education in North Dakota. These task forces developed 21 recommendations. In addition, the Higher Education Roundtable convened six discussion groups, each chaired by a member of the legislative committee, who developed 34 additional recommendations, many of which overlapped from discussion group to discussion group.

Exhibit 3-1 summarizes the status of implementation of the recommendations from the first Roundtable held during the 1999-2000 interim. Recommendations were judged to be fully implemented, partially implemented, or not implemented. Of the 92 recommendations from that Roundtable, 33 were judged to be fully implemented, and 59 partially implemented. Some recommendations will never be completely implemented because they involve continually changing client bases; once one group reaches the goal, another client group takes its place and has not reached the goal, for example, of having experienced the workplace as part of their quality education. Others are not implemented because of lack of resources.

EXHIBIT 3-1
STATUS OF IMPLEMENTATION OF 1999-2000 INTERIM
HIGHER EDUCATION ROUNDTABLE RECOMMENDATIONS

RECOMMENDATION	IMPLEMENTATION STATUS		
	FULL	PARTIAL	NONE
Economic Development Connection:			
1. Business alliances and partnerships	x	x	
2. Relationships with economic development organizations	x	x	
3. Technical program offerings		x	
4. Programs on entrepreneurship	x		
5. Partner for state-of-the-art facilities		x	
6. Partnerships with the tribal college		x	
7. Reservation workforce		x	
8. Technology infrastructure as a public utility		x	
9. Support for workforce training delivery system		x	
10. Encourage entrepreneurial behavior in the NDUS		x	
11. Modify budget process, appropriations, and audit	x		
12. Agree on accountability measures	x		
13. Add technology to the Vision 200 report	x		
14. Identify high potential research/development opportunities		x	
15. Maximize potential of global marketplace		x	
Education Excellence: Students and Learning			
1. Attract, recruit, retain highly qualified students		x	
2. Tie between learner outcomes and workplace needs		x	
3. Student workplace experience		x	
4. Identify learner outcomes and measure those		x	
5. Students leave with skills/attitudes for lifelong learning		x	
6. Partnerships with K-12 on standards		x	

EXHIBIT 3-1 (Continued)
**STATUS OF IMPLEMENTATION OF 1999-2000 INTERIM
 HIGHER EDUCATION ROUNDTABLE RECOMMENDATIONS**

RECOMMENDATION	IMPLEMENTATION STATUS		
	FULL	PARTIAL	NONE
Education Excellence: Faculty and Teaching			
1. Make teaching attractive to recruit/retain faculty		X	
2. Faculty involve employers in determining outcomes		X	
3. Infuse entrepreneurship skills into courses		X	
4. Indicators of quality and excellence for all learning		X	
5. Move from accountability based on process to outcomes		X	
6. Update faculty knowledge and skills		X	
7. Use state-of-the art equipment and technology		X	
8. Create a culture of continuous improvement		X	
9. Continuous improvement in all campus operations		X	
10. Courses/programs focus on economic & social needs of ND		X	
11. Use technology for access for non-traditional students		X	
12. Maximize technology opportunities for instruction		X	
Research Function			
1. NDUS a critical force in the economic well-being of ND		X	
2. Research create business opportunities		X	
3. Grants focused on economic, social, and educational needs of ND		X	
4. Reward faculty for pursuing research grants		X	
5. Students should gain practical research skills		X	
6. Faculty serve as lifelong learning models		X	
Service Obligation			
1. Apply knowledge to meet needs of ND and its citizens		X	
2. Institutions provide high quality cultural activities		X	
3. NDUS be attractive to non-traditional students		X	
4. Keep academic programs current		X	
5. Citizens able to view tangible forms of services to communities		X	
6. Institutions serve the state by expanding workforce training		X	
Flexible and Responsive System: Concerning the culture, policies and practices of the NDUS			
1. Build trusting relationships between NDUS, legislature, executive		X	
2. NDUS create policies and culture to reward entrepreneurship	X		
3. Give campuses control over and responsibility for budgets	X		
4. Move from seat-based to results-based credentialing		X	
5. Provide training to improve staff's ability to provide up-to-date learning		X	
6. Change formula or allocation system to reward meeting student needs		X	
7. Do not lose focus on traditional college student	X		
8. Movement to flexibility should include commitment to quality	X		
Concerning customer/client/learner focus			
1. Use asynchronous learning		X	
2. Create a seamless organization from student's perspective		X	
3. Offer flexible, focused, responsive on-campus programs		X	
Concerning relationship to the business community			
1. Identify customer needs and delivery systems to meet needs		X	
2. Continue to update faculty and staff knowledge to meet needs		X	

EXHIBIT 3-1 (Continued)
STATUS OF IMPLEMENTATION OF 1999-2000 INTERIM
HIGHER EDUCATION ROUNDTABLE RECOMMENDATIONS

RECOMMENDATION	IMPLEMENTATION STATUS		
	FULL	PARTIAL	NONE
Accessible System:			
1. SBHE designate learner centers to provide statewide access	x		
2. Develop alternative delivery systems responsive to student needs		x	
3. Develop and offer programs responsive to state needs and market trends		x	
4. Partner with private and tribal colleges to ensure access		x	
5. Communities partner with NDUS to meet training needs		x	
6. State government provide affordable broadband high-speed internet access to all ND citizens		x	
7. Partner with K-12 education to ensure students arrive at college ready		x	
8. Funding to encourage collaboration, encourage new delivery so student costs remain affordable to ND citizens		x	
9. SBHE review and modify tuition to remain competitive		x	
10. NDUS modify administrative systems and fiscal practices		x	
11. SBHE and campuses modify to support values of Roundtable	x		
12. SBHE recommend a fiscal accountability report	x		
13. NDUS take a leadership role in creating directory of services	x		
Funding and Rewards:			
1. SBHE and Chancellor recommend a financing plan	x		
2. Funding plan to have base funding, incentive, and asset-funding	x		
3. Legislative assembly work with NDUS to reach agreement on model	x		
4. OMB and Legislative Assembly modify budget request process	x		
5. Executive and legislative branches modify budget/appropriations	x		
6. SBHE establish rates to access is maintained		x	
7. Legislative Assembly provide lump sum base and strategic funding	x		
8. Provide budget flexibility	x		
9. SBHE adopt the recommendations in Sustaining Vision Cornerstone	x		
10. SBHE develop consistent set of financial reporting measurements	x		
11. Revise the audit process	x		
12. SBHE develop procedures for flexibility in use of resources	x		
13. Revise policies to reflect vision of the Roundtable	x		
14. Allocate funds for maintenance of physical assets		x	
Sustaining the Vision:			
1. Establish a mechanism for sustaining the work of the Roundtable		x	
2. NDUS take initiative to arrange Roundtable meetings	x		
3. NDUS develop systems for monitoring progress on accountability	x		
4. SBHE review current strategic plan and modify	x		
5. NDUS provide annual performance and accountability report	x		
6. SBHE provide status report on higher education in ND	x		
7. SBHE and system office develop plan to communicate results and recommendations of the Roundtable	x		

Exhibit 3-2 displays similar information for the 20 high-priority action items that were developed by the 2000-01 Interim Higher Education Roundtable. MGT was unable to find any implementation of the recommendation to enhance the state scholarship program. Of the other 19 recommendations, six were judged to be fully implemented and 13 were only partially implemented.

EXHIBIT 3-2
STATUS OF IMPLEMENTATION OF 2001-02 INTERIM
HIGHER EDUCATION ROUNDTABLE RECOMMENDATIONS

RECOMMENDATION	IMPLEMENTATION STATUS		
	FULL	PARTIAL	NONE
Economic Development Connection:			
1. Review state laws to protect privacy of business and industry partners	x		
2. Endorse the New Economy Initiative statewide talent pool	x		
Education Excellence:			
1. Keep faculty salaries competitive		x	
2. Begin to develop an approach to K-20 education using Roundtable	x		
3. Encourage emphasis on experiential learning	x		
4. Enhance emphasis on research to attract and retain faculty		x	
5. Enhance the state scholarship program			x
Flexible and Responsive System:			
1. Continue and expand flexibility	x		
2. Establish strategic alliances		x	
3. Examine the balance between competition and cooperation in NDUS		x	
Accessible System:			
1. Develop partnerships to ensure students are prepared for college		x	
2. Encourage assistance to non-traditional students		x	
3. Enhance marketing for recruitment		x	
Funding and Rewards:			
1. Identify strategies for maximizing campus utilization		x	
2. Continue to enhance entrepreneurship		x	
3. Ensure that focus and rewards are consistent with NDUS goals		x	
4. Continue special revenue fund authority	x		
Sustaining the Vision:			
1. Continue the Roundtable concept by holding annual meetings		x	
2. Develop a clear Roundtable message explaining benefits		x	
3. Tell the story to various stakeholders		x	

Exhibit 3-3 displays the same information on the status of the 21 recommendations of the 2003-04 Higher Education Roundtable, as well as the status of the 34 recommendations from the six discussion groups that were convened to develop recommendations for action. Two recommendations related to funding of higher education at 21 percent of the total state budget have not been implemented.

EXHIBIT 3-3
STATUS OF IMPLEMENTATION OF 2003-04 INTERIM
HIGHER EDUCATION ROUNDTABLE RECOMMENDATIONS

RECOMMENDATION	IMPLEMENTATION STATUS		
	FULL	PARTIAL	NONE
Economic Development Connection:			
1. Continue emphasis on NDUS contributions to the economy	x		
2. Develop a more positive image of the state of North Dakota		x	
3. Continue to assist with business development		x	
Education Excellence:			
1. Build Roundtable support among faculty		x	
2. Recognize the importance of education excellence Cornerstone		x	
3. Encourage private sector advisory boards		x	
4. Revise the accountability measures relating to education excellence		x	
Flexible and Responsive System:			
1. Anticipate trends and apply a flexible approach		x	
2. Facilitate a flexible system through open exchange of information		x	
3. Define a successful NDUS partnership arrangement		x	
Accessible System:			
1. Develop a seamless PK-20 approach thru dual credit courses		x	
2. Review financial assistance		x	
3. Enhance marketing for recruitment		x	
4. Review the impact of increased tuition costs on enrollment	x		
Funding and Rewards:			
1. Sustain the vision of the Roundtable through NDUS assets		x	
2. Provide rewards for accomplishing Roundtable objectives		x	
3. Support the long-term finance plan		x	
Sustaining the Vision:			
1. Continue the Roundtable concept by holding annual meetings		x	
2. Develop a clear Roundtable message explaining benefits		x	
3. Tell the story to various stakeholders		x	
Discussion Group A:			
1. Continue to invest in higher education		x	
2. Continue to build trusting relationships		x	
3. Review other states' processes for completing legislative info requests	x		
4. Integrate the vision of the Roundtable into all levels of the NDUS		x	
5. Review and update the accountability measures	x		

EXHIBIT 3-3 (Continued)
STATUS OF IMPLEMENTATION OF 2003-04 INTERIM
HIGHER EDUCATION ROUNDTABLE RECOMMENDATIONS

RECOMMENDATION	IMPLEMENTATION STATUS		
	FULL	PARTIAL	NONE
Discussion Group B:			
1. Review the accountability measures	x		
2. Continue Roundtable by having 2 meetings per year		x	
3. Identify soft skills and incorporate those areas in academic programs		x	
4. Increase faculty representation on Roundtable	x		
Discussion Group C:			
1. Provide funding to SBHE for collaboration		x	
2. Provide incentives to students and faculty for internships		x	
3. Continue to promote Centers of Excellence	x		
4. Allow Workforce 2000 funds to be used for soft skills training		x	
5. Market the benefits of the Roundtable		x	
6. Interface with the federal government when possible		x	
7. Identify soft skills and incorporate those areas in academic programs		x	
Discussion Group D:			
1. Continue the Roundtable concept by holding meeting before 2005	x		
2. Continue the budgetary flexibility	x		
3. Review the accountability measures and revise as needed	x		
4. Provide SBHE funding for collaboration		x	
5. Conduct a study of the remedial needs of students		x	
6. Allow new or small businesses to access the statewide info tech network		x	
7. Develop academic programs that respond quickly to state needs		x	
8. Identify soft skills and incorporate those areas in academic programs		x	
9. Communicate the results of a survey on job skills needed by employees		x	
10. Provide higher education funding equal to 21% of the total state budget			x
Discussion Group E:			
1. Provide assistance to the private sector for broadband communication		x	
2. Provide higher education funding equal to 21% of the total state budget			x
3. Develop a structured student internship program		x	
Discussion Group F:			
1. Identify soft skills and incorporate those areas in academic programs		x	
2. Develop a structured student internship program		x	
3. Review the accountability measures and revise as needed	x		
4. Review the provision of distance education and distribution of revenues		x	
5. Market the benefits of the Roundtable		x	

Evaluation of the Roundtable Recommendations

MGT staff interviewed over 100 individuals about the Roundtable, the strengths and weaknesses of the recommendations of the Roundtable, and the appropriateness of the recommendations to meet the needs and expectations of students, citizens, higher education entities, and the Legislative Assembly. In addition, MGT staff attended the February 15, 2006 meeting of the Roundtable and observed the interaction between legislators, executive agency staff, University System staff, and private sector members of the Roundtable.

There is general consensus that the Roundtable through its recommendations, has met the needs and expectations of the various North Dakota constituencies. The Roundtable's recommendations are perceived to have been instrumental in improving the quality of public higher education in North Dakota, integrating higher education into the economy, and more than that, making higher education an economic engine and driver of the economy. Further, through the Roundtable, business and industry have come to the table as partners with higher education in many entrepreneurial endeavors that can only benefit the State. Annual meetings to update the Roundtable recommendations are considered the only effective way to permit a three-way conversation between legislators, the business community, and higher education on the best ways to meet the needs and expectations of North Dakota citizens.

As one "charter" private member of the Roundtable expressed it, the Roundtable is a model for how legislators, the university system, and private individuals can work together to make an impressive difference in the State's economy. Indeed, North Dakota's Higher Education Roundtable is seen by other states as a model for improving the economy because, to be successful, the new, knowledge-based economy requires the complete participation of the university sector with all of its many, varied resources.

The recommendations of the Roundtable are perceived to have been instrumental in changing the perceptions of the business community toward the usefulness of the colleges and universities. In addition, the interactions of the Roundtable members leading to consensus recommendations have improved business and industry's perceptions of the quality and preparedness of graduates of the North Dakota University System.

Many of the Roundtable's members expressed the opinion that the Roundtable has had the impact of creating a clear and unified set of expectations and goals for the university system that can be evaluated through the accountability or performance measures. Before the Roundtable and its consensus recommendations, there were multiple expectations for higher education, and those multiple expectations many times were in conflict with one another.

Instead of a burden on the state's treasury, higher education is perceived as an economic engine of the economy that benefits all North Dakota and is an investment. This perception appears to be the result of several of the Roundtable's recommendations, as well as the many conversations that have occurred.

The Roundtable's recommendations on flexibility with accountability generally are perceived as among the most successfully implemented. Because of increased flexibility to manage resources, the institutions are perceived to have become more entrepreneurial, and more responsive to the needs of local business and industry, as well as more responsive to the needs of citizens. Economic development centers of excellence are perceived to be a major boon to the economy, and major drivers of economic action.

However, not all of the recommendations and outcomes of the Roundtable are perceived as successful by many citizens who are not Roundtable members. In particular, the perception exists that the campuses and the System have stepped up to perform admirably their half of the bargain, but the state, and in particular, the state Legislative Assembly, has not honored its half of the deal. Lack of adequate funding for faculty and staff salaries, lack of progress toward perceived equity in the distribution of resources among campuses, and lack of a commitment to appropriating 21 percent of the state's budget to higher education all are thought of as weaknesses in the recommendations as implemented.

There is general agreement among most stakeholder groups that MGT staff interviewed that the Roundtable's recommendations, and the implementation of those recommendations, have met the needs and expectations of the various North Dakota constituents. Nevertheless, there is a vocal minority who believe that the Legislative Assembly should take back control of the Roundtable and the NDUS, and that recommendations for flexibility with accountability have not served the state well. There was no evidence presented to support those beliefs.

One area in which the Roundtable's recommendations have not been implemented as successfully as would be hoped is the area of publicizing within the state the benefits of the Roundtable. Ordinary North Dakota citizens may have heard of the Roundtable but do not have a good understanding of what the Roundtable has done, or how the actions and recommendations may have benefited them or their families. Outside the state, the Roundtable model is well-known, and extremely well-regarded. Perhaps the private sector members of the Roundtable could be engaged effectively in ensuring that these Roundtable recommendations on publicizing the benefits can be successfully implemented. Private sector Roundtable members expressed great interest in meeting more than once a year to participate in agenda setting.

The general perception is that the NDUS has stepped up to the plate and carried out their responsibilities to implement the recommendations. Institutions have become more entrepreneurial, have introduced classes on the "soft-skills" needed to succeed in a knowledge based economy, increased collaboration and joint ventures with private business, and provided courses and programs through distance learning and other technologies to meet the needs of non-traditional students. In addition, colleges and universities are perceived by the general public as having made extensive efforts to meet the needs of local communities, to share the resources of the University System with the community, and to meet the training needs of business and industry. These actions are considered to be instrumental in driving the North Dakota economy, and are appropriately meeting citizen and Legislative Assembly needs and expectations.

But the governor and legislature have not committed the resources needed to carry out the Roundtable's recommendations to the fullest extent possible. For example, providing state-of-the-art equipment and a revamped information technology network require infusion of resources that have not been forthcoming. In fact, students are being charged an annual fee to implement the Roundtable recommendation on modifying administrative information systems. Until the state invests additional resources into the higher education enterprise, it is unlikely that the full resources of the University System can be leveraged to further meet the needs and expectations of students, citizens, and the Legislative Assembly.

4.0 ACCOUNTABILITY MEASURES

4.0 ACCOUNTABILITY MEASURES

This chapter provides an evaluation of the accountability measures and benchmarks in terms of appropriateness and adequacy, as well as a discussion of national trends in accountability and performance measures.

National Trends in Accountability and Performance Measures

All states have accountability or performance measures for higher education institutions, some of which are components of performance funding systems that link funding to performance on accountability measures. Performance funding, budgeting, and reporting represent the main methods of assuring state accountability for public higher education in a decentralized era of managing for results rather than controlling by regulations. In 1979 Tennessee became the first state to implement a performance funding system for higher education. In the Tennessee program, up to five percent of an institution's budget was allocated if the institution hit its performance targets.

Performance funding reached its peak usage in 2001 when 19 states had performance funding systems for higher education. The bad budgets for higher education that emerged during 2001 and 2002 spurred a rapid advance in the number of states using performance reporting and reversed the steady climb in the number of states using performance budgeting and funding.¹

Performance funding, budgeting, and/or reporting may exist under three different circumstances:

- **Mandated/Prescribed:** legislation mandates the program and prescribes the indicators or measures.
- **Mandated/Not Prescribed:** legislation mandates the program but allows state-coordinating or governing agencies to propose the indicators in cooperation with campus leaders.
- **Not Mandated:** coordinating or system boards in collaboration with campus officials voluntarily adopt the plan without legislation.

North Dakota's accountability measures/reporting would be classified as "Mandated/Prescribed" because the Legislative Assembly has written its accountability measures into law. **Exhibit 4-1** displays under which circumstance each state's accountability reporting program operates.

¹ Joseph C. Burke and Henrik P. Minassians, "Performance Reporting: The Preferred No-Cost Accountability Program," Rockefeller Institute, 2004.

EXHIBIT 4-1 ACCOUNTABILITY REPORTING BY STATES

MANDATED/PREScribed PROGRAMS	ADOPTION	FIRST REPORT
Alaska	2000	2000
Colorado	1996	1999
Florida	1991	1993
New Jersey	1994	1996
North Dakota	1999	2000
South Carolina	1992	1996
Texas	1997	1999
Washington	1997	1999
West Virginia	1991	1992
Wyoming	1995	1997

MANDATED/NOT PRESCRIBED	INITIATED	FIRST REPORT
Arizona	1995	1997
Arkansas	2003	
California	1991	1992
Connecticut	2000	2001
Georgia	2000	2001
Hawaii	1996	1997
Iowa	2001	
Kentucky	1997	1997
Louisiana	1997	2001
Maryland	1991	1996
Massachusetts	1997	1998
Michigan	2000	2001
Minnesota	2000	2000
Mississippi	1992	
North Carolina	1991	1999
Utah	1995	1997
Vermont	2002	
Virginia	1995	2001

NOT MANDATED	INITIATED	FIRST REPORT
Alabama	1982	1983
Idaho	1991	1999
Illinois	1997	1999
Indiana		2002
Kansas		2001
Maine	2000	2001
Missouri	1992	1993
Montana	2003	
Nebraska	2004	
Nevada	2004	
New Hampshire	2002	
New Mexico	1998	1998
New York	2001	
Ohio	1999	2000
Oklahoma	1997	2000
Oregon	1997	1999
Pennsylvania	1997	2000
Rhode Island	1998	1998
South Dakota	1995	2001
Tennessee	1989	1990
Wisconsin	1993	1996

Source: Burke and Minassians, updated by MGT.

Accountability measures may be classified as:

- **Input** – human, financial, and physical resources received to support programs, activities, and services.
- **Process** – means or method used to deliver programs, activities, and services.
- **Output** – quantity of products produced.
- **Outcome** – quality of the benefit or impact of the programs, activities, and services on students, society, and states.

North Dakota has all four types of measures, as do the majority of other states, as shown in **Exhibit 4-2**.

EXHIBIT 4-2
PERFORMANCE MEASURES FOR HIGHER EDUCATION

STATE	INPUT	PROCESS	OUTPUT	OUTCOME
Alabama	X		X	
Alaska	X		X	
Arizona	X	X	X	X
Arkansas	X	X	X	X
California	X		X	X
Colorado	X	X	X	X
Connecticut	X	X	X	X
Florida	X	X	X	X
Georgia	X	X	X	X
Hawaii	X	X	X	X
Idaho		X	X	X
Illinois		X	X	X
Indiana	X		X	X
Iowa	X	X	X	X
Kentucky	X	X	X	X
Louisiana	X		X	X
Maine	X		X	X
Maryland	X	X	X	X
Massachusetts	X	X	X	X
Minnesota	X	X	X	X
Mississippi		X	X	X
Missouri	X		X	X
Montana	X	X	X	X
Nebraska	X		X	X
Nevada	X	X	X	X
New Hampshire	X	X	X	X
New Jersey	X	X	X	
New Mexico	X	X	X	X
New York	X	X	X	X

EXHIBIT 4-2 (Continued)
PERFORMANCE MEASURES FOR HIGHER EDUCATION

STATE	INPUT	PROCESS	OUTPUT	OUTCOME
North Carolina	X	X	X	X
North Dakota	X	X	X	X
Ohio	X	X	X	X
Oklahoma	X	X	X	X
Oregon		X	X	X
Pennsylvania		X	X	X
Rhode Island	X	X	X	X
South Carolina	X		X	X
South Dakota		X	X	X
Tennessee	X	X	X	X
Texas	X	X	X	X
Utah		X	X	X
Vermont	X		X	X
Virginia			X	X
Washington		X	X	X
West Virginia	X	X	X	X
Wisconsin	X	X	X	X
Wyoming			X	X

Source: Developed by MGT from survey of states.

Exhibit 4-3 displays the common accountability or performance measures used by the states. North Dakota's measures are similar to those of the other states.

In 2000, the National Center for Public Policy and Higher Education released the *Measuring Up 2000* report. The *Report Card*, as it is commonly called, graded states from A to F on each of the five categories of college *Preparation, Participation, Affordability, Completion, and Benefits*. It gave an incomplete to all states on a sixth Category, *Student Learning*, since its authors determined that no reliable and comparable national data existed for assessing performance in this area. In 2000, 30 states were using higher education accountability measures; in 2001, the year following the issuance of the first Report Card, that number increased to 39, and by 2005, all states had accountability or performance reporting for higher education.

In 2002 and again in 2004, the National Center for Public Policy and Higher Education released report cards on higher education for each of the states. Each report was intended to provide the public and policymakers with information to assess and improve postsecondary education in each state. The *Measuring Up* reports of 2000, 2002, and 2004 grade states in six overall performance categories:

- **Preparation** – How adequately are students in each state being prepared for education and training beyond high school?
- **Participation** – Do state residents have sufficient opportunities to enroll in education and training beyond high school?

- **Affordability** – How affordable is higher education for students and their families?
- **Completion** – Do students make progress toward and complete their certificates and degrees in a timely manner?
- **Benefits** – What benefits does the state receive as a result of having a highly educated population?
- **Learning** – What is known about student learning as a result of education and training beyond high school?

States receive a grade in each of the six categories based on the state's performance on several indicators or quantitative measures for each category. Most states received an "Incomplete" grade in Learning because there are no common benchmarks that permit state-by-state comparisons in Learning. In the 2004 report, in the categories of Preparation, Participation, Completion, and Benefits, grades were calculated by comparing each state's current performance to that of the best-performing states, to place each state in the national context and to encourage each state to "measure up" to the highest performing states.

In the Affordability category in 2004, each state was judged to be what the National Center called "measuring down." This means that even the best performing states were becoming less affordable when the costs of higher education are considered in relation to family income. As a result of this "measuring down," 2004 grades in Affordability were calculated by comparing each state's current result to the performance of top states 10 years ago. No state received an "A" in Affordability.

