

EXECUTIVE SUMMARY

In April 2001 the Idaho State Board of Education contracted with MGT of America, Inc. to review the method of allocating funds to the four senior institutions of higher education: Boise State University, Idaho State University, Lewis-Clark State College, and the University of Idaho. The Board receives a lump-sum appropriation that is allocated among the four institutions using a “base-plus” approach for distribution of the funds.

In Phase I of the study, the State Board of Education asked that MGT determine whether there is funding equity among the four institutions. Peer comparisons were to be included in the equity analysis. The Board asked MGT to consider different institutional missions and economies of scale in the alternative methods used to determine funding equity. In addition to this initial request, the State Board requested that funding levels at the Idaho institutions be compared to funding at the peer institutions, and that funding allocation systems of other states be reviewed. To complete the peer comparisons, Phase I also encompassed validation of the peer lists proposed by the four institutions.

If a problem were to be determined to exist, the State Board requested a second phase to the study to recommend changes to the current allocation system that would address the inequities in a practical and sound manner. The proposed allocation system was to provide maximum flexibility to carry out the college and university missions established by the Board; be straightforward so that the Board may use the system to express its funding priorities; relate to institutional needs, the request and appropriation, and the allocation and use of funds; and be predictable and consistently applied.

MGT worked with a Technical Advisory Committee comprised of Board staff and the Vice Presidents for Business or Administration and the institutional research officers of the institutions to validate the peer institutions for each of the four Idaho universities or college; compare funding at the Idaho schools to the peers; evaluate the allocation mechanism, and provide recommendations for improvements. A “peer” is a college or university that is “most like” another college or university based on a group of characteristics such as mission, size, organization, location, mix of programs, and student body characteristics.

To reach the study objectives set forth by the Board, the methodology for the project encompassed five major activities:

- Validation of Peer Institutions
- Assessment of Funding Equity
- Development of Consensus on Guiding Principles for Review of the Allocation Mechanism
- Review of Best Practices in Funding Formulas
- Review of the Allocation Mechanism
- Development of Recommendations

Validation of Peer Institutions

To validate the lists of peer institutions proposed by the four institutions, MGT used a statistical method called “factor analysis” on the possible peers for each institution. 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 comparisons among colleges or universities. Variables were taken from the Integrated Postsecondary Education Data System (IPEDS) surveys. Fiscal year 1999 national data, the latest available, were used for the validation/selection of peers and for the equity analyses related to peer institutions.

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 in the data set having 22 factor scores, one for each of the 22 factors. Then, the factor scores for each Idaho institution were compared to the factor scores for each other institution in its set to get distance scores. A distance score is defined as the difference between one campus and another on each factor scores. All institutions in the group being compared were then rank ordered based on their total 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 Idaho institution.

The lists of all the institutions in the group then were compared to the peer lists chosen by the Idaho institutions. Each institution selected at least 15 peers from those institutions most like them. Exhibit 1 displays peer lists for each of the four institutions.

Assessment of Funding Equity

The next step in the process the funding was to assess the funding of the institutions to determine if the allocation was equitable. MGT assessed funding equity using the following approaches:

- A comparison among Idaho institutions related to long-term trends in state appropriations and tuition.
- A comparison between each institution and its peers on core support per student (i.e., state funding and tuition revenue).
- A comparison between each institution and the national average of similar institutions on core support per student.

Data for this study were obtained from the National Center for Education Statistics Integrated Postsecondary Education Data System (IPEDS) augmented with Idaho data. Idaho data were used for comparisons of enrollment and Idaho funding.

In the first analysis, funding from state appropriations, student tuition and fee revenues, the sum of state appropriations and student tuition and fee revenues, and total educational and general (E & G) revenues was compared. Analyses compared per full-time equivalent (FTE) and headcount student funding for each institution with per FTE or headcount student funding at the peer institutions. The results of this analysis are displayed in Exhibit 2. Exhibit 3 displays the results of the analysis for similar institutions.

**EXHIBIT 1
PEER LISTS**

Institution	Boise State University	Idaho State University	Lewis-Clark State College	University of Idaho
University of Alaska Anchorage	x			
Arizona State University West	x			
University of Arizona				x
Northern Arizona University	x	x		
University of Arkansas - Fayetteville				x
University of Arkansas Monticello			x	
California State University - Fresno	x			
Colorado State University				x
University of Colorado Denver		x		
University of Northern Colorado	x	x		
Western State College (CO)			x	
University of Hawaii Hilo			x	
Indiana State University		x		
University of Northern Iowa	x	x		
Iowa State University				x
Kansas State University				x
Wichita State University	x	X		
University of Maine Farmington			x	
Lake Superior State (MI)			x	
Southwest State University (MN)			x	
Western Montana University			x	
University of Montana Northern			x	
University of Montana		x		
Montana State University		X		x
University of Nebraska - Lincoln				x
University of Nebraska - Omaha	x	x		
University of Nevada Las Vegas	x	x		
University of Nevada Reno		x		x
New Mexico Highlands University			x	
New Mexico State University		x		x
University of North Dakota		x		
Valley City State University (ND)			x	
Central State University (OH)			x	
Cleveland State University	x			
Oklahoma State University				x
Southeastern Oklahoma State University			x	
Eastern Oregon University			x	
Portland State University	x	x		
Oregon State University				x
Lock Haven University of Pennsylvania			x	
University of South Carolina Aiken			x	
Dakota State University (SD)			x	
Texas A&M Galveston			x	
Texas Tech University				x
University of Texas El Paso	x			
Southern Utah University			x	
Utah State University				x
Weber State University (UT)	x			
George Mason University (VA)	x			
Eastern Washington University	x			
Washington State University				x
West Virginia U Institute of Technology			x	
University of Wyoming		x		x