Measuring Up 2004 also compared each state's current results with its own performance a decade earlier. Although the historical information is not graded, it does provide a context for comparisons and to judge improvements or declines.

Nationally, the results by category were as follows:

- **Preparation** - 44 states improved on more than half of the indicators and the remaining 6 states improved on at least one of the indicators.
- **Participation** – 8 states improved on more than half of the indicators, 23 improved on at least one, and 19 states declined on every indicator
- **Affordability** – 2 states improved on more than half of the indicators, 31 improved on at least one, and 17 declined on every indicator
- **Completion** - 37 states improved on more than half of the indicators, 9 improved on at least one, and 4 states declined on every indicator
- **Benefits** - 41 states improved on more than half of the indicators, 8 improved on at least one, and 1 states declined on every indicator
- **Learning** – 45 states received an "incomplete" and 5 states received a "plus"

EXHIBIT 4-3
ACCOUNTABILITY MEASURES USED BY EACH STATE

STATE	TOTAL UNIVERSITY ENROLLMENT	GRADUATION RATES	RETENTION RATES	EMPLOYER SATISFACTION	STUDENT SATISFACTION	PASSAGE OF LICENSURE EXAMS	SCORES ON GRADUATE ADMISSIONS TESTS	INSTRUCTIONAL EXPENDITURES/S TUDENT	REVENUES PER STUDENT	EXPENDITURES PER STUDENT	STATE AND LOCAL APPROPRIATIONS PER STUDENT	ACT OR SAT SCORES
Arizona	X	X	X	X								
Arkansas	X	X	X									X
California	X			X	X							
Colorado		X	X			X						
Connecticut						X				X		
Florida		X	X			X						
Georgia	X	X	X	X	X	X	X	X	X			X
Hawaii	X	X	X		X	X						X
Idaho	X								X		X	
Illinois												
Indiana	X	X										
Iowa		X	X									X
Kentucky	X	X	X									X
Louisiana	X		X							X	X	X
Maine		X										
Maryland		X	X			X						X
Massachusetts	X	X	X		X	X				X		
Minnesota	X	X										
Mississippi		X	X									
Missouri	X	X	X	X								X
Montana			X									X
Nebraska	X	X	X									X
Nevada	X	X	X									
New Hampshire	X	X	X	X	X	X						
New Jersey	X	X										

EXHIBIT 4-3 (Continued)
ACCOUNTABILITY MEASURES USED BY EACH STATE

STATE	TOTAL UNIVERSITY ENROLLMENT	GRADUATION RATES	RETENTION RATES	EMPLOYER SATISFACTION	STUDENT SATISFACTION	PASSAGE OF LICENSURE EXAMS	SCORES ON GRADUATE ADMISSIONS TESTS	INSTRUCTIONAL EXPENDITURES/ STUDENT	REVENUES PER STUDENT	EXPENDITURES PER STUDENT	STATE AND LOCAL APPROPRIATIONS PER STUDENT	ACT OR SAT SCORES
New Mexico			X							X		
New York		X							X		X	X
North Carolina	X											X
North Dakota	X	X	X	X	X	X		X	X	X	X	
Ohio	X	X	X			X		X		X		X
Oklahoma	X	X									X	X
Oregon	X		X	X	X				X			
Pennsylvania		X	X							X		
Rhode Island		X	X									X
South Carolina	X					X	X					X
South Dakota	X		X									
Tennessee	X	X	X								X	X
Texas	X	X	X			X			X		X	
Utah					X	X	X					
Vermont	X											
Virginia	X											
Washington		X	X									
West Virginia	X	X	X						X	X		X
Wisconsin		X	X			X	X					
Wyoming			X	X		X						

North Dakota's scores on the 2004 *Report Card* are shown in **Exhibit 4-4**, together with improvement scores over the past decade. North Dakota was graded as having performed consistently well in preparing students for and enrolling them in higher education. But, North Dakota has lost ground in providing students with an affordable higher education. North Dakota is the top performing state in the likelihood of 9th graders enrolling in college, and has consistently performed well on this measure for the last decade. In addition, a high percentage of freshmen at four-year public institutions return for their sophomore year. On the other hand, a very low percentage of working-age adults enroll in higher education in North Dakota, and 11 percent of adults do not have a high school diploma. More importantly, net college costs for low- and middle-income students represent nearly 40 percent of family income. This percentage has increased over the last decade. And a fairly low percentage of college students complete a bachelor's degree within six years.²

EXHIBIT 4-4
NORTH DAKOTA SCORES IN *MEASURING UP* 2004

PERFORMANCE CATEGORY	GRADE	IMPROVEMENT OVER LAST DECADE
Preparation	B	even
Participation	A-	even
Affordability	F	declined
Completion	B	declined
Benefits	C	improved
Learning	I	?

Source: Measuring Up 2004.

Many states with accountability or performance measurement and reporting programs did poorly on the *Measuring Up* report cards, in part because their indicators do not reflect statewide needs, such as high school performance, college going rates, college cost as a percent of family income, adult degree attainment, and the state's economic and civic benefits from higher education. Researchers for The National Policy Center concede that race and ethnicity explain about 10 percent of the state scores and wealth and economic vitality about 25 percent.³

Background on the NDUS Accountability Measures

The Higher Education Roundtable developed and recommended an initial set of 84 accountability measures that relate to the six cornerstones of the Roundtable. Those measures were considered to be the factors in which stakeholders were interested. A 15-member subcommittee of the Roundtable (comprised of seven legislators and NDUS staff, and representatives of the Governor's office, State Auditor's office, Office of Management and Budget, and the private sector) met to develop further the financial accountability measures. Draft non-financial accountability measures also were developed from the list of measures identified by the Higher Education Roundtable.

² National Center for Public Policy and Higher Education, *Measuring Up 2004*.

³ The National Center for Public Policy and Higher Education. 2002. *Measuring Up 2002: The State-by-State Report Card For Higher Education*. San Jose, CA: The National Center for Public Policy and Higher Education.

In 2001, the proposed measures, with refinements, additions and deletions, were adopted by the State Board of Higher Education (SBHE) and the North Dakota Legislative Assembly as part of the overall “flexibility with accountability” legislation. Twelve measures were added by the SBHE in 2001 to provide guidance in establishing policy for the NDUS. All of the measures are organized or reported based on the cornerstones of the Higher Education Roundtable.

During the 2001 legislative session, “flexibility with accountability” was perceived to be an important component of the long-term finance plan (LTFP). Annual accountability measure reports, with campus alignment plans, provided the accountability part of the equation. When the accountability measures were adopted in 2001, targets were not set by the Roundtable, the SBHE, or the North Dakota Legislature (except for funding targets included in the NDUS Long-Term Finance Plan).

Annual NDUS Accountability Measures Reports are prepared to indicate progress made since the Roundtable recommended the accountability measures. (The 2005 report was the fifth annual accountability measures report.) The measures are reviewed annually with the SBHE and with the Legislative Committee on Higher Education. Several measures were changed in 2002 because of changes to generally accepted accounting principles made by the Governmental Accounting Standards Board (GASB).

The measures were reviewed by the SBHE and North Dakota Legislative Assemblies in 2003 and 2005. In 2005, the Legislative Assembly adopted 22 measures, a reduction from 25. The SBHE also reduced the number of board measures from 12 to nine, resulting in refinements and a net reduction from a total of 37 to 31 measures. The accountability measures in effect in 2006 are displayed in **Exhibit 4-5** which also indicates the Roundtable cornerstone with which the measure is associated, and whether it is a legislatively-mandated or SBHE-required measure. North Dakota’s performance or accountability measures are similar to the measures used by other states

EXHIBIT 4-5
2005 ACCOUNTABILITY MEASURES FOR THE NDUS

ACCOUNTABILITY MEASURE	LEGISLATIVE	SBHE
Cornerstone 1: Economic Development Connection		
Enrollment in entrepreneurship courses and the number of graduates of entrepreneurship programs	X	
Percentage of University System graduates obtaining employment in the state appropriate to their education	X	
Number of businesses and employees in the region receiving training	X	
Research expenditures in proportion to the amount of revenue generated by research activity and Funding received for research activity	X	
Workforce training information, including levels of satisfaction with training events as reflected in information systematically gathered from employers and employees receiving training		X
Cornerstone 2: Education Excellence		
Student performance on nationally recognized exams in their fields compared to the national averages	X	
First-time licensure pass rates compared to other states	X	
Alumni-reported satisfaction with preparation in selected major, acquisition of specific skills and technology knowledge and abilities	X	
Student-reported satisfaction with preparation in selected major, acquisition of specific skills, and technology knowledge and abilities	X	
Employer-reported satisfaction with preparation of recently hired graduates	X	
Student graduation and retention rates	X	
Non-completers satisfaction - levels of satisfaction and reasons for non-completion as reflected in a survey of individuals who have not completed their program or degree		X
Student goals - levels and trends in the number of students achieving goals - institution meeting the defined needs/ goals as expressed by students		X
Cornerstone 3: Flexible and Responsive System		
Biennial report on employee satisfaction relating to the university system and local institutions	X	
Levels of satisfaction with responsiveness, as reflected through responses to evaluations of companies receiving training		X
Cornerstone 4: Accessible System		
Number and proportion of enrollments in courses offered by non-traditional methods	X	
Tuition and fees on a per-student basis compared to the regional average	X	
Tuition and fees as a percentage of median North Dakota household income	X	
Student enrollment information, including: (a) total number and trends in full-time, part-time, degree-seeking and non-degree-seeking students being served and (b) the number and trends of individuals, organizations, and agencies served through non-credit activities		X
Student participation - levels and trends in rates of participation of (a) recent high school graduates and non-traditional students and (b) individuals pursuing graduate degrees		X
Cornerstone 5: Funding and Rewards		
Cost per student in terms of general fund appropriations and total University System funding	X	
Cost per student and percentage distribution by major function	X	
Per capital general fund appropriations for higher education	X	
State general fund appropriation levels for University System institutions compared to peer institutions' general fund appropriation levels	X	
Ratio measuring the funding derived from operating and contributed income compared to total University System funding	X	
Ratio measuring the amount of expendable net assets as compared to the amount of long-term debt	X	
Ratio measuring the amount of expendable fund balances divided by total expenditures and mandatory transfers	X	
Ratio measuring net total revenues divided by total current revenues	X	
Higher education financing - a status report on higher education financing as compared to the Long-Term Finance Plan		X
Ratio of incentive funding to total NDUS state general fund appropriations		X
Ratio of NDUS state general fund appropriation levels to total state general fund appropriations		X

Evaluation of Accountability Measures

Each year, the University System produces an accountability measures report *Creating A University System for the 21st Century Annual Accountability Measures Report*. The annual report is consistent with the Roundtable recommendations and documents the progress of the University System on the measures adopted by the Legislative Assembly and the State Board for Higher Education. The report is perceived to be a tool that measures or provides evidence on the system's performance as a whole. Data for individual campuses are not provided in the report, although separate reports for each campus are made available to the Legislative Assembly and to the SBHE. In the report, the measures are organized by the six cornerstones of the Higher Education Roundtable.

As was mentioned earlier, the measures are similar to the accountability or performance measures used by other states or systems of higher education. The report delineates each measure, what it means and why this is an important measure, and some of the indicators provide data over time on performance of the University System on the measure. Some of the measures include comparisons to national or regional norms. For example, the Education Excellence accountability measure "non-completers satisfaction" includes information not only for the North Dakota University System but for the nation for one year. However, the Economic Development Connection accountability measure "number of businesses and employees in the region receiving training" has data only for North Dakota over a five-year time period.

The five accountability measures associated with the **Economic Development Connection** cornerstone are appropriate for this cornerstone, especially as they relate to workforce training and continuing education. There is some question as to whether the workforce training measure adequately evaluates the economic development impact of the masters and research universities. Another measure such as the number of graduates in professional programs may be more appropriate for the graduate-degree-awarding universities. The measure on outside research funding is more appropriate for the research universities than for the two-year colleges.

None of the eight accountability measures associated with the **Education Excellence** cornerstone assess the professional development and achievements of the NDUS faculty. Faculty achievement, as well as student achievement, is an important gauge of the System's educational excellence. Some assessment of the number of endowed professorships and chairs, the number of members of national academies and other professional organizations, faculty awards and honors, or other achievements should be included.

Other common measures of academic excellence that are not included in the Education Excellence cornerstone include average class size of lower-division classes, the percentage of classes taught by tenured or tenure-track faculty, and the percentage of students enrolling in graduate or professional schools after completing their undergraduate degrees. Graduation rates and persistence rates by ethnicity and gender also are not reported.

The two accountability measures associated with the **Flexible and Responsive System** cornerstone both are appropriate for the cornerstone and adequately address the Roundtable goals.

The five accountability measures associated with the **Accessible System** cornerstone are appropriate. The measures "student enrollment information" and "student participation levels" are not presented by ethnicity or gender, which does not allow for a complete assessment of whether the NDUS is truly accessible. North Dakota's population is largely homogenous in

terms of ethnicity, but Native Americans are underrepresented. Because the Roundtable included several recommendations related to Native American populations, it would be beneficial to measure accessibility to this population group in particular.

The eleven accountability measures associated with the **Funding and Rewards** cornerstone are appropriate measures of this important cornerstone. The ratios related to income or revenues, net assets, and fund balances are common ratios used to assess viability of higher education institutions, but are generally thought of as being more appropriate for use with private institutions. Moreover, eleven is too many measures of progress toward achieving the Roundtable goals for this cornerstone.

The largest overall deficiency of the NDUS accountability measures is the lack of quantifiable goals and outcomes for each specific measure. It is difficult to measure the System's success if there are no defined goals for the NDUS to achieve. In addition, many of the measures do not have benchmarks against which progress can be measured. Most other states or systems of higher education include benchmarks for each of their accountability measures. Benchmarks may be established against a group of peer institutions, against national or regional averages, or by other means. For example, the South Carolina accountability measures are benchmarked against the average performance of peer institutions. Each institution has its own set of peers, from whom data for each accountability measure are collected and reported each year.

In addition, the measures are "revised" every two years, a reflection of the biennial nature of the Legislative Assembly. Although some measures have been included since the inception of the accountability reports, most have been changed in some way. If what is measured is what is important, then this implies that what is important changes every two years. Changing measures makes it difficult to track progress.

The collection and publication of these data elements require a significant time commitment from the institutions and the system office. There are too many measures and consequently, some are not perceived to be as important as others. Because the data are presented for the system as a whole, and not for the individual institutions, it is difficult for the faculty and staff of one institution to feel any ownership of or responsibility for achieving progress on that measure. Accountability systems used by other states typically report the measure for each institution in the system for which the measure is appropriate so that institutional progress can be tracked. System-wide measures may also be presented, but are supported by information for each institution.

RECOMMENDATION 4-1:

Establish benchmarks and goals for each measure.

It is difficult to assess "progress" if where you are relative to a benchmark and where you are going are not established. An old sailing expression says "If you don't know where you are, and don't know where you are going, no wind is favorable." The same is true for accountability measures. Each measure should have a benchmark against which it is assessed, and an established goal. For example, for the measure "ratio of faculty and staff to students," one year's data are shown by type of institution. The data are not shown over time, nor is there any comparison to any national average or benchmark, or any goal for what the ratios should be. For this particular measure, MGT recommends that the benchmarks be established by comparison to the faculty and staff ratios at the peer institutions. These data are available for at least five years from the National Center for Education Statistics (NCES) Integrated Postsecondary Education

Data System (IPEDS), and can be aggregated by type of institution and for the system as a whole. In addition, goals should be set for each institution and for the system based on where the system and its institutions are relative to the peers.

RECOMMENDATION 4-2:

Include data for each institution in the annual report, in summary fashion.

Providing these data in one report will contribute to ownership and responsibility for achieving the goals at the institutional level.

RECOMMENDATION 4-3:

Reduce the number of accountability measures.

One or two system-wide measures should be linked to each cornerstone. In addition to the system-wide measures, each institution should recommend for the Legislative Assembly's and the SBHE's consideration measures for each cornerstone that are appropriate for that institution and which relate clearly to the institution's mission. For example, the measure on "research expenditures" is more appropriate for the two research universities than for the two-year colleges. Similarly, the measure "workforce training" has different measures of accomplishment at the two-year colleges than at the four-year.

RECOMMENDATION 4-4:

Once the number of accountability measures is reduced, retain those same measures for five or six years.

When measures are revised every two years, there is no continuity and no way to track progress. Keep the same measures for three biennia so that all can become familiar with the measures and progress can be measured adequately.

RECOMMENDATION 4-5:

Include a measure of faculty productivity that is appropriate for each institution.

Faculty productivity is an important component of education excellence. However, the measure of "productivity" is different for each institution. At the research universities, publications or grants received may be measures of productivity; these measures would not be appropriate for the two-year colleges, where a measure of workforce training may be more appropriate.

5.0 PEER SELECTION

5.0 PEER SELECTIONS

This section of the report will address the selection of peer institutions for North Dakota colleges and universities. The chapter is organized into sections on criteria for peer selection, selection methodology, and lists of peers for each of the institutions in North Dakota. A discussion of peer analysis in general may be found in **Appendix A**.

A “peer” is a college or university that is “most like” another college or university based on similarities on a group of variables like mission, size, organization, control, location, mix of programs, and student body characteristics. Colleges and universities use groups of peers to compare their performance on characteristics and/or to request additional funding to support initiatives. Peers may be determined for one institution based on sets of characteristics that indicate “alikehood” or “similarity” or peers may be determined for a set of institutions.

A set of peers typically includes at least ten colleges or universities because not all will elect to participate in data collection efforts. A peer group smaller than ten may not provide sufficient data to yield valid or reliable information. The peer group may include all actual peers, or it may include “aspirational” peers. Aspirational peers are those that the institution aspires to be like on some criterion, such as faculty salary or compensation levels, or academic reputation.

To determine a set of peers, colleges or coordinating/governing boards may use several methods: geographic location, membership in an organization or externally determined group, or statistical analysis. These methods are discussed in more detail in **Appendix A**.

Criteria for Peer Selection

The process of identifying peers for each of the North Dakota institutions began with development of a set of criteria or variables. In identifying the peer institutions, the primary selection criterion reflected the mission of higher education institutions in North Dakota as identified by their Carnegie Classification, as Carnegie classifications were defined in 2005. Only public institutions were included in the selection pool. Variables chosen for each of the institutions are shown in **Appendix B**, which also includes the final list of peer institutions recommended for each college and university. **Exhibit 5-1** displays the generalized set of variables from which were chosen specific variables related to each institution’s mission.

EXHIBIT 5-1
GENERAL VARIABLES/CRITERIA FOR USE IN DETERMINING PEERS

1. **Public Control**
2. **Carnegie Classification**
3. **Number of headcount students by level and part-time or full-time status**
4. **Percent part-time and percent full-time students**
5. **Location in urban/rural/suburban area**
6. **Number of full-time equivalent students**
7. **Number of degrees awarded**
8. **Degrees awarded by field and percent degrees awarded by field**
9. **Total sponsored research expenditures**
10. **Land grant status**
11. **Medical school**
12. **Highest level degree awarded**
13. **Program mix:**
Technical, 2 year, Undergraduate only, Undergraduate and masters,
Undergraduate, masters, and doctoral
14. **Number of staff by category**

Peer Selection Methodology

Peers were classified into four categories: Research, Masters, Baccalaureate, and Two-year institutions. For each category, a “sample” of institutions was drawn from the list of all public colleges and universities in the U.S. For the research sector, all public institutions classified as Doctoral/Research were included. For the Masters sector, all public Masters I and II campuses were included in the list; for the baccalaureate institutions, all public baccalaureate institutions were included; and, for the two-year campuses, all public, two-year colleges comprised the list. Data were taken from the most recent and available IPEDS institutional characteristics, fall enrollment, staffing, degrees awarded, and finance surveys, and combined into one file for each sector. All colleges and universities were provided a copy of the data file.

To develop an initial listing of “peers,” a factor analysis was completed on the combined data file for each group. Factor analysis identifies underlying variables called “factors” that explain the pattern of correlation within a set of observed variables. Because there were over 100 variables in the data set, factor analysis permitted the reduction in the number of variables to a more manageable set of factors that enabled comparison among colleges or universities.

The factor analysis developed “factor scores” for each institution for each factor identified in the analysis. A factor analysis that identified 22 factors resulted in each institution having 22 factor scores, one for each of the 22 factors.

Then, the factor scores for each institution in North Dakota were compared to the factor scores for each other institution in its “sector” to get distance scores. A distance score is defined as the difference between one campus and another on each factor score. All institutions in the group then were rank-ordered based on their distance score, and arrayed in a list from low to high distance score. The institution with the smallest distance score is the institution most like the North Dakota institution.

Lists of the peers of the North Dakota institutions currently used in the LTFP are shown as **Exhibit 5-2**. Some of the colleges and universities have common peers; for example, Mayville State University and Valley City State University have nine common peers, one of which is also a peer of Dickinson State University. Each of the peer lists is comprised of nine comparison colleges or universities.

The peer lists for Mayville and Valley City State Universities include private institutions. One of the criteria determined by the Legislative Council’s Higher Education Committee was that no private institutions could be included in the peer lists. As well, no aspirational peers were to be included. The rank-ordered lists from MGT’s factor analyses were then compared to the lists of peers currently in use in the Long-Term Finance Plan to validate whether the current peers would be considered peers in FY 2005-06. Most of the current peer lists could be validated, with the exception of the four private institutions listed as peers of Valley City State University and Mayville State University. Private institutions were not included as peers from the outset because of the widely different missions of these institutions.

MGT generally recommends that any peer list should be comprised of no fewer than 15 institutions because data are not always available upon which to base comparisons. To make funding decisions, the data set should be as complete as possible. If the peer methodology is to be continued as a component of the LTFP, then each North Dakota institution should have no fewer than 15 peers.

RECOMMENDATION 5.1:

Peer lists should be comprised of no fewer than 15 institutions.

Based on this recommendation and the decision of the Higher Education Committee that no aspirational peers were to be included, MGT suggested an initial list of 15 peer institutions for each North Dakota college or university. For this initial list, 10 of the institutions were selected from the 20 institutions most like the North Dakota institution; in the case of the five two-year North Dakota institutions, there were approximately 100 institutions that were so similar that the two-year colleges were permitted to pick 10 out of the first 100.

Exhibit 5-3 displays for each North Dakota institution, the number of institutions in the “set” of possible peers and the number of institutions that were considered to be “actual peers,” based on the statistics used for peer selection. “Actual” peer institutions are those for whom the sum of the distance scores was less than the number of factors in the factor analysis. The number of actual peers varied from 30 for North Dakota State University and 32 for the University of North Dakota to 758 for Bismarck State College and 767 for Lake Region State College.

EXHIBIT 5-2
PEER INSTITUTIONS USED IN THE LONG-TERM FINANCE PLAN

INSTITUTION	STATE	BSC	DSU	LRSC	MSU	MISU	MSU-B	NDSCS	NDSU	UND	VCSU	WSC
University of Alaska Fairbanks	AK								X			
Lurleen B. Wallace Junior College	AL											X
Northwest Shoals Community College	AL	X										
University of Montevallo	AL					X						
Ozarka College	AR						X					
Petit Jean College (U of AR Morrilton)	AR											X
Rich Mountain Community College	AR						X					
University of Arkansas Fayetteville	AR								X			
University of Arkansas Monticello	AR		X									
Concordia University	CA				X						X	
Feather River Community College District	CA						X					X
Abraham Baldwin Agricultural College	GA	X										
Albany State University	GA					X						
Hawkeye Community College	IA	X										
Indian Hills Community College	IA							X				
Iowa Valley Community College District	IA	X										X
Lewis Clark State College	ID		X									
North Idaho College	ID	X						X				
University of Idaho	ID								X			
Southern Illinois University Carbondale	IL									X		
Indiana University East	IN		X									
Kansas State University	KS								X			
University of Louisville	KY									X		
Cecil Community College	MD			X								
Garrett Community College	MD						X					
University of Maine Farmington	ME		X									
University of Maine Presque Isle	ME				X						X	
Kirtland Community College	MI			X								
University of Michigan Flint	MI					X						
West Shore Community College	MI			X								X
Central Lakes College	MN	X										

EXHIBIT 5-2 (Continued)
PEER INSTITUTIONS USED IN THE LONG-TERM FINANCE PLAN

INSTITUTION	STATE	BSC	DSU	LRSC	MSU	MISU	MSU-B	NDSCS	NDSU	UND	VCSU	WSC
Northwest Technical College - Bemidji	MN							X				
Ridgewater College	MN	X										
St. Paul Technical College	MN							X				
East Central Community College	MO											X
University of Missouri Kansas City	MO									X		
Delta State University	MS					X						
East Central Community College	MS	X										
Miles Community College	MT						X					X
University of Montana Western	MT				X						X	
Brunswick Community College	NC			X								
Carteret Community College	NC			X								
Greensboro College	NC				X						X	
Martin Community College	NC						X					
McDowell Technical Community College	NC											X
Sampson Community College	NC			X								
Warren County Community College	NJ						X					
Eastern New Mexico University	NM					X						
New Mexico State University Main	NM								X			
University of Nevada Reno	NV									X		
Houghton College	NY				X						X	
SUNY at Buffalo	NY									X		
SUNY College of Technology at Alfred	NY							X				
SUNY College of Technology at Canton	NY	X						X				
Bluffton College	OH				X						X	
Ohio University Main Campus	OH									X		X
Shawnee State University	OH		X									
Wright State University Main Campus	OH									X		
East Central University	OK					X						
Oklahoma Panhandle State University	OK				X						X	
Oklahoma State University Okmulgee	OK							X				
Southwestern Oklahoma State University	OK					X						
Clatsop Community College	OR			X								
Oregon State University	OR								X			

EXHIBIT 5-2 (Continued)
PEER INSTITUTIONS USED IN THE LONG-TERM FINANCE PLAN

INSTITUTION	STATE	BSC	DSU	LRSC	MSU	MISU	MSU-B	NDSCS	NDSU	UND	VCSU	WSC
Mansfield University of Pennsylvania	PA					X						
University of Pittsburgh Titusville	PA						X					
Central Carolina Technical College	SC							X				
Clemson University	SC								X			
University of South Carolina Aiken	SC		X									
University of South Carolina Columbia	SC									x		
Dakota State University	SD		X		X						X	
Clarendon College	TX						X					
Midwestern State University	TX					X						
Texas State Technical College Harlingen	TX							X				
Utah State University	UT								X			
Paul D. Camp Community College	VA			X								
Lyndon State College	VT				X						X	
Glenville State College	WV		X									
West Liberty State College	WV		X									
West Virginia University	WV									X		
Northwest Community College	WY											X
University of Wyoming	WY								X			

EXHIBIT 5-3
NUMBER OF POSSIBLE PEERS FOR EACH NORTH DAKOTA INSTITUTION

INSTITUTION	INSTITUTIONS IN GROUP	ACTUAL PEERS
Bismarck State College	990	758
Dickinson State University	85	58
Lake Region State College	990	767
Mayville State University	85	58
Minot State University	281	185
Minot State University - Bottineau	990	751
North Dakota State College of Science	990	67
North Dakota State University	50	30
University of North Dakota	62	32
Valley City State University	85	57
Williston State College	990	751

Institutions were then able to suggest changes to the initial peer recommendations, and to provide reasons for the suggested changes. Each institution was to select at least 10 of the 20 institutions closest to them, and then the remaining five could be selected from any of the “actual” peers. As mentioned earlier, “actual” peer institutions are those for whom the sum of the distance scores was less than the number of factors in the factor analysis.

Each of the 11 North Dakota institutions suggested changes in their peer lists, with explanations for changes. After negotiations, all institutions agreed to their peer lists, which are shown in **Exhibit 5-4**, and further detailed in **Appendix B**.

RECOMMENDATION 5-2:

For purposes of determining adequate funding levels in the LTFP, for each of the North Dakota institutions, use the sets of peer institutions delineated in Exhibit 5-4, and set out in Appendix B.

EXHIBIT 5-4
RECOMMENDED PEER INSTITUTIONS FOR THE NORTH DAKOTA COLLEGES AND UNIVERSITIES

INSTITUTION	STATE	BSC	DSU	LRSC	MSU	MISU	MSU-B	NDSCS	NDSU	UND	VCSU	WSC
University of Alaska Fairbanks	AK								X			
Northeast Alabama Community College	AL											X
University Of Alabama At Birmingham	AL									X		
Rich Mountain Community College	AR						X					
South Arkansas Community College	AR			X			X					
Southern Arkansas University Main Campus	AR					X						
Southern Arkansas University Tech	AR											X
University Of Arkansas Main Campus	AR								X			
California State University - Monterey Bay	CA		X		X						X	
Feather River Community College District	CA			X			X					X
Lamar Community College	CO						X					
Western State College Of Colorado	CO										X	
Eastern Connecticut State University	CT											
Western Connecticut State University	CT											
Naugatuck Valley Community College	CT							X				
Quinebaug Valley Community College	CT						X					
University Of Connecticut	CT								X			
University Of Delaware	DE								X			
Florida Keys Community College	FL			X								
New College Of Florida	FL		X		X						X	
Georgia College And State University	GA					X						
Georgia Southwestern State University	GA					X						
Athens Technical College	GA	X										
Dekalb Technical College	GA	X										
North Georgia College & State University	GA					X						
Southwest Georgia Technical College	GA			X								
University Of Hawaii At Manoa	HI									X		
Indian Hills Community College	IA							X				
Iowa State University	IA								X			

EXHIBIT 5-4 (Continued)
RECOMMENDED PEER INSTITUTIONS FOR THE NORTH DAKOTA COLLEGES AND UNIVERSITIES

INSTITUTION	STATE	BSC	DSU	LRSC	MSU	MISU	MSU-B	NDSCS	NDSU	UND	VCSU	WSC
Marshalltown Community College	IA	X										X
Northwest Iowa Community College	IA			X				X				
Lewis-Clark State College	ID										X	
University Of Idaho	ID								X			
Highland Community College	IL											X
University Of Illinois At Chicago	IL									X		
Indiana University – Kokomo	IN		X									
Indiana University-East	IN		X		X							
Ivy Tech State College-Whitewater	IN			X								
Purdue University-North Central Campus	IN		X		X						X	
Kentucky State University	KY					X						
University Of Kentucky	KY								X	X		
University Of Louisville	KY									X		
Massachusetts College Of Liberal Arts	MA		X		X						X	
Cecil Community College	MD			X								
Garrett College	MD						X					
St. Mary's College Of Maryland	MD				X							
University Of Maine	ME								X			
University Of Maine At Fort Kent	ME		X		X							
University Of Maine At Presque Isle	ME		X								X	
Kirtland Community College	MI			X								
Lake Michigan College	MI	X										
Washtenaw Community College	MI							X				
West Shore Community College	MI			X								X
Anoka Technical College	MN							X				
Bemidji State University	MN					X						
Hennepin Technical College	MN							X				
Itasca Community College	MN											X
Lake Superior College	MN	X										
Pine Technical College	MN			X			X					
Rainy River Community College	MN						X					
Ridgewater College	MN	X										
University of Minnesota Crookston	MN				X							
University of Minnesota Morris	MN				X						X	

EXHIBIT 5-4 (Continued)
RECOMMENDED PEER INSTITUTIONS FOR THE NORTH DAKOTA COLLEGES AND UNIVERSITIES

INSTITUTION	STATE	BSC	DSU	LRSC	MSU	MISU	MSU-B	NDSCS	NDSU	UND	VCSU	WSC
Linn State Technical College	MO							X				
Northwest Missouri State University	MO					X						
North Central Missouri College	MO											X
University Of Missouri-Kansas City	MO									X		
Miles Community College	MT						X					X
The University of Montana-Western	MT		X		X							
Brunswick Community College	NC			X								
Elizabeth City State University	NC		X		X						X	
Martin Community College	NC						X					
Mcdowell Technical Community College	NC											X
Pamlico Community College	NC						X					
Sampson Community College	NC			X								
University Of North Carolina At Chapel Hill	NC									X		
Winston-Salem State University	NC										X	
Chadron State College	NE					X						
University of Nebraska At Lincoln	NE								X			
Western Nebraska Community College	NE											X
New Jersey City University	NJ					X						
Mesalands Community College	NM						X					
New Mexico Junior College	NM	X										
New Mexico State University-Carlsbad	NM											X
New Mexico State University-Grants	NM						X					
San Juan College	NM	X										
Eastern New Mexico State University	NM					X						
New Mexico Highlands State University	NM					X						
Western New Mexico University	NM					X						
Great Basin College	NV							X				
University Of Nevada-Reno	NV								X	X		
SUNY At Buffalo	NY									X		
SUNY College Of Technology At Alfred	NY							X				
SUNY College Of Technology At Canton	NY	X										
Wright State University	OH									X		
Central State University	OH		X		X						X	

EXHIBIT 5-4 (Continued)
RECOMMENDED PEER INSTITUTIONS FOR THE NORTH DAKOTA COLLEGES AND UNIVERSITIES

INSTITUTION	STATE	BSC	DSU	LRSC	MSU	MISU	MSU-B	NDSCS	NDSU	UND	VCSU	WSC
Oklahoma Panhandle State University	OK		X								X	
Oklahoma State University-Okmulgee	OK							X				
Clackamas Community College	OR							X				
Clatsop Community College	OR			X			X					
Mt Hood Community College	OR							X				
Southwestern Oregon Community College	OR											X
Cheyney University Of Pennsylvania	PA					X						
Reading Area Community College	PA	X										
Thaddeus Stevens College Of Technology	PA							X				
University Of Pittsburgh-Bradford	PA		X								X	
University Of Rhode Island	RI								X			
Clemson University	SC								X			
Western Dakota Technical Institute	SD	X										
The University Of Tennessee	TN								X	X		
Frank Phillips College	TX			X			X					
Texas A & M University At Galveston	TX										X	
Texas State Technical College-Harlingen	TX	X										
Texas State Technical College-Waco	TX							X				
Texas State Technical College-West Texas	TX	X										
University Of Utah	UT									X		
Paul D Camp Community College	VA			X								
University Of Virginia	VA									X		
University Of Virginia's College At Wise	VA				X							
Virginia Military Institute	VA				X							
Lyndon State College	VT		X		X						X	
University Of Vermont	VT								X	X		
Lake Washington Technical College	WA	X										
Blackhawk Technical College	WI	X										
West Liberty State College	WV		X									
Eastern Wyoming College	WY							X				
Northwest Community College	WY											X
University Of Wyoming	WY								X			

6.0 LONG TERM FINANCE PLAN

6.0 LONG-TERM FINANCE PLAN

This chapter provides an evaluation of the long-term finance plan (LTFP) for the University System to determine:

- a. If the current method of funding for the University System and the method of determining and evaluating equity among the institutions is appropriate and, if so, the appropriateness of the peer institutions selected and the need to update peer institution funding comparisons.
- b. If the LTFP is realistic based on historic funding increases and forecasted economic growth in North Dakota.
- c. If the current SBHE method of setting funding priorities is appropriate.
- d. If the LTFP adequately addresses the use of various sources of revenue and allocations, and the need for funding initiatives at the state's institutions.
- e. If the current method of funding for the University System is not appropriate, develop an alternative method of funding using existing resources for the University System, including the allocation of funding to institutions and a comparison of the proposed allocation of funding to institutions to the funding provided for the 2005-07 biennium.

Chapter 5 presented information on the appropriateness of the peer institutions, and MGT recommended changes to the peer lists to include 15 peers for each North Dakota institution. Specific peers recommended for each institution also are listed in Chapter 5.

The LTFP is a method of funding the North Dakota college and university system to carry out the recommendations of and reach the goals and expectations of the Higher Education Roundtable. (The Higher Education Roundtable's goals, expectations, and recommendations are discussed in Chapter 3 of this report.)

The LTFP was developed at the direction of the Higher Education Roundtable with input from all 11 of the NDUS institutions, with the assistance of an outside consultant. The State Board of Higher Education (SBHE) approved the Plan in 2001, to serve the dual mission of providing access to high quality higher education for the citizens of North Dakota, and to enhance the role of higher education in the economy of the State. The perception was that an investment in higher education was an investment in the future of all North Dakota.

The LTFP was based on certain characteristics:

- The LTFP is designed to provide **adequate funding** to maintain campus capacity to support core functions.
- The Plan recognizes the **unique mission of each campus**.
- The Plan provides resources needed to **protect the State's investment** in facilities and infrastructure.

- The Plan encourages **collaboration** among campuses and with the private Sector.
- The Plan maintains **flexibility** to respond to changing system and state needs.
- The Plan is used only for **allocation of additional state general fund appropriations**, not for reallocation of existing state general funds.

In addition, the Plan is guided by principles that are similar to those guiding principles agreed to by the Legislative Council's Higher Education Committee early in this study:

- Funding for higher education is a **shared responsibility** of the state, through general fund appropriations; of students, through tuition and fees; and of the campuses, through efficiency and generation of other revenues.
- The SBHE remains accountable for maintaining **affordable access** while campuses are given **flexibility** to assess charges within SBHE policy.
- An **engaged biennial budget process**, with campus input, is used to define and recommend the allocation of new state resources, consistent with NDUS priorities.
- Campuses are held **accountable** for outcomes of the goals and objectives outlined in their strategic plans, and their Roundtable alignment plans, and be **rewarded and recognized** for accomplishing goals that are consistent with the Roundtable principles.
- Campuses are encouraged to **diversify resources** by other means.
- Campuses should retain **base funding**, except for one-time funds and generalized budget rescissions.
- Campuses' **unique missions** should be recognized in establishing base operating funding and **adequate funds** should be provided to maintain institutional capacity to deliver their missions.
- Campuses should be given **flexibility** to allocate resources consistent with the priorities of their strategic plans.
- The funding model should be based on **verifiable data**, be **reasonable, rational, and understandable**, without diminishing the **validity** of the model.
- New appropriations (exceeding base operating funds) should be provided to a) address inflationary operating cost increases (**parity**) and **equity** differentials, based on peer comparisons, and based on targets outlined in the LTFP; b) address **statewide priorities** through separate initiative funding to the SBHE, and consistent with Roundtable principles; c) address **capital assets** to maintain and replace state assets; and d) address **Systemwide programs and services** to provide **efficient and effective delivery across the State**.

Long-Term Finance Plan Components

The LTFP has three key components:

- Base Operating Funds;
- Capital Asset Funds; and
- Incentive Funds.

Base operating funds are designed to support core campus functions, such as instruction, research, and public service. In addition, these funds are designed to form the foundation upon which campuses may leverage other resources, such as funding from outside grants and contracts.

Capital asset funds are used in a system-wide funding model to provide for the repair and replacement of facilities, based on age of the facility, replacement value, and the deferred maintenance backlog at each campus. **Incentive funds** are intended to provide the State Board of Higher Education with some flexibility to fund special initiatives that support state and system priorities, and that are consistent with the goals of the Higher Education Roundtable.

Base operating funds are allocated to the institutions in two pools:

- **parity** which are funds needed to continue current programs and services and which may include funds for salary increases, benefits changes, and inflationary cost increases for items such as utilities and fuel costs. No more than 80 percent of all new funding may be allocated to parity.
- **equity** which are funds needed to move a campus closer to the peer benchmark level of funding. These funds are designed to move campuses funded at less than 85 percent of peer institution funding levels (including both state general funds and net tuition revenues) to 85 percent by the 2007-2009 biennium and all campuses to 95 percent by the 2013-2015 biennium.

State general fund appropriations are not reduced for any institution from the previous biennium until such time as the institution exceeds 105 percent of its peer benchmark or enrollment declines are sufficient to cause a re-evaluation of the benchmark.

Capital asset funds also are calculated in two pools:

- **current repair and replacement** funds which are needed for current repair and/or replacement of facilities and infrastructure, but does not include major capital projects funded through state bonding.
- **deferred maintenance** funds which are used for maintenance of facilities and infrastructure that has been delayed, and which can include health and safety concerns. ADA compliance, computer networking, utilities tunnels, or other major repairs.

Capital asset funds are designed to move campuses to 100 percent of the Office of Management and Budget's building and infrastructure formula by the 2011-2013 biennium and to address deferred maintenance needs by the 2015-2017 biennium. Funding provided to each institution is determined by the SBHE for projects greater than \$100,000. Institutions are given authority to allocate dollars for repair and replacement priorities, and may carry over unspent capital asset funds from one biennium to the next and to accumulate funds for large projects.

Incentive funds are used to provide incentives for collaboration, increasing access to education, incorporating entrepreneurial behavior, demonstrating accountability, or for other actions supported by the Higher Education Roundtable. Two percent of the NDUS state appropriation is to be dedicated to incentive funds by the 2007-09 biennium.

Funding under the LTFP is a shared responsibility among the state, students, and the institutions. Funds for parity and equity come from state general funds and net tuition revenues. Since the cost of education varies by type of institution, the targeted ratio or the share of the funds to be provided by each source of funding varies by type of institution, as shown in **Exhibit 6-1**.

**EXHIBIT 6-1
STATE AND STUDENT SHARES OF BASE OPERATING FUNDS**

CAMPUS	STATE SHARE	STUDENT SHARE
North Dakota State University	60%	40%
University of North Dakota		
Minot State University	65%	35%
Dickinson State University	70%	30%
Mayville State University		
Valley City State University		
Bismarck State College	75%	25%
Lake Region State College		
Minot State University Bottineau		
North Dakota State College of Science		
Williston State College		

The NDUS institutions also contribute to covering parity and equity costs by using resources effectively and efficiently and by managing operations as defined by the LTFP. Campuses also generate additional resources through gifts, grants, contracts, and sales of services. These additional revenues are retained by the campuses which generated the resources to support the basic missions of teaching, research, and public service.

Equity Issues

Equity is not a new issue for the North Dakota colleges and universities. Prior to implementation of the LTFP and its peer comparison model, the NDUS used funding formulas to determine adequate levels of funding for the institutions in the NDUS. Campuses were at different percentages of the sum of the funding formulas, which meant that funding was inequitable then. In the 1991-93 biennium, the Legislature appropriated a total of \$1.3 million to Bismarck State College and Minot State University; in the 1995-97 biennium these two institutions received a total of \$1 million; and in the 1997-1999 biennium, three institutions – Bismarck State College,

Minot State University, and UND – Williston received a total of \$1.25 million in equity funds.¹ In 1997, the SBHE recognized inequities in the allocation of base resources to the 11 colleges and universities and in its 1999-2001 biennial budget request, the SBHE requested \$3 million for equity but none of these funds were included in the Governor's Executive Recommendation.

Equity was evaluated prior to implementation of the LTFP by comparing the percentage of the formula-determined "need" amount to actual appropriations. **This is considered an appropriate method of evaluating equity**, and many examples of this methodology may be found in the economics literature.

Based upon the 1999-2001 Executive Budget Recommendation, the SBHE directed staff to prepare a report on the equity of the base allocations. **Exhibit 6-2** displays that comparison, showing that funding varied from 82.5 percent of formula for NDSCS to 98.3 percent of formula for Minot State University Bottineau. None of the institutions were considered "over-funded" but there were inequities in the allocations to the institutions, as measured by the percentage of formula that each would receive. The total disparity from high to low percentage of formula was 15.8 percent (98.3-82.5).

EXHIBIT 6-2
COMPARISON OF 1999-2001 FORMULA AMOUNTS TO ALLOCATIONS
TOTAL COSTS INCLUDING VARIABLE, PLANT, AND PLANT IMPROVEMENTS
EXCLUDING ALL ONE-TIME FUNDED ITEMS

CAMPUS	% OF FORMULA	DOLLAR VARIANCE
MiSU – BC	98.3%	(\$90,773)
MiSU	98.1%	(\$719,780)
MaSU	97.6%	(\$266,168)
VCSU	92.4%	(\$1,255,417)
UND	91.7%	(\$12,557,936)
BSC	90.9%	(\$2,242,195)
NDSU	89.9%	(\$13,374,998)
DSU	89.1%	(\$2,404,179)
UND-W	87.5%	(\$1,043,674)
UND-LR	84.1%	(\$1,152,850)
NDSCS	82.5%	(\$6,873,656)
<i>System Average</i>	90.8%	
<i>Total Dollar Shortfall</i>		(\$41,981,626)

Source: North Dakota University System, Funding Equity Comparison, January 1999.

With the advent of the LTFP, the method of determining and evaluating equity was comparison of the percentage of the "needs" of the institution to the amount funded through appropriations. The comparison is expressed as a percentage, and if the percentages funded for the institutions were comparable, then equity would have been achieved. This calculation was made by comparing actual funding per student to the average funding per student at the peer institutions. By the 2003-05 biennium, this comparison showed that the disparity in the percentage funded had

¹ *Funding Equity Comparison Based upon the 1991-01 Executive Budget Recommendation*, North Dakota University System, January 1999.

increased significantly, and it increased somewhat for the 2005-07 biennium, as shown in Exhibits 6-3 and 6-4. In the 2003-2005 biennium, the disparity had increased from 15.8 percent to 53.7 percent (95.8 – 42.1); and had increased even further in the 2005-07 biennium to 55.0 percent (100.1 – 45.1). Note that amounts allocated for the 2003-05 and 2005-07 biennia are under the LTFP, whereas amounts allocated for the 1999-2001 biennium are compared to the previous funding formula determinations of base funding.

EXHIBIT 6-3
COMPARISON OF 2003-05 OPERATING BASE TO PEER FUNDING

CAMPUS	% OF PEERS	DOLLAR VARIANCE
BSC	44.4%	(\$14,272,554)
DSU	58.3%	(\$6,271,547)
LRSC	42.1%	(\$5,132,374)
MaSU	88.4%	\$0
MiSU	69.2%	(\$5,934,106)
MiSU – BC	57.7%	(\$1,941,472)
NDSCS	77.6%	(\$2,270,756)
NDSU (Without Agriculture)	48.6%	(\$52,910,276)
UND	55.9%	(\$60,848,229)
VCSU	95.8%	\$0
WSC	61.6%	(\$2,067,847)
<i>System Average</i>	56.7%	
<i>Total Dollar Shortfall</i>		(\$151,649,161)

Source: North Dakota University System, Resource Allocation Model, November 2005.

EXHIBIT 6-4
COMPARISON OF 2005-07 OPERATING BASE TO PEER FUNDING
(BEFORE ALLOCATION OF \$2 MILLION EQUITY FUNDING)

CAMPUS	% OF PEERS	DOLLAR VARIANCE
BSC	48.0%	(\$18,293,137)
DSU	62.7%	(\$8,748,467)
LRSC	45.1%	(\$6,568,700)
MaSU	92.6%	(\$723,203)
MiSU	72.7%	(\$10,224,682)
MiSU – BC	61.0%	(\$2,776,514)
NDSCS	81.2%	(\$5,761,039)
NDSU	52.1%	(\$69,612,223)
UND	59.3%	(\$84,889,315)
VCSU	100.1%	\$8,634
WSC	65.2%	(\$3,392,228)
<i>System Average</i>	60.3%	
<i>Total Dollar Shortfall</i>		(\$210,980,874)

Source: North Dakota University System, Resource Allocation Model, November 2005.

Obviously, the choice of peers is of paramount importance in comparisons of funding. Including “aspirational” peers, that is, institutions chosen because their funding per student is significantly more than the North Dakota institution, will result in the percentage of “needs” funded by state general funds that is significantly lower than if aspirational peers are not included. This does not mean that the methodology of determining equity is inappropriate, but does mean that the results of the comparison can be skewed by inappropriate peer groups. Therefore, the selection of peers in a peer comparison model like that used in the LTFP requires careful consideration.

As was indicated in Chapter 5, the current peer groups were evaluated to determine the appropriateness of the peer institutions selected. **The peer groups in general were found to be appropriate, except for the private institutions that were peers of Mayville State University and Valley City State University. Recommendations were made for new peer groups for each of the eleven institutions in the NDUS.**

In the education finance arena, to determine if funding is distributed in an equitable manner, economists and education finance experts use a number of statistical measures of disparity to determine equity of the funding mechanism. Three of the simplest measures are the range, the restricted range, and the federal range ratio. The range is simply the difference between the highest and the lowest observations in a distribution. The smaller the value of the range, the smaller the variation and the better the equity. The formula for the range is: Highest – Lowest. The restricted range is defined as the difference between the observations at the 95th and 5th percentiles of the distribution. The restricted range is useful because it eliminates “outliers.” The formula for the restricted range is: value at 95th percentile – value at 5th percentile. For purposes of this study, the restricted range had to be calculated as the value at the 91st percentile – value at 9th percentile because there are only 11 institutions in the NDUS.

The federal range ratio was originally designed as a federal test to measure whether states met federal wealth neutrality guidelines in distributing federal funds. The federal range ratio is the restricted range divided by the observation at the 5th percentile. The formula for the federal range ratio is (value at 95th percentile – value at 5th percentile) divided by value at 5th percentile. The smaller the value of the federal range ratio, the less variation or inequity in the distribution. As above, the federal range ratio in this study was computed as the value at 91st percentile minus the value at the 9th percentile, divided by the value at the 9th percentile.

Exhibit 6-5 displays the range, the restricted range, and the federal range ratios for the 1999-2001, 2003-2005, and 2005-2007 biennia funding to the institutions as measured by percent of formula or peer comparator group average. In these comparisons, for the 1999-2001 biennium, funding is compared to formula. On all three measures of equity for all three time periods, **the funding for the NDUS institutions is not equitable, and the disparity has increased since the 1999-2001 biennium.**

EXHIBIT 6-5
MEASURES OF EQUITY IN THE ALLOCATION OF GENERAL FUNDS
IN THE BASE BUDGETS OF THE NDUS INSTITUTIONS

BIENNIUM	RANGE	RESTRICTED RANGE	FEDERAL RANGE RATIO
1999-2001	15.9%	14.0%	0.1667
2003-2005	53.7%	44.0%	0.9910
2005-2007	55.0%	44.6%	0.9292

Source: Calculated by MGT from NDUS documents.

There are several reasons why the inequity in funding has increased since the inception of the LTFP. First, the Legislative Assembly has appropriated only limited additional revenues with which to address inequities in the allocation of resources. Since the LTFP has as one of its driving principles that the Plan “is used only for allocation of additional state general fund appropriations, not reallocation of existing state general funds,”² there is no way for equity to increase unless new state general funds are appropriated.

Secondly, the manner in which funds are allocated between “parity” and “equity” increases the disparity, and therefore, increases the inequity in the allocation of resources. That is, 80 percent of all new state general funds are allocated using a base that was inequitable at the start, as evidenced by the 1999-2001 biennium equity measures shown in Exhibit 6-5. When the playing field is not level at the beginning of the game, then building on that base without adjustments to level the field will only make the field more uneven. Therefore, **if one of the major goals of the Long-Term Finance Plan is to distribute available resources equitably among the institutions, then the current State Board of Higher Education method of setting funding priorities with 80 percent going to parity and 20 percent to equity, will not achieve the goal.** There are methodologies to distribute “parity” revenues that could contribute to equity in funding, and these will be discussed later in this chapter.

Sources of Revenue

The LTFP includes as one component that funding for the NDUS is a shared responsibility among the students, the institutions, and the state. In the LTFP, the state share of base funding is to vary by type of institution from 75 percent at the two-year campuses to 60 percent at the two research universities. Similarly, the student share is supposed to support 40 percent of the cost of education at the research universities and only 25 percent at the two-year campuses. To calculate the percentage shares, revenues collected from technology fees are subtracted from tuition collections, and funding appropriated for the Higher Education Computer Network (HECN), agriculture extension and experiment station, flood-related expenditures, the Interactive Video Network (IVN), and the On-line Dakota Information Network (ODIN) also are deducted.

Over time students have taken on an increasing share of the costs so that during the 2003-05 biennium student shares varied from 35 percent to 61 percent, as shown in **Exhibit 6-6**.

² The NDUS Long-Term Finance Plan, North Dakota University System, May 2004.

EXHIBIT 6-6
STUDENT SHARES OF COST

CAMPUS	FY 2004 ACTUAL	FY 2005 ACTUAL	2003-2005 BIENNIUM
BSC	56.4%	56.3%	56.3%
DSU	49.1%	53.0%	51.2%
LRSC	55.9%	56.6%	56.3%
MaSU	34.0%	40.6%	37.3%
MiSU	45.9%	50.2%	48.1%
MiSU – BC	36.8%	39.6%	38.2%
NDSCS	38.9%	41.5%	40.2%
NDSU	56.6%	64.5%	60.7%
UND	60.4%	57.9%	59.0%
VCSU	31.5%	37.9%	34.8%
WSC	48.4%	45.2%	46.7%
System Average	54.4%	56.5%	55.5%

Source: 2005 Accountability Report, NDUS.

Several states such as Virginia, West Virginia, and Oregon have allocated the state/student shares of the cost of education by type of institution; that is, students at the two-year institutions are expected to pay a smaller share of the cost of education, while students at research universities are expected to pay the largest share (among the types of institutions). Percentages vary from 20 percent for two-year institutions to 40 percent for research universities. Typical percentages for four-year colleges vary from 25 to 35 percent, with the most common student share 33 percent.

Theoretically, the percentage of funding from students is in direct relationship to the share of the benefits of higher education that are attributed to students and their families. Likewise, the state share of funding theoretically is related to the benefits that accrue to the state and its citizens from higher education. Economic studies conducted by Howard Bowen and others attribute the majority of the benefits of higher education to the state and its citizens, business and industry. The benefits of an educated citizenry, improved incomes, and therefore higher tax collections, are some of the benefits derived from higher education.

In addition to tuition revenues, the NDUS institutions also contribute other resources such as gifts and research grant income to achieve the objectives of the Higher Education Roundtable. According to the 4th Accountability Measures Report, the research expenditures of the NDUS have increased over 50 percent from \$67.2 million to \$101.7 million since 2001. These expenditures have a direct economic impact on the economy of the state. The increase in research funding is a greater percentage increase than many university systems have experienced during this time period.

As well, the institutions have contributed to the Long-Term Finance Plan through operating the institutions effectively and efficiently.

Funding of the LTFP is a shared responsibility of the state, students, and the institutions. **The Long-Term Finance Plan adequately addresses the use of various sources of revenues.**

However, **the Long-term Finance Plan does not adequately address the need for funding initiatives at the state's institutions.** In particular, the LTFP does not provide new program start-up funding, funding for state-of-the-art equipment and technology, or other items that are consistent with the Roundtable recommendations. The Roundtable was very clear in its recommendations to establish programs that meet the needs of the business community, for soft-skills programs, and for programs and research that would stimulate the state's economy. All of these new initiatives require funding that is not included in the base funding of the institutions.

Although the LTFP adequately addresses the use of various sources of revenues, **the State has not provided its share of resources, in the base funding component, the Incentive Funding Component, or the Capital Asset Funding Component.** As a result, students have shouldered a significantly greater share, base funding is significantly below the "adequate" level, deferred maintenance has increased, and there has been little available for incentive funding to address system and state priorities consistent with the Higher Education Roundtable's goals.

Evaluation of the Method of Funding

The majority of states use funding formulas to determine an adequate level of funding for their higher education institutions and to allocate existing resources equitably. Some states like Alabama and Oklahoma incorporate peer comparisons into the funding model, and provide base funding related to peer funding levels.

North Dakota historically has used funding formulas to determine the resource needs of the institutions. Formulas like those North Dakota had before the Long-Term Finance Plan are used by states and systems for a variety of reasons, including:

- Formulas provide an objective method to determine institutional needs equitably.
- Formulas reduce political competition and lobbying by the institutions.
- Formulas provide state officials with a reasonably simple and understandable basis for measuring expenditures and revenue needs of campuses and determining the adequacy of support.
- Formulas enable institutions to project needs on a timely basis.
- Workload based formulas address the uniqueness of each institution and special needs related to the differences in size, student body make-up, academic programs, and research activities.
- Formulas can adequately address economies and diseconomies of scale and scope.
- Formulas represent a reasonable compromise between public accountability and institutional autonomy.
- Formulas ease comparisons between institutions because each institution's formula amounts are calculated based on its unique characteristics.
- Formulas permit policy makers to focus on basic policy questions.

On the other hand, formula usage has disadvantages, including the following:

- Formulas may be used to reduce all academic programs to a common level of mediocrity by funding each one the same because quantitative measures cannot assess the quality of a program.
- Formulas may reduce incentives for institutions to seek outside funding.
- Formulas may perpetuate inequities in funding that existed before the advent of the formula.
- Enrollment-driven formulas may be inadequate to meet the needs of changing client bases or new program initiatives.
- Formulas cannot serve as substitutes for public policy decisions.
- Formulas are only as accurate as the data on which the formula is based.
- Formulas may not provide adequate differentiation among institutions.
- Formulas are linear in nature and may not account for sudden shifts in enrollments and costs.

Similarly, there are advantages and disadvantages to the use of peer comparisons to determine base funding levels. Among the advantages of a peer model are the following, some of which are similar to the advantages of funding formulas:

- Peer comparisons provide an objective method to determine institutional needs.
- Peer comparisons reduce political competition and lobbying by the institutions.
- Peer comparisons can provide state officials with a reasonably simple and understandable basis for measuring expenditures and revenue needs of campuses and determining the adequacy of support.
- Peer comparisons tend to appeal to a sense of state pride and enhance policy makers' awareness that the state's institutions must compete with colleges and universities in other states for faculty and other academic resources.
- Peer comparisons minimize inappropriate comparisons among institutions within the same state.
- Peer comparisons inform college and university leaders that differential missions may require different resources per student, leading to an acceptance of differential funding from the state.

Likewise, there are disadvantages to the use of a peer average-based funding model:

- Peer funding models assume that any change in the number of students has the same impact on the institution although cost studies demonstrate that some students cost much more than others.

- Over time, peer funding models discourages growth in programs that cost more than average.
- No two institutions are ever alike in program mix and other variables, and peer models cannot be as precise at measuring funding needs as a workload based model.
- Peer funding models may perpetuate inequities in funding.
- Peer funding models may be inadequate to meet the needs of changing client bases or new program initiatives in part because the data always are dated.
- Institutions in the state are at the mercy of economic conditions or policy changes that occur in states where the peers are located.
- Institutions are too dynamic in program mix and other variables to permit any stability over time in a list of appropriate peers.
- Most lists of peer institutions for institutions within a system do not control for relative funding levels by a state so that a bachelor's college with peers in well-funded states could have a higher target funding average than a research university with peers in poorly funded states.

Use of funding formulas requires good data systems and significant amounts of data on student enrollments by course, discipline, and level. In addition, data are needed on other workload measures related to the physical plant, student services, libraries, and other components of institutional operations. In 2006 because of difficulties implementing ConnectND, **the NDUS does not, in MGT's opinion, have the capability of collecting, retrieving, and using all the data needed to support a funding formula.**

MGT recognizes that there are some unique characteristics of the North Dakota institutions that would make a funding formula appropriate for the system. In particular, there are some built-in inefficiencies in a system with eleven institutions to serve a state with less than 700,000 residents. The citizens of North Dakota voted in 1999 to maintain all eleven institutions in the state's Constitution. Because the public policy decision was to continue all eleven, with such a small state population, some institutions are too small to take advantage of economies of scale in their operations. Even the two largest institutions, North Dakota State University and the University of North Dakota, are relatively small for a land-grant institution or for an institution with a medical school. Lake Region State College, Mayville State University, Minot State University – Bottineau, Valley City State University, and Williston State College cannot take advantage of economies of scale, and could benefit from a fixed base allocation with a variable amount per student above the base. In addition, recent decisions that may alter the missions of several campuses will introduce even greater inefficiencies into the system.

Currently, there is unanimous agreement among the college and university presidents to retain the current peer benchmark funding model, with appropriate revisions. This was the decision of the presidents who met via conference call on July 19, 2005. Also, the presidents unanimously agreed that the model would be used consistently to allocate new funding, not to reallocate existing base state appropriations among the NDUS institutions. In addition, there was unanimous agreement that the current percentage of the total state general fund budget was not adequate to fund the NDUS at an equitable level to meet the needs of the state and fulfill the expectations of the Higher Education Roundtable.

Therefore, MGT determined that **the current method of funding using peer comparisons is the most appropriate base funding methodology at this time. However, components of the base funding methodology could benefit from changes that are more in line with the principles for a funding methodology suggested earlier.** Each of these changes is addressed below.

Student Count

The current peer comparison model uses one year of student data to determine the amount of funding per student. Obviously, the student count is very important, and can vary from year to year, introducing an element of instability into funding. One of the guiding principles for a funding model is: The funding formula should not permit shifts in funding levels to occur more quickly than institutional managers can reasonably be expected to respond. A model that is based on one year's student count has the potential to shift funding levels more quickly than institutional managers can reasonably be expected to respond. Using a two-year average of students will smooth out changes in enrollment.

In addition, the student count currently used is full-time equivalent (FTE) students. Costs of student services, libraries, and physical plant are related more to headcount than to FTE.

RECOMMENDATION 6-1:

Determine the count of students for the base funding component of the plan by using an average of the two most current years' fall enrollment, with 25 percent of the count based on student headcount and 75 percent based on full-time equivalent students.

Basing 25 percent of the count on headcount will consider those components of institutional costs related more to the number of students served. In most college and university budgets, these costs comprise 25 percent of the budget. Using the average of the two most current years' enrollment counts will smooth out potentially large shifts in funding needs.

Peer Institutions

The peer institutions were evaluated in Chapter 5, and recommendations made to update the lists.

RECOMMENDATION 6-2:

Use the peer institutions listed in Chapter 5 to update the peer funding comparisons. Keep the same set of peer institutions for at least two biennia, unless there are major changes that suggest that a peer group may need revision.

Updating of Peer Institution Data

The current methodology establishes a based operating funding benchmark for each North Dakota institution based on the review of peer state and local appropriations and net tuition revenues per student. Benchmarks are to be re-established every six years, and in the intervening years, are to be inflated by a percentage amount equivalent to the change in the consumer price index. One of the consequences of this methodology of updating the peer institution data is that there is no confidence in the validity of the data.

RECOMMENDATION 6-3:

Update the data for the peers by using the most current IPEDS data available at the time the biennial budget request is prepared.

Updating data by using the most current will ensure the validity of the data. One of the guiding principles is “Based on valid and reliable data” and using the most current data will base the method on valid and reliable data.

Parity Funding

As was discussed earlier, the current method of allocating 80 percent of new money to parity and 20 percent to equity has exacerbated the inequity in funding. Currently, “parity” funding is related to the increases needed for salary funding, health insurance, and operating inflation. Increases in the costs of utilities are considered separately, but also are folded into the “parity” funding category. This current services budget is calculated based on estimates of operating inflation.

Amounts calculated for the current services budget, or parity, are added to the base budgets at full face value, without regard to the differences in funding that already exist. These additions further exacerbate the previously-existing inequities in the funding distribution.

The issue is not how the parity adjustments are calculated. These are reasonable assumptions and a reasonable way to calculate the “current services budget.”

However, there are methods to distribute the parity funding that will not exacerbate the equity issue. Institutions do need to maintain current services budget, including adjustments that reflect differences in utilities costs. Estimates of increased utilities budgets should be included in the parity funding, even though those estimates will be vastly different for the campuses in the system. However, the allocation of parity should reflect that the base budgets are at different levels of equity. Consequently, institutions that were at higher percentages of the peer groups not only continue to be at higher percentages, but the disparity increases. At the current rate of change, the equity problem in funding will never be corrected. This has the potential to discredit the entire peer funding methodology.

At least two methods of ameliorating this problem can be suggested: change the percentages of the increased funding that is allocated to “parity,” and change the method of allocating parity. Of course, a third method is to both change the percentages and change the method. It should be noted that all of the NDUS institutions are under-funded relative to peers, and what is actually being done here is attempting to distribute inadequate resources as equitably as possible. The constraint that no institution shall receive less than the prior biennial appropriation makes this objective difficult to achieve.

RECOMMENDATION 6-4:

Revise the method of allocating parity and equity so that a minimum of 80 percent of the new funding is allocated to equity and 20 percent to parity. Further, allocate the 20 percent of parity dollars in inverse proportion to the percent of peer funding so that institutions that are the furthest from peer funding would get the greatest relative parity increase.

Making these two changes to the allocation of base funding will result in increased equity in the distribution of resources. However, funding will not become equitable for some time unless sufficient appropriations are made to address the issue of adequate funding.

Adequacy of Funding and State/Student Share

Based on analysis using the current peer groups, not revised peers, as discussed above, state appropriations have not been sufficient to fund the NDUS institutions adequately, as measured by the percent of average per student peer group funding. Percentages of “adequate” funding varied from 45.1 percent at Lake Region State College to 100.1 percent at Valley City State University, for an overall NDUS average of 60.3 percent (before allocation of the \$2 million equity funding).

As a result, the student share of funding at every institution exceeds the target funding shares in the LTFP, as was discussed earlier. This disparity is especially critical at the two-year institutions where the disparity between the target funding shares and actual student funding are the greatest. For example, at Bismarck State College and Lake Region State College, the target student funding responsibility is 25 percent but the actual student funding share is 56 percent, over double the target.

The only solution to this, of course, is increased state funding. The question this raises is “is the LTFP realistic based on historic funding increases and forecasted economic growth in North Dakota?”

Up until the 21st century, the NDUS was funded at 21 percent or more of the state general fund budget. Since 2001 that percentage has declined to 19.5 percent or lower, depending on how the measurement is made and what is included in both the state general fund budget and the NDUS share of the budget. National figures place the percentage at 17.3 percent, which excludes certain funding for capital projects as well as other items.

A January 2006 article by Don Boyd of the Rockefeller Institute of Government at the State University of New York at Albany predicted that the North Dakota general fund would grow by 29.7 percent during the next 8 years, but that higher education’s growth rate in that budget would be negative – that is, higher education would receive a smaller share than in 2006.³

Nevertheless, if higher education funding were based on historical funding patterns, and if the recommendations of the Higher Education Roundtable to maintain higher education’s share of the general fund budget at 21 percent, then the **Long-Term Finance is realistic, although it will take more than ten years to meet the current targets.**

Further, as their part of carrying out the Roundtable recommendations, the higher education institutions perceive that they have stepped up to the table and contributed to increases in the state’s economy that have resulted in increased state revenues. Indeed, there is a projected \$200 million state surplus this biennium. It is reasonable for the institutions to assume that they would share in the increased resources from assisting the economy to expand, as the Higher Education

³ Donald Boyd, 2006. *State Fiscal Outlooks from 2005 – 2013: Implications for Higher Education*. Rockefeller Institute, State University of New York.

Roundtable indicated. If the institutions were to receive 21 percent of the increased state general fund budget, there would be sufficient resources to begin to address the inequities in funding among the institutions. Raising higher education's share to 21 percent would generate at least an additional \$20 million per biennium.

This is not sufficient to eliminate the inequities for some time, or to eliminate the deferred maintenance backlog, but considerable progress would be made, especially with changes to the distribution of parity and equity funds discussed above. Balanced against this of course are the competing demands on the state budget from PK-12 education, Medicare, and the shifting of other programs from the federal government to the states. The challenge to the Governor and the Legislative Assembly is to balance all these demands and needs to find the optimal mix that will serve the citizens of North Dakota and improve the economy.

Tying the NDUS funding to 21 percent of the state general fund budget will permit the University System to share in and be rewarded for contributing to the state's economy, which is one of the major tenets of the Higher Education Roundtable.

RECOMMENDATION 6-5:

Increase state funding to the NDUS to reach the goal of 21 percent of the state general fund budget.

Funding Targets

A component of the current LTFP is that budget requests will move institutions currently funded at less than 85 percent of peer institution funding to 85 percent by the 2007-09 biennium and all institutions to 95 percent of peer institution funding by the 2013-15 biennium. In addition, in the Capital Asset Funding Component of the Plan, the goal is to phase in full funding of the OMB's buildings and infrastructure formula by the 2011-13 biennium and to address the current deferred maintenance backlog by the 2015-17 biennium. Additionally, 2 percent of the total state general fund appropriation was to be provided for Special Initiative Funding, phased in by the 2009-11 biennium.

At the current rate of increase, these funding targets will not be achieved. Based on the 2005-07 appropriations levels, over \$150 million would be needed to bring all campuses to their 85 percent of the peer benchmarks, based on state share only. This amount does not include funding needed to address the backlog of deferred maintenance or the infrastructure formula.

Even if all the small colleges and universities were closed, there would not be sufficient resources to provide adequate funding for the two largest campuses. The closing of these institutions is not an option, given the vote of the state's citizens. Indeed, closing of any institution would negatively impact the state's economy in general, and the local economy in particular.

One option of course is to set a different target of peer level funding, and bring all institutions up to that level, holding constant the institutions above the target level of funding. Under this option, certain campuses will continue to be dissatisfied with funding.

Some have suggested that a second option is to disband the NDUS and revert to a system where each institution fends for itself and the general market prevails. This would result in closing of certain institutions, and would not be in the state's best interests in using higher education as drivers of the state's economy. It is likely that such an option would cost the state more in the long run.

No solution will make every institution happy. No level of funding will be sufficient to reach the satisfaction level for all institutions and be within the state's ability to support higher education, as well as other state services.

From this perspective, the **85 percent and 95 percent targets are unrealistic.**

RECOMMENDATION 6-6:

Establish more realistic targets for funding.

Historically, North Dakota has not provided what could be called an "adequate" level of state funding for its institutions of higher education. Recognizing that fact, setting the goal at a lesser percentage will bring the goal to an achievable level. Some will contend that the bar should be set as high as possible to encourage high levels of achievement; others will contend that setting the bar too high makes the goal impossible to achieve, so why try? Perhaps one way of establishing targets is to increase funding by a specified percentage each biennium for those institutions below the peer funding level. The percentage increase could be set at 10 percent per year, or twice the percentage increase in the state general fund, whichever is greater. This has the advantage of clearly tying increases in NDUS funding to increases in the state's economy.

Comparisons of Alternatives for Distributing Funding to the Institutions

Exhibit 6-7 displays the 2005-07 legislative appropriations to the institutions, including the \$2 million equity adjustments, but excluding Capital Assets funding. These funding levels also exclude funding for the Higher Education Computer Network (HECN), agriculture extension and experiment, Interactive Video Network (IVN), the On-line Dakota Information Network (ODIN), and flood-related expenditures. With the \$2 million equity adjustment, funding as a percent of the peer benchmark varied from a low of 48.4 percent for Lake Region State College to a high of 100.1 percent at Valley City State University. Another \$208.7 million would be required to bring all institutions to 100 percent of peer funding. To reach the goal of 85 percent of peer funding, an additional \$176.8 million would be required. It is unlikely that this goal could be reached in three biennia.

EXHIBIT 6-7
2005-07 LEGISLATIVE APPROPRIATIONS

INSTITUTION	BASE FUNDING	EQUITY	TOTAL	FUNDING AS % OF PEER
Bismarck State College	16,865,547	400,000	17,265,547	49.1%
Dickinson State University	14,711,627		14,711,627	62.7%
Lake Region State College	5,389,989	400,000	5,789,989	48.4%
Mayville State University	9,003,630		9,003,630	92.6%
Minot State University	27,215,850		27,215,850	72.7%
Minot State University- Bottineau	4,334,460		4,334,460	61.0%
North Dakota State College of Science	24,956,828		24,956,828	81.2%
North Dakota State University	75,804,650	900,000	76,704,650	52.7%
University of North Dakota	123,912,604	300,000	124,212,604	59.5%
Valley City State University	11,806,526		11,806,526	100.1%
Williston State College	5,752,997		5,752,997	65.2%
Total	319,754,708	2,000,000	321,754,708	60.7%

Source: NDUS, 2006.

Exhibit 6-8 displays FY 2004 funding per student using the recommended set of peer institutions, with adjustments for Higher Education Computer Network (HECN), Interactive Video Network (IVN), the On-line Dakota Information Network (ODIN), flood-related expenditures, and technology fee revenues. Adjustments are not made for agriculture extension and experiment because similar adjustments could not be made for the peer institutions.

When compared to the appropriations levels at the peers, funding as a percent of the peer benchmark varied from a low of 40.3 percent at the University of North Dakota to a high of 84.0 percent at Valley City State University. Funding for the system was at 50.5 percent of the peer appropriation.

Under the long-term finance plan, funding is a shared responsibility between the state, students, and the institutions. As was discussed earlier, there are targeted ratios or shares of funds that vary by type of institution. The state funding share is calculated by those ratios for the combination of appropriations and net tuition revenues. **Exhibit 6-9** displays the funding per student using the recommended set of peer institutions, with adjustments for Higher Education Computer Network (HECN), Interactive Video Network (IVN), the On-line Dakota Information Network (ODIN), flood-related expenditures, and technology fee revenues. Adjustments are not made for agriculture extension and experiment because similar adjustments could not be made for the peer institutions.

When compared to the appropriations levels at the peers, funding as a percent of the peer benchmark, using the state share of the total, varied from a low of 40.6 percent at Lake Region State College to a high of 88.8 percent at Valley City State University. Funding for the system would be at 53.6 percent of the targeted peer level of funding.

**EXHIBIT 6-8
FY 2004 FUNDING PER STUDENT**

INSTITUTION	NET TUITION			APPROPRIATIONS			TOTAL NET TUITION AND APPROPRIATIONS		
	North Dakota	Peers	ND As % Of Peers	North Dakota	Peers	ND As % Of Peers	North Dakota	Peers	ND As % Of Peers
Bismarck State College	\$3,050	\$2,275	134.1%	\$2,962	\$6,910	42.9%	\$6,012	\$9,185	65.5%
Dickinson State University	\$2,296	\$3,330	69.0%	\$3,319	\$8,006	41.5%	\$5,615	\$11,336	49.5%
Lake Region State College	\$3,073	\$2,056	149.5%	\$3,245	\$8,611	37.7%	\$6,318	\$10,667	59.2%
Mayville State University	\$2,087	\$4,121	50.6%	\$6,458	\$8,556	75.5%	\$8,545	\$12,672	67.4%
Minot State University	\$2,865	\$3,717	77.1%	\$4,423	\$6,855	64.5%	\$7,288	\$10,573	68.9%
Minot State University-Bottineau	\$1,450	\$1,586	91.4%	\$4,442	\$8,053	55.2%	\$5,892	\$9,639	61.1%
North Dakota State College of Science	\$2,582	\$2,683	96.2%	\$5,675	\$7,347	77.2%	\$8,257	\$9,949	83.0%
North Dakota State University	\$4,138	\$6,267	66.0%	\$6,424	\$10,699	60.0%	\$10,562	\$16,966	62.3%
University of North Dakota	\$6,298	\$6,801	92.6%	\$4,481	\$11,113	40.3%	\$10,779	\$17,914	60.2%
Valley City State University	\$2,161	\$3,058	70.7%	\$7,306	\$8,693	84.0%	\$9,467	\$11,751	80.6%
Williston State College	\$1,977	\$1,878	105.3%	\$3,637	\$6,829	53.3%	\$5,614	\$8,721	64.4%
Total	\$4,274	\$5,439	78.6%	\$4,994	\$9,882	50.5%	\$9,269	\$15,320	60.5%

EXHIBIT 6-9
FY 2004 FUNDING PER STUDENT,
USING STATE SHARE OF BASE OPERATING FUNDS

INSTITUTION	NORTH DAKOTA APPROP PER FTE	PEER TOTAL APPROP AND TUITION PER FTE	STATE SHARE	STATE SHARE OF PEER TOTAL	ND AS % OF PEER BENCH-MARK
Bismarck State College	\$2,962	\$9,185	75%	\$6,889	43.0%
Dickinson State University	\$3,319	\$11,336	70%	\$7,935	41.8%
Lake Region State College	\$3,245	\$10,667	75%	\$8,000	40.6%
Mayville State University	\$6,458	\$12,672	70%	\$8,870	72.8%
Minot State University	\$4,423	\$10,573	65%	\$6,872	64.4%
Minot State University-Bottineau	\$4,442	\$9,639	75%	\$7,229	61.4%
North Dakota State College of Science	\$5,675	\$9,949	75%	\$7,462	76.1%
North Dakota State University	\$6,424	\$16,966	60%	\$10,179	63.1%
University of North Dakota	\$4,481	\$17,914	60%	\$10,749	41.7%
Valley City State University	\$7,306	\$11,751	70%	\$8,226	88.8%
Williston State College	\$3,637	\$8,721	75%	\$6,541	55.6%
Total	\$4,994	\$15,320		\$9,310	53.6%

Exhibit 6-10 displays the benchmark funding for the 2005-07 biennium if the recommended peer comparison groups were used, together with actual funding. This exhibit is analogous to Exhibit 6-8. Special items have been excluded from the comparisons (adjustments for Higher Education Computer Network (HECN), Interactive Video Network (IVN), the On-line Dakota Information Network (ODIN), flood-related expenditures, and technology fee revenues). Adjustments are not made for agriculture extension and experiment because similar adjustments could not be made for the peer institutions without a special survey of the peer institutions, which could not be completed within the time frame of the study. **To use this model in determining and comparing funding levels, it is recommended that the NDUS do a survey of the NDSU peer institutions to be able to remove agriculture extension and experiment station expenditures.** MGT understands that North Dakota law prevents the commingling of funds appropriated especially for the agriculture programs at NDSU. However, MGT also recognizes that certain expenditures are made by the NDSU campus that benefit agriculture, and are not charged to these programs. The same is true for the peer institutions – it is extremely difficult to separate out the costs of institutional support attributable to agriculture programs, such as the proportion of the president's and vice presidents' time, accounting and human resources costs, maintenance of physical plant, and similar items.

This comparison also uses the recommended count of students, where 25 percent of the student count is based on headcount and 75 percent is based on FTE for the two most recent years of IPEDS data. Funding varies from 35.7 percent of the benchmark at Lake Region State College to 78.2 percent at North Dakota State College of Science.

EXHIBIT 6-10
COMPARISON OF BENCHMARK FUNDING USING RECOMMENDED PEERS
TO LEGISLATIVE APPROPRIATIONS FOR THE 2005-07 BIENNIUM

INSTITUTION	STUDENT COUNT	BENCHMARK FUNDING	BIENNIAL BENCHMARK	LEGISLATIVE APPROP- RIATION	% OF BENCHMARK
Bismarck State College	2,899	\$6,910	40,064,180	17,265,547	43.1%
Dickinson State University	2,143	\$8,006	34,314,115	14,711,627	42.9%
Lake Region State College	941	\$8,611	16,205,902	5,789,989	35.7%
Mayville State University	762	\$8,556	13,039,344	9,003,630	69.0%
Minot State University	3,275	\$6,855	44,900,559	27,215,850	60.6%
Minot State University- Bottineau	492	\$8,053	7,924,152	4,334,460	54.7%
North Dakota State College Of Science	2,207	\$7,347	32,429,658	24,956,828	77.0%
North Dakota State University	10,815	\$10,699	231,411,540	133,316,837	57.6%
University Of North Dakota	12,088	\$11,113	268,678,587	124,212,604	46.2%
Valley City State University	913	\$8,693	15,873,418	11,806,526	74.4%
Williston State College	745	\$6,829	10,175,210	5,752,997	56.5%
Total	37,280		715,016,665	378,366,895	52.9%

Exhibit 6-11 displays the benchmark funding for the 2005-07 biennium if the recommended peer comparison groups were used, together with actual funding. This exhibit is analogous to Exhibit 6-9, which uses the percentage shares of state and tuition funding. Special items have been excluded from the comparisons (adjustments for Higher Education Computer Network (HECN), Interactive Video Network (IVN), the On-line Dakota Information Network (ODIN), flood-related expenditures, and technology fee revenues). Adjustments are not made for agriculture extension and experiment.

This comparison also uses the recommended count of students, where 25 percent of the student count is based on headcount and 75 percent is based on FTE for the two most recent years of IPEDS data. Funding varies from 38.5 percent of the benchmark at Lake Region State College to 78.6 percent at Valley City State University.

EXHIBIT 6-11
COMPARISON OF BENCHMARK FUNDING USING RECOMMENDED PEERS
TO LEGISLATIVE APPROPRIATIONS FOR THE 2005-07 BIENNIUM
USING STATE SHARE OF BASE OPERATING FUNDS

INSTITUTION	STUDENT COUNT	BEN CHMARK FUNDING	BIENNIAL BEN CHMARK	LEGISLATIVE APPROP- RIATION	% OF BEN CHMARK
Bismarck State College	2,899	\$6,889	39,940,973	17,265,547	43.2%
Dickinson State University	2,143	\$7,935	34,009,503	14,711,627	43.3%
Lake Region State College	941	\$8,000	15,056,471	5,789,989	38.5%
Mayville State University	762	\$8,870	13,518,490	9,003,630	66.6%
Minot State University	3,275	\$6,872	45,012,483	27,215,850	60.5%
Minot State University- Bottineau	492	\$7,229	7,113,582	4,334,460	60.9%
North Dakota State College Of Science	2,207	\$7,462	32,936,165	24,956,828	75.8%
North Dakota State University	10,815	\$10,179	220,178,354	133,316,837	60.5%
University Of North Dakota	12,088	\$10,749	259,857,109	124,212,604	47.8%
Valley City State University	913	\$8,226	15,020,128	11,806,526	78.6%
Williston State College	745	\$6,541	9,745,718	5,752,997	59.0%
Total	37,280		692,388,974	378,366,895	54.6%

If the goal is set to reach 65 percent of the benchmark funding level of the peers, then only Mayville State University, North Dakota State College of Science, and Valley City State University would be the only institutions to receive no equity funding. A total of \$85.0 million in new funding would be required to reach that level. It is unlikely that this level will be achieved during the next biennium.

Further, if the new dollars were appropriated in the ratio of 80 percent to equity and 20 percent to parity, the distribution of the 2005-07 biennial funding would change markedly, as shown in **Exhibit 6-12**. The calculation for this exhibit assumes that student counts are calculated as recommended, and that \$16.8 million of the \$21 million new funding in the biennium is allocated to equity and the remaining \$4.2 million to parity. In addition, the assumption is made that equity is distributed in proportion to the total distance from peer funding. Funding for agriculture programs have been excluded from North Dakota State University and from the peers at the same ratio to get an appropriation level for non-agriculture programs that was equal to 60.6 percent of the funding for peers. This amount was calculated by dividing the non-agriculture appropriations for NDSU (\$76,704,650) by .606 to get the peer benchmark total funding of \$126,575,330; which was then divided by the number of students (10,815) to get a dollar amount of funding for the biennium (\$11,704), and divided by 2 to get the annual funding amount.

EXHIBIT 6-12
COMPARISON OF 2005-07 LEGISLATIVE APPROPRIATIONS TO
ALLOCATIONS UNDER RECOMMENDED CHANGES

INSTITUTION	BASE	PARITY	EQUITY	TOTAL	ACTUAL APPROP.	DIFFERENCE
Bismarck State College	15,612,327	222,289	1,284,327	17,118,943	17,265,547	-146,604
Dickinson State University	13,669,533	194,628	1,093,597	14,957,758	14,711,627	246,131
Lake Region State College	5,032,682	71,656	484,150	5,588,488	5,789,989	-201,501
Mayville State University	8,602,335	122,481		8,724,816	9,003,630	-278,814
Minot State University	25,890,346	368,629	1,447,404	27,706,379	27,215,850	490,529
Minot State University-Bottineau	4,102,856	58,417	228,742	4,390,014	4,334,460	55,554
North Dakota State College of Science	23,839,431	339,428		24,178,859	24,956,828	-777,969
North Dakota State University	70,694,066	1,006,547	5,446,133	77,146,746	76,704,650	442,096
University of North Dakota	116,633,402	1,660,635	6,427,590	124,721,627	124,212,604	509,023
Valley City State University	11,304,672	160,957		11,465,629	11,806,526	-340,897
Williston State College	5,436,977	77,412	241,061	5,755,450	5,752,997	2,453
Total	300,818,627	4,283,077	16,653,004	321,754,708	321,754,708	0

Under this assumption the only institutions whose allocations would not increase would be Bismarck State College, Lake Region State College, Mayville State University, North Dakota State College of Science, and Valley City State University. Likely another method of distributing equity funding would provide additional dollars to other extremely under-funded institutions.

A methodology that distributed new funding based on 80 percent equity and 20 percent parity achieves some additional equity in the distribution of resources because the variance in the percent of the peer benchmark decreases markedly from 55.0 percent to 40.1 percent. The percent of peer funding using this method is displayed in **Exhibit 6-13**. Funding for agriculture programs have been excluded from North Dakota State University and from the peers at the same ratio to get an appropriation level for non-agriculture programs that was equal to 60.6 percent of the funding for peers. This amount was calculated by dividing the non-agriculture appropriations for NDSU (\$76,704,650) by .606 to get the peer benchmark total funding of \$126,575,330; which was then divided by the number of students (10,815) to get a dollar amount of funding for the biennium (\$11,704), and divided by 2 to get the annual funding amount, \$5,852.

**EXHIBIT 6-13
COMPARISON TO PEER BENCHMARK UNDER RECOMMENDED METHOD**

INSTITUTION	BENCHMARK FUNDING	BIENNIAL BENCHMARK	REVISED FUNDING	% OF BENCHMARK
Bismarck State College	\$6,889	39,940,973	17,265,547	43.2%
Dickinson State University	\$7,935	34,009,503	14,711,627	43.3%
Lake Region State College	\$8,000	15,056,471	5,789,989	38.5%
Mayville State University	\$8,870	13,518,490	9,003,630	66.6%
Minot State University	\$6,872	45,012,483	27,215,850	60.5%
Minot State University-Bottineau	\$7,229	7,113,582	4,334,460	60.9%
North Dakota State College of Science	\$7,462	32,936,165	24,956,828	75.8%
North Dakota State University	\$5,862	126,784,245	76,704,650	60.5%
University of North Dakota	\$10,749	259,857,109	124,212,604	47.8%
Valley City State University	\$8,226	15,020,128	11,806,526	78.6%
Williston State College	\$6,541	9,745,718	5,752,997	59.0%
Total		598,994,865	321,754,708	53.7%

APPENDICES

APPENDIX A – PEER ANALYSIS

This Appendix addresses the use of peers and general peer analysis.

Peer Analysis

A “peer” is a college or university that is “most like” another college or university based on similarities on a group of variables like mission, size, organization, control, location, mix of programs, and student body characteristics. Colleges and universities use groups of peers to compare their performance on characteristics and/or to request additional funding to support initiatives.

Colleges, state systems, and legislative analysts have used peers to set tuition, recommend faculty salaries, compare expenditures per full-time equivalent student, compare legislative appropriations, and adjust student/faculty ratios. In 1996, a majority of states were using peers in their funding models; 26 states used peer data for salary purposes; 17 for tuition and fee setting; 10 for determining overall funding levels; and six for determining funding for libraries.¹

Peers may be determined for one institution based on sets of characteristics that indicate “alikehood” or “similarity” or peers may be determined for a set of institutions. An individual institution may use peers for internal comparison purposes. For example, peers can be established for each academic department, or for each business office in the university. Generally, peers are determined for “general” purposes, and the same set of peers is used for all comparisons that a college or university may make. However, some colleges have one set of peers for determining tuition, another set of peers for comparisons of faculty and staff salaries and compensation, and a third set for funding comparisons.

A set of peers typically includes at least ten colleges or universities because not all will elect to participate in data collection efforts. A peer group smaller than ten may not provide sufficient data to yield valid or reliable information. The peer group may include all actual peers, or it may include “aspirational” peers. Aspirational peers are those that the institution aspires to be like on some criterion, such as faculty salary or compensation levels, or academic reputation.

To determine a set of peers, colleges or coordinating/governing boards may use several methods: geographic location, membership in an organization or externally determined group, or statistical analysis.

¹ McKeown, Mary P. “State Funding Formulas: Promise Fulfilled?” in *A Struggle to Survive. Funding Higher Education in the Next Century*, Honeyman, D.S., J.L. Wattenbarger, and K.C. Westbrook (eds.) Thousand Oaks, CA: Corwin Press. 1996.

Geographic Proximity. All of the colleges in the contiguous states may be used as peers; or other colleges in the same state that have been assigned the same Carnegie Classification. Geographic proximity is used because it is thought that the nearby colleges are those with which the college or university competes for students and staff. The Southern Regional Education Board (SREB) and the Western Interstate Commission on Higher Education (WICHE) maintain detailed data bases on the colleges and universities in their region, and form the basis for geographic peer comparisons. Geographic peer selection is used most often for comparisons of tuition and fees.

Membership in Athletic Conferences, Organizations, or in the Same Carnegie Classification. Carnegie Classifications are categorizations of colleges and universities using a method designed by the Carnegie Commission for the Advancement of Teaching. In the Carnegie categories that were used in this report, colleges and universities are classified as Doctoral/Research, Masters I and Masters II, Baccalaureate colleges, Two Year, or Specialized Campus. (NOTE: In February 2006, Carnegie released new classifications for all the colleges and universities in the United States. These new classifications include differentiation by size and location.)

Some colleges and universities use membership in Carnegie Classification or in an athletic conference as the only criterion for determining peers. For examples, members of the Big Ten Athletic Conference compare data on physical plant, libraries, planning, enrollment trends, and other data items. The universities that are members of the Association of American Universities (AAU) have detailed data that are shared among member institutions. Data include items such as rank of faculty and class size by discipline and level. Membership is used most often for peer selection for plant, library, and faculty comparisons.

Statistical Analysis. To determine peers, some colleges or governing/coordinating boards use statistical analysis techniques. The analysis may be simple or quite complex. A simple analysis may use only one variable to select peers, such as all colleges of a certain size, no matter what the location, organization, or control, might be selected.

More complex statistical methodologies involve upwards of 100 variables in determining the set of peer institutions. Variables include size, location, organization, control, mix of academic programs, types of students served, graduation rates, or any of a number of other variables.

Typically the peer selection will start with one variable that is used as the major criterion to eliminate most of the 4,800 colleges and universities in the United States. For example, only public colleges may be included in the selection group. Then, the group may be further winnowed by elimination of all colleges above or below a certain enrollment.

The most complex method for selecting peers involves completing factor analyses or cluster analyses to determine which colleges have the most alike factor scores, or which cluster together based on the variables used. A set of “difference” scores may be computed, which are used to determine how alike two institutions are on a variable or factor. The difference scores are summed across all variables or factors, and those colleges with the smallest total difference score become the set of peers.

Statistical Methodology Used to Select Peers for North Dakota Institutions

The process of identifying peers for each of the North Dakota institutions began with development of a set of criteria or variables. In identifying the peer institutions, the primary selection criterion reflected the mission of higher education institutions in North Dakota as identified by their Carnegie Classification, as Carnegie classifications were defined in 2005. Only public institutions were included in the selection pool. Variables chosen for each of the institutions are shown in **Appendix B**, which also includes the final list of peer institutions recommended for each college and university.

Peers were classified into four categories: Research, Masters, Baccalaureate, and Two-year institutions. For each category, a “sample” of institutions was drawn from the list of all public colleges and universities in the U.S. For the research sector, all public institutions classified as Doctoral/Research were included. For the Masters sector, all public Masters I and II campuses were included in the list; for the baccalaureate institutions, all public baccalaureate institutions were included; and, for the two-year campuses, all public, two-year colleges comprised the list.

Data were taken from the most recent and available IPEDS institutional characteristics, fall enrollment, staffing, degrees awarded, and finance surveys, and combined into one file for each sector. All colleges and universities were provided a copy of the data file.

To develop an initial listing of “peers,” a factor analysis was completed on the combined data file for each group. Factor analysis identifies underlying variables called “factors” that explain the pattern of correlation within a set of observed variables. Because there were over 100 variables in the data set, factor analysis permitted the reduction in the number of variables to a more manageable set of factors that enabled comparison among colleges or universities. The factors identified by the statistical technique explained over 80 percent of the variance or differences among campuses.

For the factor analysis, the statistical package (SPSS) completed a general factor analysis with no constraints placed on the number of factors, and with no weighted variables. In addition, only a basic factor analysis was run, with no rotation and no other special settings.

The factor analysis developed “factor scores” for each institution for each factor identified in the analysis. A factor analysis that identified 22 factors resulted in each institution having 22 factor scores, one for each of the 22 factors.

Then, the factor scores for each institution in North Dakota were compared to the factor scores for each other institution in its “sector” to get distance scores. A distance score is defined as the difference between one campus and another on each factor score. Each of the distance scores was squared to eliminate negative numbers, and the squared distance or difference scores summed to get a combined “distance score” for the North Dakota institution and the other institution. All institutions in the group then were rank-ordered based on their distance score, and arrayed in a list from low to high distance score. The institution with the smallest distance score is the institution most like the North Dakota institution.

APPENDIX B: PEER INSTITUTIONS

APPENDIX B - PEER INSTITUTIONS

PEER INSTITUTIONS BISMARCK STATE COLLEGE

Institution	City	State
Athens Technical College	Athens	GA
Dekalb Technical College	Clarkston	GA
Marshalltown Community College	Marshalltown	IA
Lake Michigan College	Benton Harbor	MI
Lake Superior College	Duluth	MN
Ridgewater College	Willmar	MN
New Mexico Junior College	Hobbs	NM
San Juan College	Farmington	NM
SUNY College of Technology at Canton	Canton	NY
Reading Area Community College	Reading	PA
Western Dakota Technical Institute	Rapid City	SD
Texas State Technical College-Harlingen	Harlingen	TX
Texas State Technical College-West Texas	Sweetwater	TX
Lake Washington Technical College	Kirkland	WA
Blackhawk Technical College	Janesville	WI

Variables/Criteria used in Determining Peers for Bismarck State College

1. Public control
2. Carnegie classification as a two-year institution

The first two variables were used as discriminating variables, that is, only public two-year colleges or universities were included in the group of possible peers for BSC.

3. Location
4. Total headcount students
5. Total full-time headcount students
6. Total part-time headcount students
7. Percent full-time headcount students
8. Number of undergraduate students
9. Number of full-time, first-time, first-year undergraduate students
10. Number of other full-time undergraduate students
11. Number of part-time, first-time, first-year undergraduate students
12. Number of other part-time undergraduate students
13. Number of part-time non-degree undergraduate students
14. Full-time equivalent students
15. Number of Communications degrees awarded

16. Percent of Communications degrees
17. Number of Computer Information Systems degrees awarded
18. Percent CIS degrees
19. Number of Engineering technical degrees awarded
20. Percent of Engineering technical degrees
21. Number of Legal degrees awarded
22. Percent Legal degrees
23. Liberal studies degrees awarded
24. Percent liberal studies degrees
25. Number of Music degrees
26. Percent of Music degrees
27. Number of Parks, Recreation and Leisure degrees awarded
28. Percent of Parks, Recreation and Leisure degrees
29. Number of Security and Protective Services degrees awarded
30. Percent of Security and Protective Services degrees
31. Number of construction Trades degrees awarded
32. Percent of Construction Trades degrees
33. Number of Mechanic and Repair Technologies degrees awarded
34. Percent of Mechanic and Repair Technologies
35. Number of Precision Production degrees awarded
36. Percent of Precision Production degrees
37. Number of Transportation and Materials Moving degrees awarded
38. Percent of Transportation and Materials Moving degrees
39. Number of Health degrees awarded
40. Percent Health degrees awarded
41. Number of Business degrees awarded
42. Percent Business degrees awarded
43. Total degrees awarded
44. Total Staff
45. Total Full-time staff
46. Percent full-time staff
47. Number of full-time faculty
48. Number of part-time faculty
49. Percent part-time faculty
50. Number of full-time executive staff
51. Number of part-time executive staff
52. Number of full-time technical staff
53. Number of full-time skilled staff
54. Number of part-time skilled staff
55. Number of part-time technical staff
56. Number of full-time clerical staff
57. Number of part-time clerical staff

**PEER INSTITUTIONS
DICKINSON STATE UNIVERSITY**

Institution	City	State
California State University – Monterey Bay	Monterey	CA
New College of Florida	Sarasota	FL
Indiana University - Kokomo	Kokomo	IN
Indiana University-East	Richmond	IN
Purdue University-North Central Campus	Westville	IN
University of Maine at Fort Kent	Fort Kent	ME
University of Maine at Presque Isle	Presque Isle	ME
Massachusetts College of Liberal Arts	North Adams	MA
The University of Montana-Western	Dillon	MT
Elizabeth City State University	Elizabeth City	NC
Central State University	Wilberforce	OH
Oklahoma Panhandle State University	Goodwell	OK
University of Pittsburgh-Bradford	Bradford	PA
Lyndon State College	Lyndonville	VT
West Liberty State College	West Liberty	WV

Variables/Criteria used in Determining Peers for Dickinson State University

1. Public control
2. Carnegie classification as a baccalaureate institution

The first two variables were used as discriminating variables, that is, only public baccalaureate colleges or universities were included in the group of possible peers for DSU.

3. Location
4. Total headcount students
5. Total full-time headcount students
6. Total part-time headcount students
7. Percent full-time headcount students
8. Number of undergraduate students
9. Number of full-time, first-time, first-year undergraduate students
10. Number of other full-time undergraduate students
11. Number of part-time, first-year undergraduate students
12. Number of other part-time undergraduate students
13. Number of part-time non-degree undergraduate students
14. Full-time equivalent students
15. Number of Communications degrees awarded
16. Percent of Communications degrees
17. Number of Computer Information Systems degrees awarded
18. Percent CIS degrees
19. Number of Education degrees awarded

20. Percent of Education degrees
21. Number of Foreign Language degrees awarded
22. Percent Foreign Language degrees
23. Number of English degrees awarded
24. Percent of English degrees
25. Liberal studies degrees awarded
26. Percent liberal studies degrees
27. Number of Biological Science degrees awarded
28. Percent Biological Science degrees
29. Number of Math degrees awarded
30. Percent of Math degrees
31. Number of Music degrees
32. Percent of Music degrees
33. Number of Physical Science degrees awarded
34. Percent Physical Science degrees
35. Number of Psychology degrees awarded
36. Percent of Psychology degrees
37. Number of Health degrees awarded
38. Percent Health degrees awarded
39. Number of Business degrees awarded
40. Percent Business degrees awarded
41. Total degrees awarded
42. Total Staff
43. Total Full-time staff
44. Percent full-time staff
45. Number of full-time faculty
46. Number of part-time faculty
47. Percent part-time faculty
48. Number of full-time executive staff
49. Number of part-time executive staff
50. Number of full-time technical staff
51. Number of full-time skilled staff
52. Number of part-time skilled staff
53. Number of part-time technical staff
54. Number of full-time clerical staff
55. Number of part-time clerical staff

**PEER INSTITUTIONS
LAKE REGION STATE COLLEGE**

Institution	City	State
South Arkansas Community College	El Dorado	AR
Feather River Community College District	Quincy	CA
Florida Keys Community College	Key West	FL
Southwest Georgia Technical College	Thomasville	GA
Ivy Tech State College-Whitewater	Whitewater	IN
Northwest Iowa Community College	Sheldon	IA
Cecil Community College	North East	MD
Kirtland Community College	Roscommon	MI
West Shore Community College	Scottville	MI
Pine Technical College	Pine City	MN
Brunswick Community College	Supply	NC
Sampson Community College	Clinton	NC
Clatsop Community College	Astoria	OR
Frank Phillips College	Borger	TX
Paul D Camp Community College	Franklin	VA

Variables/Criteria used in Determining Peers for Lake Region State College

1. Public control
2. Carnegie classification as a two-year institution

The first two variables were used as discriminating variables, that is, only public two-year colleges or universities were included in the group of possible peers for LRSC.

3. Location
4. Total headcount students
5. Total full-time headcount students
6. Total part-time headcount students
7. Percent full-time headcount students
8. Number of undergraduate students
9. Number of full-time, first-time, first-year undergraduate students
10. Number of other full-time undergraduate students
11. Number of part-time, first-time, first-year undergraduate students
12. Number of other part-time undergraduate students
13. Number of part-time non-degree undergraduate students
14. Full-time equivalent students
15. Number of Communications degrees awarded
16. Percent of Communications degrees
17. Number of Computer Information Systems degrees awarded
18. Percent CIS degrees
19. Number of Engineering technical degrees awarded

20. Percent of Engineering technical degrees
21. Number of Legal degrees awarded
22. Percent Legal degrees
23. Liberal studies degrees awarded
24. Percent liberal studies degrees
25. Number of Music degrees
26. Percent of Music degrees
27. Number of Parks, Recreation and Leisure degrees awarded
28. Percent of Parks, Recreation and Leisure degrees
29. Number of Security and Protective Services degrees awarded
30. Percent of Security and Protective Services degrees
31. Number of construction Trades degrees awarded
32. Percent of Construction Trades degrees
33. Number of Mechanic and Repair Technologies degrees awarded
34. Percent of Mechanic and Repair Technologies
35. Number of Precision Production degrees awarded
36. Percent of Precision Production degrees
37. Number of Transportation and Materials Moving degrees awarded
38. Percent of Transportation and Materials Moving degrees
39. Number of Health degrees awarded
40. Percent Health degrees awarded
41. Number of Business degrees awarded
42. Percent Business degrees awarded
43. Total degrees awarded
44. Total Staff
45. Total Full-time staff
46. Percent full-time staff
47. Number of full-time faculty
48. Number of part-time faculty
49. Percent part-time faculty
50. Number of full-time executive staff
51. Number of part-time executive staff
52. Number of full-time technical staff
53. Number of full-time skilled staff
54. Number of part-time skilled staff
55. Number of part-time technical staff
56. Number of full-time clerical staff
57. Number of part-time clerical staff

**PEER INSTITUTIONS
MAYVILLE STATE UNIVERSITY**

Institution	City	State
California State University – Monterey Bay	Seaside	CA
New College of Florida	Sarasota	FL
Indiana University - East	Richmond	IN
Purdue University-North Central Campus	Westville	IN
Massachusetts College of Liberal Arts	North Adams	MA
University of Maine at Fort Kent	Fort Kent	ME
St. Mary's College of Maryland	St. Mary's City	MD
University of Minnesota Crookston	Crookston	MN
University of Minnesota Morris	Morris	MN
The University of Montana-Western	Dillon	MT
Elizabeth City State University	Elizabeth City	NC
Central State University	Wilberforce	OH
Lyndon State College	Lyndonville	VT
The University of Virginia's College at Wise	Wise	VA
Virginia Military Institute	Lexington	VA

Variables/Criteria used in Determining Peers for Mayville State University

1. Public control
2. Carnegie classification as a baccalaureate institution

The first two variables were used as discriminating variables, that is, only public baccalaureate colleges or universities were included in the group of possible peers for MSU.

3. Location
4. Total headcount students
5. Total full-time headcount students
6. Total part-time headcount students
7. Percent full-time headcount students
8. Number of undergraduate students
9. Number of full-time, first-time, first-year undergraduate students
10. Number of other full-time undergraduate students
11. Number of part-time, first-year undergraduate students
12. Number of other part-time undergraduate students
13. Number of part-time non-degree undergraduate students
14. Full-time equivalent students
15. Number of Communications degrees awarded
16. Percent of Communications degrees
17. Number of Computer Information Systems degrees awarded
18. Percent CIS degrees
19. Number of Education degrees awarded

20. Percent of Education degrees
21. Number of Foreign Language degrees awarded
22. Percent Foreign Language degrees
23. Number of English degrees awarded
24. Percent of English degrees
25. Liberal studies degrees awarded
26. Percent liberal studies degrees
27. Number of Biological Science degrees awarded
28. Percent Biological Science degrees
29. Number of Math degrees awarded
30. Percent of Math degrees
31. Number of Music degrees
32. Percent of Music degrees
33. Number of Physical Science degrees awarded
34. Percent Physical Science degrees
35. Number of Psychology degrees awarded
36. Percent of Psychology degrees
37. Number of Health degrees awarded
38. Percent Health degrees awarded
39. Number of Business degrees awarded
40. Percent Business degrees awarded
41. Total degrees awarded
42. Total Staff
43. Total Full-time staff
44. Percent full-time staff
45. Number of full-time faculty
46. Number of part-time faculty
47. Percent part-time faculty
48. Number of full-time executive staff
49. Number of part-time executive staff
50. Number of full-time technical staff
51. Number of full-time skilled staff
52. Number of part-time skilled staff
53. Number of part-time technical staff
54. Number of full-time clerical staff
55. Number of part-time clerical staff

**PEER INSTITUTIONS
MINOT STATE UNIVERSITY**

Institution	City	State
Western Connecticut State University	Danbury	CT
Eastern Connecticut State University	Willimantic	CT
Southern Arkansas University Main Campus	Magnolia	AR
Georgia Southwestern State University	Americus	GA
North Georgia College & State University	Dahlonega	GA
Georgia College And State University	Milledgeville	GA
Kentucky State University	Frankfort	KY
Bemidji State University	Bemidji	MN
Northwest Missouri State University	Maryville	MO
Chadron State College	Chadron	NE
New Jersey City University	New Jersey City	NJ
Eastern New Mexico University	Portales	NM
Western New Mexico University	Silver City	NM
New Mexico Highlands University	Las Vegas	NM
Cheyney University of Pennsylvania	Cheyney	PA

Variables/Criteria used in Determining Peers for Minot State University

1. Public control
2. Carnegie classification as a Masters institution

The first two variables were used as discriminating variables, that is, only public masters universities were included in the group of possible peers for Minot State University.

3. Location
4. Total headcount students
5. Total full-time headcount students
6. Total part-time headcount students
7. Percent full-time headcount students
8. Number of full-time graduate students
9. Number of undergraduate students
10. Number of full-time, first-time, first-year undergraduate students
11. Number of other full-time undergraduate students
12. Number of first professional students
13. Number of part-time, first-year undergraduate students
14. Number of other part-time undergraduate students
15. Number of part-time non-degree undergraduate students
16. Number of part-time first professional students
17. Number of part-time graduate students
18. Full-time equivalent students
19. Number of Natural Science degrees awarded

20. Percent Natural Science degrees awarded
21. Number of Area Studies degrees awarded
22. Percent of Area Studies degrees
23. Number of Communications degrees awarded
24. Percent of Communications degrees
25. Number of Computer Information Systems degrees awarded
26. Percent CIS degrees
27. Number of Education degrees awarded
28. Percent of Education degrees
29. Number of
30. Number of Engineering degrees awarded
31. Percent of Engineering degrees
32. Number of Engineering Related Technology degrees awarded
33. Percent of Engineering Related Technology degrees
34. Liberal studies degrees awarded
35. Percent liberal studies degrees
36. Number of Biological Science degrees awarded
37. Percent Biological Science degrees
38. Number of Physical Science degrees awarded
39. Percent Physical Science degrees
40. Number of Psychology degrees awarded
41. Percent of Psychology degrees
42. Number of Health degrees awarded
43. Percent Health degrees awarded
44. Number of Business degrees awarded
45. Percent Business degrees awarded
46. Total degrees awarded
47. Total Staff
48. Total Full-time staff
49. Percent full-time staff
50. Number of full-time faculty
51. Number of part-time faculty
52. Percent part-time faculty
53. Number of full-time technical staff
54. Number of full-time skilled staff
55. Number of part-time graduate assistants
56. Number of part-time technical staff
57. Research expenditures

PEER INSTITUTIONS
MINOT STATE UNIVERSITY – BOTTINEAU CAMPUS

Institution	City	State
Rich Mountain Community College	Mena	AR
South Arkansas Community College	El Dorado	AR
Feather River Community College District	Quincy	CA
Lamar Community College	Lamar	CO
Quinebaug Valley Community College	Danielson	CT
Garrett College	McHenry	MD
Pine Technical College	Pine City	MN
Rainy River Community College	International Falls	MN
Miles Community College	Miles City	MT
Martin Community College	Williamston	NC
Pamlico Community College	Grantsboro	NC
Mesalands Community College	Tucumcari	NM
New Mexico State University-Grants	Grants	NM
Clatsop Community College	Astoria	OR
Frank Phillips College	Borger	TX

Variables/Criteria used in Determining Peers for Minot State University - Bottineau

1. Public control
2. Carnegie classification as a two-year institution

The first two variables were used as discriminating variables, that is, only public two-year colleges or universities were included in the group of possible peers for the Bottineau campus of Minot State University.

3. Location
4. Total headcount students
5. Total full-time headcount students
6. Total part-time headcount students
7. Percent full-time headcount students
8. Number of undergraduate students
9. Number of full-time, first-time, first-year undergraduate students
10. Number of other full-time undergraduate students
11. Number of part-time, first-time, first-year undergraduate students
12. Number of other part-time undergraduate students
13. Number of part-time non-degree undergraduate students
14. Full-time equivalent students
15. Number of Communications degrees awarded
16. Percent of Communications degrees
17. Number of Computer Information Systems degrees awarded

18. Percent CIS degrees
19. Number of Engineering technical degrees awarded
20. Percent of Engineering technical degrees
21. Number of Legal degrees awarded
22. Percent Legal degrees
23. Liberal studies degrees awarded
24. Percent liberal studies degrees
25. Number of Music degrees
26. Percent of Music degrees
27. Number of Parks, Recreation and Leisure degrees awarded
28. Percent of Parks, Recreation and Leisure degrees
29. Number of Security and Protective Services degrees awarded
30. Percent of Security and Protective Services degrees
31. Number of construction Trades degrees awarded
32. Percent of Construction Trades degrees
33. Number of Mechanic and Repair Technologies degrees awarded
34. Percent of Mechanic and Repair Technologies
35. Number of Precision Production degrees awarded
36. Percent of Precision Production degrees
37. Number of Transportation and Materials Moving degrees awarded
38. Percent of Transportation and Materials Moving degrees
39. Number of Health degrees awarded
40. Percent Health degrees awarded
41. Number of Business degrees awarded
42. Percent Business degrees awarded
43. Total degrees awarded
44. Total Staff
45. Total Full-time staff
46. Percent full-time staff
47. Number of full-time faculty
48. Number of part-time faculty
49. Percent part-time faculty
50. Number of full-time executive staff
51. Number of part-time executive staff
52. Number of full-time technical staff
53. Number of full-time skilled staff
54. Number of part-time skilled staff
55. Number of part-time technical staff
56. Number of full-time clerical staff
57. Number of part-time clerical staff

**PEER INSTITUTIONS
NORTH DAKOTA STATE COLLEGE OF SCIENCE**

Institution	City	State
Naugatuck Valley Community College	Waterbury	CT
Indian Hills Community College	Ottumwa	IA
Northwest Iowa Community College	Sheldon	IA
Washtenaw Community College	Ann Arbor	MI
Anoka Technical College	Anoka	MN
Hennepin Technical College	Brooklyn	MN
Linn State Technical College	Linn	MO
Great Basin College	Elko	NV
SUNY College of Technology at Alfred	Alfred	NY
Oklahoma State University-Okmulgee	Okmulgee	OK
Clackamas Community College	Oregon City	OR
Mt Hood Community College	Gresham	OR
Thaddeus Stevens College of Technology	Lancaster	PA
Texas State Technical College-Waco	Waco	TX
Eastern Wyoming College	Torrington	WY

Variables/Criteria used in Determining Peers for North Dakota State College of Science

1. Public control
2. Carnegie classification as a two-year institution

The first two variables were used as discriminating variables, that is, only public two-year colleges or universities were included in the group of possible peers for NDSCS.

3. Location
4. Total headcount students
5. Total full-time headcount students
6. Total part-time headcount students
7. Percent full-time headcount students
8. Number of undergraduate students
9. Number of full-time, first-time, first-year undergraduate students
10. Number of other full-time undergraduate students
11. Number of part-time, first-time, first-year undergraduate students
12. Number of other part-time undergraduate students
13. Number of part-time non-degree undergraduate students
14. Full-time equivalent students
15. Number of Agriculture degrees awarded
16. Percent of Agriculture degrees
17. Number of Natural Science degrees awarded
18. Percent of Natural Science degrees

19. Number of Computer Information Systems degrees awarded
20. Percent CIS degrees
21. Number of Engineering technical degrees awarded
22. Percent of Engineering technical degrees
23. Number of Parks, Recreation and Leisure degrees awarded
24. Percent of Parks, Recreation and Leisure degrees
25. Number of Security and Protective Services degrees awarded
26. Percent of Security and Protective Services degrees
27. Number of construction Trades degrees awarded
28. Percent of Construction Trades degrees
29. Number of Mechanic and Repair Technologies degrees awarded
30. Percent of Mechanic and Repair Technologies
31. Number of Precision Production degrees awarded
32. Percent of Precision Production degrees
33. Number of Transportation and Materials Moving degrees awarded
34. Percent of Transportation and Materials Moving degrees
35. Number of Health degrees awarded
36. Percent Health degrees awarded
37. Number of Business degrees awarded
38. Percent Business degrees awarded
39. Total degrees awarded
40. Total Staff
41. Total Full-time staff
42. Percent full-time staff
43. Number of full-time faculty
44. Number of part-time faculty
45. Percent part-time faculty
46. Number of full-time technical staff
47. Number of part-time technical staff

**PEER INSTITUTIONS
NORTH DAKOTA STATE UNIVERSITY**

Institution	City	State
University of Alaska Fairbanks	Fairbanks	AK
University of Arkansas Main Campus	Fayetteville	AR
University of Connecticut	Storrs	CT
University of Delaware	Newark	DE
University of Idaho	Moscow	ID
Iowa State University	Ames	IA
University of Kentucky	Lexington	KY
University of Maine	Orono	ME
University of Nevada Reno	Reno	NV
University of Nebraska at Lincoln	Lincoln	NE
University of Rhode Island	Kingston	RI
Clemson University	Clemson	SC
University of Tennessee	Knoxville	TN
University of Vermont	Burlington	VT
University of Wyoming	Laramie	WY

Variables/Criteria used in Determining Peers for North Dakota State University

1. Public control
2. Carnegie classification as a Research or Doctoral institution
3. Land-grant status

The first three variables were used as discriminating variables, that is, only public doctoral or research universities which are land-grant universities were included in the group of possible peers for NDSU.

4. Location
5. Total headcount students
6. Total full-time headcount students
7. Total part-time headcount students
8. Percent full-time headcount students
9. Number of full-time first professional students
10. Number of full-time graduate students
11. Number of undergraduate students
12. Number of full-time, first-time, first-year undergraduate students
13. Number of part-time first professional students
14. First Professional students as a percent of headcount
15. Full-time equivalent students
16. Agriculture degrees awarded
17. Percent agriculture degrees awarded
18. Number of Architecture and Design Science degrees awarded
19. Percent of Architecture and Design Science degrees

20. Number of Computer Information Systems degrees awarded
21. Percent CIS degrees
22. Number of Education degrees awarded
23. Percent of Education degrees
24. Number of Natural Science degrees awarded
25. Percent of Natural Science degrees
26. Number of Engineering degrees awarded
27. Percent of Engineering degrees
28. Number of Engineering Related Technology degrees awarded
29. Percent of Engineering Related Technology degrees
30. Liberal studies degrees awarded
31. Percent liberal studies degrees
32. Number of Biological Science degrees awarded
33. Percent Biological Science degrees
34. Number of Physical Science degrees awarded
35. Percent Physical Science degrees
36. Number of Psychology degrees awarded
37. Percent of Psychology degrees
38. Number of Health degrees awarded
39. Percent Health degrees awarded
40. Number of Business degrees awarded
41. Percent Business degrees awarded
42. Total degrees awarded
43. Total Staff
44. Total Full-time staff
45. Percent full-time staff
46. Number of full-time faculty
47. Number of part-time faculty
48. Percent part-time faculty
49. Number of full-time technical staff
50. Number of full-time skilled staff
51. Number of part-time graduate assistants
52. Number of part-time technical staff
53. Research expenditures

**PEER INSTITUTIONS
UNIVERSITY OF NORTH DAKOTA**

Institution	City	State
University of Alabama at Birmingham	Birmingham	AL
University of Hawaii at Manoa	Honolulu	HI
University of Illinois at Chicago	Chicago	IL
University of Kentucky	Lexington	KY
University of Louisville	Louisville	KY
University of Missouri-Kansas City	Kansas City	MO
University of Nevada-Reno	Reno	NV
SUNY at Buffalo	Buffalo	NY
University of North Carolina at Chapel Hill	Chapel Hill	NC
Wright State University	Dayton	OH
University of Pittsburgh	Pittsburgh	PA
The University of Tennessee	Knoxville	TN
University of Utah	Salt Lake City	UT
University of Vermont and State Agricultural College	Burlington	VT
University of Virginia-Main Campus	Charlottesville	VA

Variables/Criteria used in Determining Peers for University of North Dakota

1. Public control
2. Carnegie classification as a Research or Doctoral institution
3. Medical school

The first three variables were used as discriminating variables, that is, only public doctoral or research universities with a medical school were included in the group of possible peers for UND.

4. Location
5. Total headcount students
6. Total full-time headcount students
7. Total part-time headcount students
8. Percent full-time headcount students
9. Number of full-time first professional students
10. Number of full-time graduate students
11. Number of undergraduate students
12. Number of part-time first professional students
13. First Professional students as a percent of headcount
14. Number of part-time graduate students
15. Full-time equivalent students
16. Law degrees awarded
17. Percent law degrees awarded
18. Number of Computer Information Systems degrees awarded

19. Percent CIS degrees
20. Number of Education degrees awarded
21. Percent of Education degrees
22. Number of Philosophy degrees awarded
23. Liberal studies degrees awarded
24. Percent liberal studies degrees
25. Number of Biological Science degrees awarded
26. Percent Biological Science degrees
27. Number of Mathematics degrees awarded
28. Percent Mathematics degrees
29. Number of Physical Science degrees awarded
30. Percent Physical Science degrees
31. Number of Social Science degrees awarded
32. Percent Social Science degrees
33. Number of Visual and Performing Arts degrees awarded
34. Percent Visual and Performing Arts degrees awarded
35. Number of Health degrees awarded
36. Percent Health degrees awarded
37. Number of Business degrees awarded
38. Percent Business degrees awarded
39. Total degrees awarded
40. Total Staff
41. Total Full-time staff
42. Percent full-time staff
43. Number of full-time faculty
44. Number of part-time faculty
45. Percent part-time faculty
46. Number of full-time executives
47. Number of full-time other professional staff
48. Number of full-time technical staff
49. Number of full-time skilled staff
50. Number of full-time clerical staff
51. Number of full-time service staff
52. Number of part-time graduate assistants
53. Number of part-time technical staff
54. Research expenditures

**PEER INSTITUTIONS
VALLEY CITY STATE UNIVERSITY**

Institution	City	State
California State University - Monterey Bay	Monterey	CA
Western State College of Colorado	Gunnison	CO
New College of Florida	Sarasota	FL
Lewis-Clark State College	Lewiston	ID
Purdue University - North Central	Westville	IN
University of Maine at Presque Isle	Presque Isle	ME
Massachusetts College of Liberal Arts	North Adams	MA
University of Minnesota Morris	Morris	MN
Elizabeth City State University	Elizabeth City	NC
Winston-Salem State University	Winston-Salem	NC
Central State University	Wilberforce	OH
Oklahoma Panhandle State University	Goodwell	OK
University of Pittsburgh-Bradford	Bradford	PA
Texas A & M University at Galveston	Galveston	TX
Lyndon State College	Lyndonville	VT

Variables/Criteria used in Determining Peers for Valley City State University

1. Public control
2. Carnegie classification as a baccalaureate institution

The first two variables were used as discriminating variables, that is, only public baccalaureate colleges or universities were included in the group of possible peers for VCSU.

3. Location
4. Total headcount students
5. Total full-time headcount students
6. Total part-time headcount students
7. Percent full-time headcount students
8. Number of undergraduate students
9. Number of full-time, first-time, first-year undergraduate students
10. Number of other full-time undergraduate students
11. Number of part-time, first-year undergraduate students
12. Number of other part-time undergraduate students
13. Number of part-time non-degree undergraduate students
14. Full-time equivalent students
15. Number of Communications degrees awarded
16. Percent of Communications degrees
17. Number of Computer Information Systems degrees awarded
18. Percent CIS degrees
19. Number of Education degrees awarded

20. Percent of Education degrees
21. Number of Foreign Language degrees awarded
22. Percent Foreign Language degrees
23. Number of English degrees awarded
24. Percent of English degrees
25. Liberal studies degrees awarded
26. Percent liberal studies degrees
27. Number of Biological Science degrees awarded
28. Percent Biological Science degrees
29. Number of Math degrees awarded
30. Percent of Math degrees
31. Number of Music degrees
32. Percent of Music degrees
33. Number of Physical Science degrees awarded
34. Percent Physical Science degrees
35. Number of Psychology degrees awarded
36. Percent of Psychology degrees
37. Number of Health degrees awarded
38. Percent Health degrees awarded
39. Number of Business degrees awarded
40. Percent Business degrees awarded
41. Total degrees awarded
42. Total Staff
43. Total Full-time staff
44. Percent full-time staff
45. Number of full-time faculty
46. Number of part-time faculty
47. Percent part-time faculty
48. Number of full-time executive staff
49. Number of part-time executive staff
50. Number of full-time technical staff
51. Number of full-time skilled staff
52. Number of part-time skilled staff
53. Number of part-time technical staff
54. Number of full-time clerical staff
55. Number of part-time clerical staff

**PEER INSTITUTIONS
WILLISTON STATE COLLEGE**

Institution	City	State
Northeast Alabama Community College	Rainsville	AL
Southern Arkansas University Tech	Camden	AR
Feather River Community College District	Quincy	CA
Marshalltown Community College	Marshalltown	IA
Highland Community College	Freeport	IL
West Shore Community College	Scottville	MI
Itasca Community College	Grand Rapids	MN
North Central Missouri College	Trenton	MO
Miles Community College	Miles City	MT
Western Nebraska Community College	Scottsbluff	NE
New Mexico State University-Carlsbad	Carlsbad	NM
McDowell Technical Community College	Marion	NC
Southwestern Oregon Community College	Coos Bay	OR
University of Pittsburgh-Titusville	Titusville	PA
Northwest Community College	Powell	WY

Variables/Criteria used in Determining Peers for Williston State College

1. Public control
2. Carnegie classification as a two-year institution

The first two variables were used as discriminating variables, that is, only public two-year colleges or universities were included in the group of possible peers for WSC.

3. Location
4. Total headcount students
5. Total full-time headcount students
6. Total part-time headcount students
7. Percent full-time headcount students
8. Number of undergraduate students
9. Number of full-time, first-time, first-year undergraduate students
10. Number of other full-time undergraduate students
11. Number of part-time, first-time, first-year undergraduate students
12. Number of other part-time undergraduate students
13. Number of part-time non-degree undergraduate students
14. Full-time equivalent students
15. Number of Communications degrees awarded
16. Percent of Communications degrees
17. Number of Computer Information Systems degrees awarded
18. Percent CIS degrees
19. Number of Engineering technical degrees awarded

20. Percent of Engineering technical degrees
21. Number of Legal degrees awarded
22. Percent Legal degrees
23. Liberal studies degrees awarded
24. Percent liberal studies degrees
25. Number of Music degrees
26. Percent of Music degrees
27. Number of Parks, Recreation and Leisure degrees awarded
28. Percent of Parks, Recreation and Leisure degrees
29. Number of Security and Protective Services degrees awarded
30. Percent of Security and Protective Services degrees
31. Number of construction Trades degrees awarded
32. Percent of Construction Trades degrees
33. Number of Mechanic and Repair Technologies degrees awarded
34. Percent of Mechanic and Repair Technologies
35. Number of Precision Production degrees awarded
36. Percent of Precision Production degrees
37. Number of Transportation and Materials Moving degrees awarded
38. Percent of Transportation and Materials Moving degrees
39. Number of Health degrees awarded
40. Percent Health degrees awarded
41. Number of Business degrees awarded
42. Percent Business degrees awarded
43. Total degrees awarded
44. Total Staff
45. Total Full-time staff
46. Percent full-time staff
47. Number of full-time faculty
48. Number of part-time faculty
49. Percent part-time faculty
50. Number of full-time executive staff
51. Number of part-time executive staff
52. Number of full-time technical staff
53. Number of full-time skilled staff
54. Number of part-time skilled staff
55. Number of part-time technical staff
56. Number of full-time clerical staff
57. Number of part-time clerical staff

APPENDIX C: DATA TABLES

APPENDIX C – DATA TABLES

This Appendix provides the supporting data for the calculations shown in the Executive Summary and in Chapter 6.

Bismarck State College

Institution	Headcount	FTE	Net Tuition	Appropriations	Sum	Revenue/FTE
Bismarck State College	3,430	2,668	\$8,136,428	\$7,903,269	\$16,039,697	\$6,012
Per FTE			\$3,050	\$2,962		
Athens Technical College	2,800	1,712	\$3,521,030	\$10,687,539	\$14,208,569	\$8,299
Dekalb Technical College	5,266	3,071	\$5,499,744	\$18,486,751	\$23,986,495	\$7,811
Marshalltown Community College	1,421	1,076	\$3,358,867	\$6,154,109	\$9,512,976	\$8,841
Lake Michigan College	3,802	2,042	\$4,600,348	\$14,904,754	\$19,505,102	\$9,552
Lake Superior College	4,680	3,109	\$9,124,410	\$12,065,809	\$21,190,219	\$6,816
Ridgewater College	4,284	3,179	\$9,831,723	\$15,560,596	\$25,392,319	\$7,988
New Mexico Junior College	2,222	1,514	\$1,656,904	\$15,175,770	\$16,832,674	\$11,118
San Juan College	5,114	1,990	\$3,314,412	\$31,970,927	\$35,285,339	\$17,731
Suny College of Technology at Canton	2,538	2,272	\$4,363,957	\$12,823,114	\$17,187,071	\$7,565
Reading Area Community College	4,158	2,439	\$9,305,602	\$10,965,370	\$20,270,972	\$8,311
Western Dakota Technical Institute	1,057	854	\$3,045,377	\$2,798,569	\$5,843,946	\$6,843
Texas State Technical College-Harlingen	4,028	2,495	\$2,715,425	\$20,091,004	\$22,806,429	\$9,141
Texas State Technical College- West Texas	1,628	1,488	\$2,330,674	\$13,200,269	\$15,530,943	\$10,437
Lake Washington Technical College	3,750	2,464	\$5,633,680	\$11,463,588	\$17,097,268	\$6,939
Blackhawk Technical College	2,679	1,624	\$2,963,177	\$20,145,537	\$23,108,714	\$14,230
Average	3,295	2,089	\$4,751,022	\$14,432,914	\$19,183,936	\$9,185
Per FTE			\$2,275	\$6,910		
Bismarck State as a % of Peer Average	104.09%	127.74%	134.07%	42.87%		65.45%

Dickinson State University

Institution	Headcount	FTE	Net Tuition	Appropriations	Sum	Sum/FTE
Dickinson State University	2,461	1,971	\$4,525,460	\$6,542,096	\$11,067,556	\$5,615
Per FTE			\$2,296	\$3,319		
California State University - Monterey Bay	3,760	3,364	\$5,767,556	\$48,864,803	\$54,632,359	\$16,240
New College of Florida	671	670	\$2,447,055	\$10,929,582	\$13,376,637	\$19,965
Indiana University - Kokomo	2,954	1,949	\$7,574,980	\$11,797,422	\$19,372,402	\$9,938
Indiana University-East	2,568	1,717	\$5,921,677	\$8,974,542	\$14,896,219	\$8,677
Purdue University-North Central Campus	3,469	2,510	\$9,379,263	\$11,551,720	\$20,930,983	\$8,339
University of Maine at Fort Kent	933	756	\$3,358,000	\$3,934,000	\$7,292,000	\$9,641
University of Maine at Presque Isle	1,546	1,235	\$3,670,000	\$6,028,000	\$9,698,000	\$7,853
Massachusetts College of Liberal Arts	1,811	1,407	\$7,279,102	\$12,802,314	\$20,081,416	\$14,273
The University of Montana-Western	1,128	955	\$3,532,102	\$4,853,788	\$8,385,890	\$8,778
Oklahoma Panhandle State University	1,145	1,017	\$1,414,454	\$6,135,280	\$7,549,734	\$7,424
Central State University	1,621	1,521	\$4,415,878	\$18,033,181	\$22,449,059	\$14,759
Elizabeth City State University	2,308	2,051	\$4,545,343	\$24,559,904	\$29,105,247	\$14,191
Lyndon State College	1,444	1,232	\$8,584,034	\$4,136,850	\$12,720,884	\$10,325
West Liberty State College	2,511	2,278	\$7,570,467	\$8,840,702	\$16,411,169	\$7,203
Peer Average	1,991	1,619	5,389,994	12,960,149	18,350,143	\$11,336
Per FTE			3,330	8,006		
Dickinson State as a % of Peer Average	123.63%	121.76%	68.96%	41.46%		49.54%

Lake Region State College

Institution	Headcount	FTE	Net Tuition	State/Local Approp	Sum	Sum/FTE
Lake Region State College	1,473	760	\$2,335,688	\$2,466,000	\$4,801,688	\$6,318
Per FTE			\$3,073	\$3,245		
South Arkansas Community College	1,098	627	\$1,239,400	\$6,178,682	\$7,418,082	\$11,831
Feather River Community College District	1,547	835	\$639,436	\$7,762,527	\$8,401,963	\$10,062
Florida Keys Community College	1,283	614	\$1,711,156	\$5,287,829	\$6,998,985	\$11,399
Southwest Georgia Technical College	1,087	716	\$1,779,534	\$6,793,360	\$8,572,894	\$11,973
Ivy Tech State College-Whitewater	1,541	797	\$2,370,034	\$6,920,495	\$9,290,529	\$11,657
Northwest Iowa Community College	1,079	715	\$2,429,258	\$6,341,169	\$8,770,427	\$12,266
Cecil Community College	1,797	996	\$3,472,513	\$8,853,282	\$12,325,795	\$12,375
Kirtland Community College	1,918	1,045	\$2,489,609	\$8,068,549	\$10,558,158	\$10,104
West Shore Community College	1,318	793	\$1,017,094	\$8,273,828	\$9,290,922	\$11,716
Pine Technical College	769	429	\$1,542,518	\$2,767,904	\$4,310,422	\$10,048
Brunswick Community College	1,109	733	\$609,642	\$7,139,983	\$7,749,625	\$10,572
Sampson Community College	1,574	975	\$810,352	\$7,205,281	\$8,015,633	\$8,221
Clatsop Community College	1,573	785	\$1,944,416	\$8,263,776	\$10,208,192	\$13,004
Frank Phillips College	843	660	\$504,861	\$4,352,976	\$4,857,837	\$7,360
Paul D Camp Community College	1,636	806	\$1,136,712	\$5,043,578	\$6,180,290	\$7,668
Peer Average	1,345	768	\$1,579,769	\$6,616,881	\$8,196,650	\$10,667
Per FTE			\$2,056	\$8,611		
Lake Region as a % of Peer Average	109.53%	98.91%	149.48%	37.68%		59.23%

Mayville State University

Institution	Headcount	FTE	Net Tuition	Appropriations	Sum	Sum/FTE
Mayville State University	817	681	\$2,018,298	\$4,397,772	\$6,416,070	\$9,422
Per FTE			\$2,964	\$6,458		
California State University - Monterey Bay	3,760	3,364	\$5,767,556	\$48,864,803	\$54,632,359	\$16,240
New College of Florida	671	670	\$2,447,055	\$10,929,582	\$13,376,637	\$19,965
Indiana University - East	2,568	1,717	\$5,921,677	\$8,974,542	\$14,896,219	\$8,677
Purdue University-North Central Campus	3,469	2,510	\$9,379,263	\$11,551,720	\$20,930,983	\$8,339
Massachusetts College of Liberal Arts	1,811	1,407	\$7,279,102	\$12,802,314	\$20,081,416	\$14,273
University of Maine at Fort Kent	933	756	\$3,358,000	\$3,934,000	\$7,292,000	\$9,641
St. Mary's College of Maryland	1,922	1,845	\$14,102,319	\$13,682,871	\$27,785,190	\$15,062
University of Minnesota Crookston	2,320	1,496	\$4,144,546	\$8,542,156	\$12,686,702	\$8,480
University of Minnesota Morris	1,861	1,772	\$8,782,100	\$13,767,591	\$22,549,691	\$12,726
The University of Montana-Western	1,128	955	\$3,532,102	\$4,853,788	\$8,385,890	\$8,778
Elizabeth City State University	2,308	2,051	\$4,545,343	\$24,559,904	\$29,105,247	\$14,191
Central State University	1,621	1,521	\$4,415,878	\$18,033,181	\$22,449,059	\$14,759
Lyndon State College	1,444	1,232	\$8,584,034	\$4,136,850	\$12,720,884	\$10,325
The University of Virginia's College at Wise	1,703	1,476	\$5,802,383	\$10,220,201	\$16,022,584	\$10,853
Virginia Military Institute	1,333	1,333	\$11,271,628	\$11,387,742	\$22,659,370	\$16,999
Peer Average	1,923	1,607	\$6,622,199	\$13,749,416	\$20,371,615	\$12,677
Per FTE			4,121	8,556		
Mayville State as a % of Peer Average	42.48%	42.38%	71.92%	75.48%		74.32%

Minot State University

Institution	Headcount	FTE	Net Tuition	Appropriations	Sum	Sum/FTE
Minot State University	3,847	3,010	\$8,625,793	\$13,313,446	\$21,939,239	\$7,288
Per FTE			\$2,865	\$4,423		
Eastern Connecticut State University	5,095	4,159	\$17,789,368	\$31,754,823	\$49,544,191	\$11,913
Western Connecticut State University	6,079	4,631	\$24,673,485	\$32,513,134	\$57,186,619	\$12,349
Southern Arkansas University Main Campus	3,008	2,649	\$5,758,354	\$13,930,954	\$19,689,308	\$7,434
Georgia Southwestern State University	2,410	1,866	\$4,348,443	\$12,616,989	\$16,965,432	\$9,092
North Georgia College & State University	4,517	3,689	\$9,834,045	\$18,899,967	\$28,734,012	\$7,789
Georgia College and State University	5,695	4,778	\$15,344,300	\$26,316,748	\$41,661,048	\$8,719
Kentucky State University	2,306	1,922	\$7,476,319	\$23,198,834	\$30,675,153	\$15,960
Bemidji State University	5,012	3,978	\$17,063,702	\$20,365,467	\$37,429,169	\$9,409
Northwest Missouri State University	6,574	5,520	\$25,715,098	\$28,292,300	\$54,007,398	\$9,784
Chadron State College	2,711	2,115	\$4,196,390	\$12,235,491	\$16,431,881	\$7,769
New Jersey City University	9,361	6,021	\$34,698,811	\$44,365,934	\$79,064,745	\$13,131
Eastern New Mexico University	3,706	2,994	\$5,547,396	\$25,102,000	\$30,649,396	\$10,237
Western New Mexico University	2,972	2,090	\$3,155,128	\$15,514,604	\$18,669,732	\$8,933
New Mexico Highlands University	3,287	2,224	\$6,140,352	\$24,510,400	\$30,650,752	\$13,782
Cheyney University of Pennsylvania	1,536	1,356	\$3,878,173	\$12,666,288	\$16,544,461	\$12,201
Sum	64,269	49,992	\$185,619,364	\$342,283,933	\$527,903,297	\$10,560
Peer Average	4,285	3,333	\$12,374,624	\$22,818,929	\$35,193,553	\$10,560
Peer Average Per FTE			\$3,713	\$6,847		
Minot State as a % of Peer Average	89.79%	90.33%	77.17%	64.59%		69.02%

Minot State University – Bottineau

Institution	Headcount	FTE	Net Tuition	Appropriations	Sum	Revenues/FTE
Minot State University - Bottineau	621	466	\$675,641	\$2,070,000	\$2,745,641	\$5,892
Per FTE			\$1,450	\$4,442		
Rich Mountain Community College	1,072	658	\$382,925	\$2,958,260	\$3,341,185	\$5,078
South Arkansas Community College	1,098	627	\$1,239,400	\$6,178,682	\$7,418,082	\$11,831
Feather River Community College District	1,547	835	\$639,436	\$7,762,527	\$8,401,963	\$10,062
Lamar Community College	1,091	700	\$903,892	\$2,678,446	\$3,582,338	\$5,118
Quinebaug Valley Community College	1,571	864	\$1,702,532	\$6,398,673	\$8,101,205	\$9,376
Garrett College	614	456	\$1,126,935	\$5,512,669	\$6,639,604	\$14,561
Pine Technical College	769	429	\$1,542,518	\$2,767,904	\$4,310,422	\$10,048
Rainy River Community College	384	303	\$758,113	\$2,395,987	\$3,154,100	\$10,410
Miles Community College	564	457	\$1,018,551	\$2,807,301	\$3,825,852	\$8,372
Martin Community College	861	574	\$286,573	\$6,152,622	\$6,439,195	\$11,218
Pamlico Community College	379	225	\$166,594	\$3,311,431	\$3,478,025	\$15,458
Mesalands Community College	498	318	\$548,948	\$2,388,702	\$2,937,650	\$9,238
New Mexico State University-Grants	636	367	\$334,625	\$2,569,908	\$2,904,533	\$7,914
Clatsop Community College	1,573	785	\$1,944,416	\$8,263,776	\$10,208,192	\$13,004
Frank Phillips College	843	660	\$504,861	\$4,352,976	\$4,857,837	\$7,360
Peer Average	900	551	\$873,355	\$4,433,324	\$5,306,679	\$9,639
Peer Average Per FTE			\$1,586	\$8,053		
Bottineau as a % of the Peer Average	69.00%	84.65%	91.40%	55.16%		61.12%

North Dakota State College of Science

Institution	Headcount	FTE	Net Tuition	Appropriations	Sum	Revenues/FTE
North Dakota State College of Science	2,468	2,125	\$5,485,695	\$12,060,000	\$17,545,695	\$8,257
Per FTE			\$2,582	\$5,675		
Naugatuck Valley Community College	5,155	3,009	\$8,310,608	\$22,478,442	\$30,789,050	\$10,232
Indian Hills Community College	3,783	3,017	\$7,399,001	\$14,773,186	\$22,172,187	\$7,349
Northwest Iowa Community College	1,079	715	\$2,429,258	\$6,341,169	\$8,770,427	\$12,266
Washtenaw Community College	12,070	6,311	\$16,778,754	\$55,755,968	\$72,534,722	\$11,493
Anoka Technical College	2,113	1,414	\$6,061,291	\$8,334,737	\$14,396,028	\$10,181
Hennepin Technical College	5,673	3,284	\$11,482,452	\$19,980,498	\$31,462,950	\$9,581
Linn State Technical College	872	813	\$3,937,181	\$4,300,870	\$8,238,051	\$10,133
Great Basin College	2,412	1,306	\$1,708,000	\$12,601,000	\$14,309,000	\$10,956
Suny College of Technology at Alfred	3,469	3,204	\$7,696,143	\$18,692,987	\$26,389,130	\$8,236
Oklahoma State University-Okmulgee	2,701	2,109	\$1,888,095	\$12,915,065	\$14,803,160	\$7,019
Clackamas Community College	7,187	4,075	\$7,956,419	\$31,808,810	\$39,765,229	\$9,758
Mt Hood Community College	8,078	4,711	\$13,653,000	\$33,786,000	\$47,439,000	\$10,070
Thaddeus Stevens College of Technology	646	646	\$3,450,055	\$7,948,000	\$11,398,055	\$17,644
Texas State Technical College-Waco	4,210	3,485	\$7,268,485	\$29,765,227	\$37,033,712	\$10,627
Eastern Wyoming College	1,448	829	\$1,291,933	\$6,514,303	\$7,806,236	\$9,416
Peer Average	4,060	2,595	\$6,754,045	\$19,066,417	\$25,820,462	\$9,949
Per FTE			\$2,603	\$7,347		
NDSCS as a % of Peer Average	60.79%	81.88%	99.19%	77.25%		82.99%

North Dakota State University

Institution	Headcount	FTE	Net Tuition	State Approp.	Sum	Sum/FTE
North Dakota State University	11,623	10,181	\$42,128,510	\$69,076,382	\$111,204,892	\$10,923
Per FTE			\$4,138	\$6,785		
University of Alaska Fairbanks	8,736	5,705	\$20,614,124	\$103,517,843	\$124,131,967	\$21,760
University of Arkansas Main Campus	16,405	13,883	\$65,391,841	\$160,009,610	\$225,401,451	\$16,236
University of Connecticut	22,053	19,570	\$141,573,265	\$256,467,347	\$398,040,612	\$20,340
University of Delaware	21,121	18,889	\$191,852,615	\$107,876,300	\$299,728,915	\$15,868
University of Idaho	12,895	10,908	\$35,126,457	\$117,660,794	\$152,787,251	\$14,007
Iowa State University	27,380	24,982	\$145,342,017	\$236,708,764	\$382,050,781	\$15,293
University of Kentucky	25,397	22,309	\$114,148,441	\$303,568,135	\$417,716,576	\$18,724
University of Maine	11,222	9,363	\$47,179,000	\$86,690,000	\$133,869,000	\$14,298
University of Nevada Reno	15,534	12,387	\$46,886,310	\$166,021,748	\$212,908,058	\$17,188
University of Nebraska at Lincoln	22,559	20,060	\$89,239,184	\$198,495,615	\$287,734,799	\$14,344
University of Rhode Island	14,791	12,288	\$98,772,533	\$83,073,837	\$181,846,370	\$14,799
Clemson University	17,016	15,531	\$131,048,798	\$126,020,449	\$257,069,247	\$16,552
University of Tennessee	27,281	24,668	\$147,044,385	\$352,858,048	\$499,902,433	\$20,265
University of Vermont	10,967	9,486	\$140,147,000	\$37,121,000	\$177,268,000	\$18,687
University of Wyoming	13,130	10,320	\$29,184,411	\$128,302,542	\$157,486,953	\$15,260
Sum	266,487	230,346	\$1,443,550,381	\$2,464,392,032	\$3,907,942,413	\$16,966
Peer Average	17,766	15,356	\$96,236,692	\$164,292,802	\$260,529,494	\$16,966
Per FTE			\$6,267	\$10,699		
NDSU as a %of Peer Average	65.42%	66.30%	66.03%	63.42%		64.38%

University of North Dakota

Institution	HC	FTE	Net Tuition	Appropriation	Sum	Sum/FTE
University of North Dakota-Main Campus	13,034	11,585	\$72,966,544	\$59,197,215	\$132,163,759	\$11,408
Per FTE			\$6,298	\$5,110		
University of Alabama at Birmingham	16,357	12,728	\$62,948,898	\$219,883,401	\$282,832,299	\$22,221
University of Hawaii at Manoa	19,862	16,311	\$70,304,060	\$187,471,038	\$257,775,098	\$15,804
University of Illinois at Chicago	25,764	22,420	\$154,106,731	\$248,903,926	\$403,010,657	\$17,975
University of Kentucky	25,397	22,309	\$114,148,441	\$293,484,456	\$407,632,897	\$18,272
University of Louisville	20,605	16,265	\$87,314,000	\$155,544,000	\$242,858,000	\$14,931
University of Missouri-Kansas City	14,226	9,797	\$77,710,952	\$73,383,629	\$151,094,581	\$15,423
University of Nevada-Reno	15,534	12,387	\$46,886,310	\$166,021,748	\$212,908,058	\$17,188
SUNY at Buffalo	27,255	23,872	\$130,150,147	\$316,807,083	\$446,957,230	\$18,723
University of North Carolina at Chapel Hill	26,359	23,401	\$153,943,215	\$380,446,327	\$534,389,542	\$22,836
Wright State University	14,648	12,646	\$83,051,929	\$89,436,737	\$172,488,666	\$13,640
University of Pittsburgh Main Campus	26,795	23,306	\$240,322,273	\$163,386,000	\$403,708,273	\$17,322
The University of Tennessee	27,281	24,668	\$147,044,385	\$352,858,048	\$499,902,433	\$20,265
University of Utah	28,436	22,574	\$116,714,000	\$227,835,000	\$344,549,000	\$15,263
University of Vermont and State Agricultural College	10,967	9,486	\$140,147,000	\$37,121,000	\$177,268,000	\$18,687
University of Virginia-Main Campus	23,077	20,264	\$227,984,184	\$115,100,918	\$343,085,102	\$16,931
Peer Average	21,504	18,162	\$123,518,435	\$201,845,554	\$325,363,989	\$17,914
Per FTE			\$6,801	\$11,113		
UND as a % of Peer Average	60.61%	63.79%	92.61%	45.98%		63.68%

Valley City State University

Institution	Headcount	FTE	Net Tuition	Appropriations	Sum	Revenues/FTE
Valley City State University	998	826	\$2,670,507	\$6,034,661	\$8,705,168	\$10,539
Per FTE			\$3,233	\$7,306		
California State University - Monterey Bay	3,760	3,364	\$5,767,556	\$48,864,803	\$54,632,359	\$16,240
Western State College of Colorado	2,410	2,267	\$7,914,653	\$6,896,788	\$14,811,441	\$6,533
New College of Florida	671	670	\$2,447,055	\$10,929,582	\$13,376,637	\$19,965
Lewis-Clark State College	3,471	2,660	\$1,775,395	\$21,972,133	\$23,747,528	\$8,928
Purdue University - North Central	3,469	2,510	\$9,379,263	\$11,551,720	\$20,930,983	\$8,339
University of Maine at Presque Isle	1,546	1,235	\$3,670,000	\$6,028,000	\$9,698,000	\$7,853
Massachusetts College of Liberal Arts	1,811	1,407	\$7,279,102	\$12,802,314	\$20,081,416	\$14,273
University of Minnesota Morris	1,861	1,772	\$8,782,100	\$13,767,591	\$22,549,691	\$12,726
Elizabeth City State University	2,308	2,051	\$4,545,343	\$24,559,904	\$29,105,247	\$14,191
Winston-Salem State University	4,102	3,627	\$8,885,377	\$35,570,852	\$44,456,229	\$12,257
Central State University	1,621	1,521	\$4,415,878	\$18,033,181	\$22,449,059	\$14,759
Oklahoma Panhandle State University	1,145	1,017	\$1,414,454	\$6,135,280	\$7,549,734	\$7,424
Texas A & M University at Galveston	1,620	1,529	\$7,311,810	\$12,360,660	\$19,672,470	\$12,866
Lyndon State College	1,444	1,232	\$8,584,034	\$4,136,850	\$12,720,884	\$10,325
Peer Average	2,231	1,919	\$5,869,430	\$16,686,404	\$21,052,112	\$11,756
Per FTE			\$3,059	\$8,697		
Valley City State as a % of Peer Average	44.73%	43.05%	105.69%	84.01%		89.65%

Williston State College

Institution	Headcount	FTE	Net Tuition	Appropriations	Sum	Revenues/FTE
Williston State College	871	692	\$1,368,184	\$2,516,979	\$3,885,163	\$5,614
Per FTE			\$1,977	\$3,637		
Northeast Alabama Community College	2,072	1,381	\$1,965,308	\$5,007,843	\$6,973,151	\$5,049
Southern Arkansas University Tech	1,223	717	\$1,320,511	\$6,243,917	\$7,564,428	\$10,550
Feather River Community College District	1,547	835	\$639,436	\$7,762,527	\$8,401,963	\$10,062
Marshalltown Community College	1,421	1,076	\$3,358,867	\$6,154,109	\$9,512,976	\$8,841
Highland Community College	2,462	1,585	\$2,886,697	\$9,641,117	\$12,527,814	\$7,904
West Shore Community College	1,318	793	\$1,017,094	\$8,273,828	\$9,290,922	\$11,716
Itasca Community College	1,142	933	\$2,729,715	\$4,538,637	\$7,268,352	\$7,790
North Central Missouri College	1,496	1,008	\$2,841,701	\$2,752,693	\$5,594,394	\$5,550
Miles Community College	564	457	\$1,018,551	\$2,807,301	\$3,825,852	\$8,372
Western Nebraska Community College	2,640	1,545	\$2,103,665	\$12,313,924	\$14,417,589	\$9,332
New Mexico State University-Carlsbad	1,236	797	\$711,481	\$3,509,785	\$4,221,266	\$5,296
McDowell Technical Community College	1,209	786	\$614,790	\$5,836,768	\$6,451,558	\$8,208
Southwestern Oregon Community College	2,068	1,264	\$3,814,653	\$12,821,400	\$16,636,053	\$13,161
Northwest Community College	1,689	1,310	\$2,185,150	\$11,261,568	\$13,446,718	\$10,265
Peer Average	1,578	1,035	\$1,943,401	\$7,066,101	\$9,009,503	\$8,721
Per FTE			\$1,878	\$6,829		
Williston as a % of the Peer Average	55.21%	66.87%	105.28%	53.27%		64.38%

APPENDIX D: COMMENTS ON THE REPORT

APPENDIX D – COMMENTS ON THE REPORT

This Appendix includes comments on the MGT draft report of March 14, 2006. Comments were received from the State Board of Higher Education, Legislative Council staff, Senator Tim Flakoll, Council of College Faculties, Minot State University, North Dakota State University, University of North Dakota, and Williston State College.

COMMENTS FROM SBHE

SBHE Response to the Higher Education Funding and Accountability Study March 24, 2006 Report

Overall Response

Overall, the NDUS is pleased to see that MGT found:

- that state funding in support of the NDUS should be increased to the goal of, at least, 21 percent of the state general fund budget;
- the Roundtable to be successful in improving the quality of public higher education in ND, in integrating higher education into the economy, and making higher education an economic engine and driver of the economy;
- the accountability measures are appropriate and consistent with the Roundtable recommendations (see separate section of this report);
- the long-term finance plan and peer funding model to be a valid approach for determining funding needs and allocating resources;
- the unified system of higher education to be the most effective and efficient means of delivering higher education services to the State of ND. In fact, as noted in the MGT Report, a recent study by the Pew Charitable Trust called North Dakota's higher education system one of the "five most productive state systems of higher education relative to its resources";
- that no funding model will sufficiently address the equity and other funding challenges without a large infusion of state resources.

Specific Responses to Proposed Funding Model

MGT believes that a formula-based funding level is more appropriate for the NDUS for various reasons, but also concludes that a peer benchmark model is also a sound approach. MGT suggested the NDUS cannot implement a formula-based funding model at this time due to lack of adequate data systems. Although this lack of data conclusion is debatable, it is not realistic to believe that the NDUS would have sufficient time to develop and reach consensus on a complex formula model prior to development of the 2007-09 biennial budget. Also, as the MGT report points out, equity funding challenges existed under the former formula approach which was utilized by the NDUS prior to the peer benchmark model, and also resulted in significant, but inappropriate, inter-institutional comparisons among NDUS campuses.

Both short-term and long-term, the SBHE believes the peer benchmark funding model is appropriate for the reasons outlined below; however, in order for the model or any other model to be successful, the campuses, SBHE and Chancellor must unanimously support it for the following reasons:

- it is consistent with the Roundtable Report which recommends a model based on external peer comparisons;
- it produces and provides a lump-sum appropriation for the campus, through funding mechanism as opposed to several formulas, providing maximum spending flexibility;
- it focuses comparisons with similar external peer campuses, instead of internal comparisons among dissimilar NDUS campuses;
- it is simpler to understand and manage than is a complex workload funding formula approach;
- it creates incentives for maximizing external resources;
- it is driven by a public policy decision about the appropriate share of cost to be borne by the student versus the State, minimize influences from the peer states;
- it is a reasonable and fair mechanism for measuring equity and determining the appropriate allocation of resources;

The model can be improved by implementing all of the MGT recommended changes, (with some possible modifications) and other changes as noted below:

Base Operations (Peer Funding Model)

- adopt the new 15 recommended peers, by campus (already agreed to by each campus, according to MGT).
- use the average of the two most recent years' enrollment data (already agreed to by the LTF Plan Committee)
- use 25% of headcount and 75% of full-time equivalent students
- keep the same set of peer campuses for at least two biennia, unless there are major changes that suggest a peer group may need revision (already agreed to by the LTF Plan Committee)
- update the peer benchmark data by using the most current IPEDS data available at the time the budget is prepared (already agreed to by the LTF Plan Committee)
- The parity/equity allocation and the allocation of equity funding should be revised, following more review and consultation; however, the recommended 20% to parity and 80% to equity is not realistic
- the state fund 100% of the state share of the cost, so the unfunded portion is not shifted to students further increasing the share of cost borne by the students.
- establish more realistic targets for peer funding percentages linked to higher education's contributions to helping grow the state's economy.

Capital Assets Funding

- adequately fund ongoing capital maintenance consistent with industry standards to prevent further erosion of facilities.
- address deferred maintenance costs consistently through regular or one-time funding allocations.
- address equity differentials within capital asset allocations, considering both ongoing and deferred maintenance requirements.

Incentive Based Funding

- provide regular and increased funding, consistent with the LTF plan, to reach an amount equivalent to two percent of the NDUS state general fund appropriation. Funding to be used in support of state and system priorities.

Specific Responses to Accountability Measures Recommendations

- Establish benchmarks and goals for each measure: When the accountability measures were adopted in 2001, targets were not set by the Roundtable, the SBHE or the North Dakota Legislature (except for funding targets included in the NDUS Long-Term Finance Plan). It was concluded that it would not be useful to set targets until sufficient baseline or benchmarking information had been collected and the performance of the colleges and universities, in comparison to national and/or regional data, was known. For some measures, national and regional comparisons do not exist. As of 2006, data for some of the accountability measures, for which sources and collection mechanisms were readily available, have been tabulated for five years. Data for other measures have been collected and added to the accountability measures report as sources and collection mechanisms have been identified or developed. Sufficient data now is available to determine trends and evaluate progress, thereby, making it possible for the SBHE to set targets for some or all of the accountability measures. Caution will be needed in establishing performance targets in relation to peer institutions considering the NDUS institutions are funded at approximately half that of their peers.
- Include data for each institution in the annual report: Accountability measures information is currently compiled for each institution in accordance with the Roundtable Cornerstones. Summaries could be included in the system-wide report or provided as a supplement to the annual report.
- Reduce the number of accountability measures: The University System will work with the key stakeholders in identifying accountability measures which the stakeholders believe are less valuable and can be eliminated.
- Once the number of accountability measures is reduced, retain the same measures for five or six years: The University System agrees with this recommendation and finds it consistent with one of the major recommendations of the Roundtable – “Limit the freedom of other parties to expect accountability outside the domains established and agreed upon.”
- Include a measure of faculty productivity that is appropriate for each institution: A measure will be included to reflect faculty productivity appropriate to the various types of institutions within the University System.

COMMENTS FROM LEGISLATIVE COUNCIL STAFF

The following are Legislative Council staff comments regarding the MGT of America, Inc., final report for the higher education funding and accountability study:

For Executive Summary Exhibit 2 and Exhibit 6-8 entitled FY 2004 Funding Per Student, we suggest that MGT of America, Inc., clarify that:

- The appropriations amounts for North Dakota State University and its related peers includes funding appropriated for agriculture extension and experiment.
- The appropriations amounts for the University of North Dakota and its related peers includes funding appropriated for related medical schools.

For Executive Summary Exhibit 3 and Exhibit 6-9 entitled Comparison if Benchmark Funding Using Recommended Peers to Legislative Appropriations for the 2005-07 Biennium, we suggest that MGT of America, Inc.:

- Clarify what is meant by "special items have been excluded from the comparison".
- Clarify whether or not agriculture extension and experiment amounts should be included or not included for North Dakota State University. Agriculture extension and experiment funding is included in Executive Summary Exhibit 2 and Exhibit 6-8 which determined the benchmark funding for the university, but agriculture extension and experiment funding is not included in the legislative appropriation amount reported for the university in Executive Summary Exhibit 3 and Exhibit 6-9.
- Verify the calculations for biennial benchmarks. (See attached file)

In regard to the recommendation that the state increase funding to the North Dakota University System to reach the goal of 21 percent of the state general fund budget, please note that the Legislative Assembly provided the North Dakota University System funding of \$366,953,836 from the general fund, approximately 21 percent of total general fund appropriations, for the 2001-03 biennium, which was the first biennium after the initial Higher Education Roundtable meeting. This level of funding included not only funding for the operations of the higher education institutions but also funding for the North Dakota University System office, a technology pool, debt service payments, extraordinary repairs and major capital construction projects at the higher education institutions, and the Forest Service. It is our understanding that the 21 percent referred to in the final report is only for institutional operations and would require additional appropriations for the additional items mentioned. This should be clarified in the report.

	Student Count	Benchmark Funding	Biennial Benchmark	Calculated Biennial Benchmark	Difference
BSC	2,899	\$6,617	\$38,365,366	\$38,365,366	\$0
DSU	2,143	\$5,749	\$24,640,214	\$24,640,214	\$0
LRSC	941	\$8,611	\$16,205,902	\$16,205,902	\$0
MaSU	762	\$8,556	\$13,039,344	\$13,039,344	\$0
MiSU	3,275	\$6,855	\$44,900,559	\$44,900,250	\$309
MiSU - B	492	\$8,053	\$7,924,152	\$7,924,152	\$0
SCS	2,207	\$7,232	\$31,922,048	\$31,922,048	\$0
NDSU	10,815	\$10,699	\$231,411,540	\$231,419,370	(\$7,830)
UND	12,088	\$11,113	\$268,678,587	\$268,667,888	\$10,699
VCSU	913	\$8,697	\$15,880,722	\$15,880,722	\$0
WSC	745	\$6,829	\$10,175,210	\$10,175,210	\$0
Total	37,280		\$703,143,644	\$703,140,466	\$3,178

COMMENTS FROM SENATOR FLAKOLL

March 26, 2006

TO: The North Dakota Legislative Council, Interim Higher Education Committee and MGT of America, Inc.

RE: Initial response to MGT study.

This letter is in response to a request for comments on the report by MGT of America, Inc. which was presented to the Interim Higher Education Committee on March 14, 2006.

I found the findings to support many efforts which I and others attempted to forward during the 2005 legislative session. Those areas include:

- 1) Provide a formula that earmarks a **higher percentage** of new dollars to improve equity.
- 2) Establishment of more realistic **benchmarks for progress** in funding, ones with **intermediate platforms** that address both short term and long term progress.
- 3) Provide a formula that is **fairer to students**.
- 4) Provide **more new dollars** to improve the equity situation in Higher Education.
- 5) Have a formula that provides a **more significant proportion of new dollars to those who are suffering the most** from a lack of a visionary long term funding formula. AKA a bottom up approach.
- 6) I agree to the fullest extent that our **current system of funding has only widened the gap in equity** across the system.

I appreciate the work of MGT to rework the peers that they assigned to each institution. I also appreciate that each institution was able to provide real input into their peers. The work of MGT offered well thought out improvements to our current peer systems. It also provided additional enlightenment to problems associated with a peer formula (page ES-14). While I noted some concerns during their presentation, I would also like to transcribe a few thoughts.

I think it was helpful and appropriate that additional peers were added in an attempt to provide additional stability to the system. I do have concern that the greatest improvement in equity (range from highest to lowest) in the past six years seems to come, not from funding improvements but rather from changes in peers. That raises a flag of concern for me. It also concerns me that we are not able to get data on peers from five years and ten years ago due to changes that include the way revenue is reported.

Using history as our guide, we need to move forward with the realization that some very worthy programs may be more costly than others (ex. diesel mechanics or the medical school). Does a peer formula allow for proper incentives to migrate into new programs that would be more expensive than the norm?

Similarly, how might a peer formula accommodate for our North Dakota priorities. With a peer model, we are in effect adopting the priorities of the peer institutions without any accommodation

for additional weight we wish to apply to areas where we in North Dakota find a greater priority or need.

I think it appropriate to keep our high priority of the education of students separate from other important state priorities. I specifically site NDCC 4-05.1-02 which clearly states: “Funds appropriated to the agriculture experimentation station may not be commingled with funds appropriate to North Dakota state university. Appropriation requests to defray expenses of the agriculture experimentation station must be separate from appropriation requests to defray expenses of North Dakota state university.”

I also cite a portion of NDCC 4-05.1-20: “Agriculture research fund – Continuing appropriation. The agriculture research fund is a special fund in the state treasury. The moneys in the fund must be expended for purposes of agriculture research.”

I believe that this law is in place to make sure that moneys are not transferred to the detriment of either students or important agriculture programs or branch stations across that state.

Therefore if a peer model is used, it is proper that North Dakota State University data be void of state appropriations for research and extension. That unencumbered data should rightly be compared to their peers with similar data for extension and research stations not encumbered with their higher education function.

Currently there are nine agriculture research extension stations in North Dakota located in: Williston, Dickinson, Langdon, Oakes, Carrington, Casselton, Streeter, Minot and Hettinger. An unwelcome formula change that mixes their station dollars into higher education student funding formulas threatens their ability to provide for agriculture’s needs in every corner of this state. As Chair of the Senate Agriculture Committee, I feel certain that others will have concerns that it may even go as far as to threaten a station’s existence.

I am very interested in the philosophical method of funding that was the preferred method forwarded by MGT (money follows the students). Serving on Governor Hoeven’s North Dakota Commission on Education Improvement, I think it is logical that there are philosophical similarities in how we address education funding between K-12 and Higher Education. I hope that in the months to come we can continue to make progress in methodologies of education funding that have a student focus.

If we feel that the preferred funding model presented by MGT is correct, we should begin to move down a path that immediately starts the progress that will undoubtedly take a number of years to fully realize.

In 1999 I served at the founding chair of the Flexible and Responsive cornerstone of the Roundtable for Higher Education. Our action or inaction will truly be a test of if we have created a fully integrated system that is flexible and responsive to the problems, needs and opportunities in the NDUS.

Sincerely,

Senator Tim Flakoll
District 44
Senate Education Committee

COMMENTS FROM THE COUNCIL OF COLLEGE FACULTIES

Dear Sir or Madame,

The Council of College Faculties, representing the faculty of all institutions in the North Dakota University System, met today via IVN. At the meeting, the following resolution passed without dissent. I have included the resolution as an attachment and copied it below this message.

Respectfully,

John Pederson,
Faculty Advisor to the State Board of Higher Education
Associate Professor, Division of Liberal Arts, Mayville State
University

Council of College Faculties Resolution
Approved March 21, 2006

Whereas MGT of America has presented its Higher Education Funding and Accountability Study to the North Dakota Legislative Council in Fargo on March 14, 2006, and

Whereas the Legislative Council has asked for public comment on the report by March 28, 2006, and

Whereas MGT's report cited a Pew Charitable Trust funded study that called North Dakota's higher education system one of the "five most productive state systems of higher education relative to its resources," and

Whereas all North Dakota University System institutions are under-funded relative to their peers, and

Whereas MGT's report concluded that the State has not provided its share of resources in the base funding component, the Incentive Funding component, or the Capital Asset Funding component in the long term finance plan,

Therefore, the Council of College Faculties resolves the following:

That as the MGT study recommends, the State of North Dakota should increase and maintain state funding to the North Dakota University System to 21 percent of the state general fund budget.

COMMENTS FROM MINOT STATE UNIVERSITY

Minot State University Response MGT Funding and Accountability Study March 29, 2006

Submitted to the Legislative Council and Chancellor Potts at the North Dakota University System

General Observations

The overall theme of this study is that higher education in North Dakota is both under funded and doing an excellent job educating students with the resources available. The report suggests, and Minot State University strongly concurs, that the 21% target of the state budget for higher education is something the state should seriously consider as a minimum standard of funding for higher education in North Dakota.

Indirectly, the State of North Dakota has few options in finding additional resources for higher education other than a reallocation of resources from current programs or giving more of the new dollars to higher education. If the North Dakota University System were to receive 21% of the biennium budget for 2007-2009, the additional funds would help reduce system equity issues.

Revenue Sources

The report identifies a number of key points. As noted on page 71 and 72 of the report, North Dakota does not have the ability at this time to raise additional revenues through tax collections. The state is 11% below the national average and 7% below the contiguous states in average per capita personal income. Personal income tax collections in North Dakota are approximately 60% below the national average, but North Dakota collects almost twice as much from other taxes, such as those from natural resources. North Dakota appropriates a 60% greater share of its budget to higher education than the national average. While its per capita share devoted to higher education is 30% higher than the national average, its net state dollars per student FTE is 8% below the national average.

Accountability Measures

The recommendations in the report (1-5) on accountability measures are reasonable, although we believe that there are too many accountability measures for the six cornerstones of the Higher Education Roundtable. There is, as noted in the report, a lack of quantifiable goals and outcomes for each measure.

Peer Institutions

The selection of the peer institutions was based on a sound process and reliable factors. We have not had the time to complete an examination of the specific peers identified for MiSU. After that analysis, we will be able to understand the extent to which they are comparable. At this time, the process and the criteria appear to be appropriate.

Long-Term Finance Plan

Under the Long-Term Finance Plan section (page 77), the definitions of base operating funds, capital asset funds and incentive funds are reasonable as are the definitions of parity and equity. Incentive funds (2% of the NDUS appropriation) and the NDUS definition of these funds is very important to Minot State University, especially whether or not Centers of Excellence funds are part of incentive funds or a separate source of money. We look forward to receiving more information on the incentive funds process.

The most critical statement in this section (top of page 78) dealing with equity is the recommendation that: “state general funds are not reduced for any institution from the previous biennium until such time as the institution exceeds 105 percent of its peer benchmark or enrollment declines are sufficient to cause a re-evaluation of the benchmark.”

The need for this statement becomes acutely clear as it relates to Minot State University. On page 89 (Exhibit 4), it is recommended that the equity/parity percentages are changed from the current 80% parity/20% equity to 80% equity/20% parity. Such a change would have resulted in a decrease in Minot State University’s actual appropriation for 05-07 of \$999,063. Such a decrease in funding is an unacceptable solution for Minot State University. This approach, as the report indicates on page 79, is to be employed only to allocate additional state general fund resources, not the reallocation of existing state general funds. This change to the LTFP model would have deleterious effects on Minot State University. It would more beneficial to look at a fixed base allocation.

Additional Responses to specific Long-Term Finance Plan Recommendations (beginning on page 86)

Minot State University supports the use of using two or three year averages of fall enrollments based on a distribution model for headcount and FTE students.

Using the peer models for at least two biennia is a good idea to maintain consistency, and updating the peer model with the most current IPEDS data is reasonable. Minot State University is not supportive of the model using 80% equity and 20% parity.

Minot State strongly endorses the recommendation to reach the goal of 21% of the state general fund budget.

Thank you for the opportunity to respond to this report and its recommendations. If you have questions, please contact Mr. Ron Dorn, vice president for finance and Administration, at Minot State University.

COMMENTS FROM NORTH DAKOTA STATE UNIVERSITY

NORTH DAKOTA STATE UNIVERSITY RESPONSE TO MGT REPORT

We received the request to respond to the MGT Report from the Chancellor's Office late afternoon on 28 MAR 2006.

We agree with the following points in the MGT report (quoted or paraphrased):

1. The North Dakota Roundtable was a very unique and visionary approach for supporting higher education. It allowed the NDUS institutions the flexibility with accountability to successfully offer new, high quality educational programs which, in turn, have helped improve the economic potential of the state.
2. The portion of state appropriation allocated to higher education is higher than the national average but has been declining over the last few biennia. Allocation of 21% of state appropriation is a realistic goal for funding higher education.
3. Tuition and fees at the 4-year institutions are a bargain relative to regional and national averages.
4. Funding of the NDUS institutions is comparatively lower than the peer institutions in the external peer model.
5. Current funding for the NDUS institutions is not equitable. The inequity is not a new issue and the inequities have grown over the last few years.
6. The Long Term Finance Plan as developed in 2001
 - a) has actually increased the inequity, especially using the 80/20 parity/equity allocation. In fact, using this allocation of new funds will never solve the equity problem
 - b) using the 85% and 95% benchmarks as targets are unrealistic
 - c) did not address the need for funding new initiatives at the NDUS institutions
7. New state funds must be appropriated to effectively deal with the equity problem.

After reviewing the MGT Report, the following issues, concerns, and questions are raised.

1. The MGT Report clearly states that the current LTFP has perpetuated and exacerbated the inequity problem. However, is this "new" peer model recommended by MGT the same model with a substituted set of peers. Thus, will this new model continue to exacerbate the inequity without creating a solution?
2. The external peer model is complicated and complex. The input data raise major questions such as validity, accuracy, and currentness. The mix of state appropriation coupled with tuition and fees raise questions about state philosophy, program mix, among others.
3. Questions about validity and accuracy of data are pertinent. This is very important since MGT reportedly used FY 2004 data; the Chancellor's Office also used FY 2004

data. The state appropriation values calculated by each method varied markedly. The conclusions reached by each model were very different. How does this create confidence in the external peer model?

4. Allocation of funds using the peer model depends highly on selection of the plan components (e.g., parity/equity ratio, benchmarks, distance from peers) and markedly different results can be obtained depending on how these plan components are applied. This can influence which institutions receive equity and how much each institution would receive.
5. Assumptions of validity of data are also raised with regard to including the agricultural appropriations at NDSU. By law, these funds cannot be intermingled with other state funding to support educational programs. Further compounding this issue is the observation that agricultural funding is about 36% of total funding. In NDSU peers, agriculture support is as low as 2.6% with many in the 20 - 27% range. With data skewed in this manner, the results would lack credibility. Likewise, including the medical funding at UND complicates the funding picture. The medical school should also be handled separately since the funding is identified in a separate line item in the budget.
6. The external peer model has been promoted to “avoid internal comparisons of dissimilar NDSU campuses.” This remains perplexing - first, institutions are already making comparisons and as shown by MGT in emphasizing the similarity in NDUS institutions (e.g., BSC, WSC, MiSU-B, and LRSC and DSU, MaSU, MiSU, and VCSU). Within these categories of similar institutions, there are vast inequities in funding (using FY 2004 state appropriations per student FTE): DSU @ \$3550 v. VCSU @ \$6905 or BSC @ \$2838 v. WSC @ \$3601. These inequities need appropriate explanation. Comparison to external peers will not remove these inequities.
7. MGT also recognizes that a finance plan based on funding formula could also be appropriate for NDUS institutions. Yet, there appears to be great reluctance to even explore such a model. MGT has provided some very cogent reasons/advantages for considering this model (MGT Report pp 12-13).
8. The external peer model and the formula based model have advantages and disadvantages.
9. The formula driven model should be examined since by its nature it is much simpler to understand, the data used are easier to validate, and any deviations can be explained in a straight-forward manner. Furthermore, it directs the funding to students, and it creates understandable benchmarks which make progress easier to document.
10. A formula-driven model based only on state appropriations and student credit hours (SCH) (number of students times number of credits) would provide the advantages in (9) above.
11. A comparison of state appropriations at each NDUS institution is shown in the following table. The state appropriations (FY 2004) and the SCH (Fall 2003) are easily validated.

Comparisons among the institutions show the same variations as the external peer model and offer better opportunities to correct the inequities among the NDUS institutions.

Institution	Fall 2003 SCH**	FY2004 State Approp.	State Approp. Per SCH
BSC	41,202	\$7,903,269	\$192
DSU	29,884	\$6,542,096	\$219
LRSC	11,074	\$2,466,000	\$223
MaSU	10,504	\$4,397,772	\$419
MiSU	44,880	\$13,313,446	\$297
MiSU - B	7,100	\$2,070,000	\$292
NDSCS	34,838	\$12,060,000	\$346
NDSU*	152,138	\$44,258,121	\$291
UND***	173,010	\$59,197,215	\$342
VCSU	13,184	\$6,034,661	\$458
WSC	10,557	\$2,516,979	\$238
TOTAL	528,371	\$160,759,559	
AVERAGE			\$304

* NDSU with Ag removed

**SCH = # student X # credits

***Includes medical funding (should be removed for comparisons)

12. In the final analysis, the important question is, “Is the funding fair to students?” We believe examination of the data in the above table clearly shows it is not. Whatever model is selected must treat the students fairly.

COMMENTS FROM THE UNIVERSITY OF NORTH DAKOTA

The following comments are offered regarding the MGT Funding and Accountability Study presented on March 14, 2006.

We are pleased to see that the report validates the use of a peer comparison model and affirms the basis for selection of the peers as rational. We also support continued use of the peer model as recommended. The report acknowledges the need for initiatives funding which is not adequately addressed in the current Long Term Finance Plan.

The MGT comments focused on preserving the system of higher education in North Dakota are also viewed positively. Finally, the recommendations regarding the accountability measures provide constructive steps for improvement.

There are several additional items that we believe need correction, further discussion or need to be added to the report.

1. UND supports the use of total Legislative Appropriation in the comparison between NDUS institutions and their respective peers. This is consistent with the treatment of the Medical School as an integral part of the University of North Dakota. Likewise, it is consistent with the treatment of agriculture extension and experiment in Exhibit 2 (Exhibit 6-8) as an integral part of North Dakota State University. The IPEDS reported data for the benchmark institutions cannot objectively be disaggregated given all the issues that arise to fully cost a component of an institution (for example, allocating shared infrastructure and administration). Any attempt to remove the Medical School funding or agriculture extension and experiment funding from the peer institutions data would be subjective at best.
2. Exhibit 3 (and Exhibit 6-9) presents a calculated biennial benchmark compared to the current 2005-07 Legislative Appropriation by institution. An error exists in the data for NDSU which compares the benchmark funding level from Exhibit 2 including agriculture to the Legislative Appropriation excluding agriculture resulting in the calculation of a flawed percent of benchmark. These two numbers are not comparable. The affect of this error carries into the calculations in Exhibit 4 and 5.
3. Regardless of the error in Exhibit 3, the report did not contain enough detail to fully understand the method used to distribute parity or equity in Exhibit 4. A clear definition of the calculation would be helpful.
4. The report describes the capital assets funding model that is part of the current Long Term Finance Plan but does not provide specific recommendations for the future except to point out the overall lack of funding for higher education. Capital assets funding equity must be addressed as part of any complete equity funding study.
5. We are not supportive of the proposed 80/20 equity/parity split as it fails to recognize the financial vulnerability created by the inadequate level of funding that currently exists. Consideration should be given to a model where the funding of parity occurs up to the level of inflation then all to equity.

6. The 2005-07 biennial appropriation for higher education contains \$20,563,093 in funding to support common information systems. These funds are then allocated to the host campuses (University of North Dakota and North Dakota State University) that provide these system wide services to all campuses. We agree with the step of removing the system service costs from the host campus expenditures however recommend that the total be allocated back to all campuses to more accurately recognize the level of taxpayer support that benefits the operations of all NDUS institutions. This allocation should be done in a way that does not affect the relative funding position among the NDUS institutions (possibly based on Legislative Appropriation). This allocation will increase the percent of benchmark funding comparison for all NDUS institutions.

Charles Kupchella
President
University of North Dakota

COMMENTS FROM WILLISTON STATE UNIVERSITY

joe.mccann@wsc.nodak.edu
P.O. Box 1326 Williston, ND 58802-1326
Phone (701) 774-4233
Fax (701) 774-4252



Office of the President

To: Senator Holmberg
From: Joe McCann, WSC President

Cc: 03/27/06

Re: Response to MGT of America Report

I am supportive of the MGT of America Report, which was presented to the Interim Higher Education Committee March 14, 2004. I feel that the MGT consultants I encountered went about their task in a professional manner and exhibited seasoned insight. I also support the State Board of Higher Education Response to this report that was shared with your Committee this week.

The North Dakota Roundtable on Higher Education has provided impetus for Williston State College to stretch in order to do its part in:

- Expanding access to education and training, thus allowing more of our citizens to improve their lives and stay in North Dakota
- Improving the alignment of our credit programs with the needs of our regional labor market both in academic transfer and career/ technical education
- Partnering with business and industry, school districts, and other colleges and universities
- Building capacity for responsiveness and flexibility
- Striving to more comprehensively serve northwestern North Dakota through: civic engagement, academic transfer, career/technical workforce development, workforce training service to employers, and collaborative efforts.

WSC has undergone internal stress and subjected itself to financial strain in order to make progress on the Roundtable Cornerstones. This was done with an expectation that future North Dakota economic vitality would translate into resources “consistent with the directions and expectations of the Roundtable”. Additional resources are needed at WSC to allow the college to consolidate the gains we’ve made, heal, and expand our impact even further.

I endorse the report’s funding recommendations. It is my belief that no funding mechanism is perfect, but the use of “peer institutions for funding comparisons” is close to optimal for the NDUS given our broad range of institutional missions, governance structure, and stakeholders. I feel the most beneficial features of such a model is that it is:

- Externally focused so as to compare our institutions to others beyond our state
- Flexible enough to change as our institutions progress
- Understandable to our community college's constituencies.

Thank you for requesting this input as the Interim Higher Education Committee considers action steps for the 2007 Legislative Session.