EXHIBIT 2
COMPARISONS OF FY 1999 UNRESTRICTED REVENUES PER STUDENT
IDAHO INSTITUTIONS AND THEIR PEERS

	Tuition & Fees	State Appropriations	E & G Revenues	Tuition; State and Local Appropriations
Average per FTE, BSU Peers	3,780	6,015	10,540	9,795
BOISE STATE UNIVERSITY	3,436	6,030	10,180	9,466
BOISE STATE AS A % OF PEER AVERAGE	90.9%	100.2%	96.6%	96.6%
Average per FTE, ISU Peers	3,798	6,388	11,833	10,186
IDAHO STATE UNIVERSITY	3,464	6,848	11,121	10,312
AS A % OF PEER AVERAGE	91.2%	107.2%	94.0%	101.2%
Average per FTE, LCSC Peers	3,283	5,554	9,560	8,836
LCSC	2,604	6,292	9,835	8,896
LCSC as a % of peer average	79.3%	113.3%	102.9%	100.7%
Average per FTE, UI Peers	4,170	8,431	15,000	12,617
UNIVERSITY OF IDAHO	3,924	8,345	13,947	12,268
UI as a % of peer average	94.1%	99.0%	93.0%	97.2%
Average per FTE Student, All Peers	3,911	7,066	12,629	10,983
Average, Idaho Institutions	3,528	6,973	11,543	10,501
Idaho as a % of peer average	90.2%	98.7%	91.4%	95.6%
Average per Headcount, BSU Peers	2,753	4,381	7,677	7,134
BOISE STATE UNIVERSITY	2,349	4,123	6,961	6,472
BOISE STATE AS A % OF PEER AVERAGE	85.3%	94.1%	90.7%	90.7%
Average per Headcount, ISU Peers	2,935	4,937	9,146	7,873
IDAHO STATE UNIVERSITY	2,695	5,328	8,652	8,023
AS A % OF PEER AVERAGE	91.8%	107.9%	94.6%	101.9%
Average per Headcount, LCSC Peers	2,749	4,652	8,008	7,401
LCSC	1,954	4,723	7,381	6,677
LCSC as a % of peer average	71.1%	101.5%	92.2%	90.2%
Average per Headcount Student, UI Peers	3,556	7,189	12,790	10,758
UNIVERSITY OF IDAHO	3,225	6,858	11,462	10,083
UI as a % of peer average	90.7%	95.4%	89.6%	93.7%
Average per Headcount Student, All Peers	3,106	5,611	10,030	8,723
Average, Idaho Institutions	2,656	5,251	8,692	7,907
Idaho as a % of peer average	85.5%	93.6%	86.7%	90.7%

EXHIBIT 3
COMPARISONS OF FY 1999 UNRESTRICTED REVENUES PER STUDENT
IDAHO INSTITUTIONS AND NATIONAL AVERAGES FOR SIMILAR INSTITUTIONS

	Tuition & Fees	State Appropriations	E & G Revenues	Tuition; State and Local Appropriations
Average per FTE, BSU Group	3,784	5,768	10,477	9,578
BOISE STATE UNIVERSITY	3,436	6,030	10,180	9,466
BOISE STATE AS A % OF GROUP AVERAGE	90.8%	104.5%	97.2%	98.8%
Average per FTE, ISU Group	3,784	5,768	10,477	9,578
IDAHO STATE UNIVERSITY	3,464	6,848	11,121	10,312
AS A % OF GROUP AVERAGE	91.5%	118.7%	106.2%	107.7%
Average per FTE, LCSC Group	3,465	5,415	9,576	8,913
LCSC	2,604	6,292	9,835	8,896
LCSC as a % of Group average	75.2%	116.2%	102.7%	99.8%
Average per FTE, UI Group	5,478	8,701	17,367	14,191
UNIVERSITY OF IDAHO	3,924	8,345	13,947	12,268
UI as a % of Group average	71.6%	85.9%	80.3%	86.5%
Average per FTE Student, All Groups	4,240	6,618	12,451	10,881
Average, Idaho Institutions	3,528	6,973	11,543	10,501
Idaho as a % of Group average	83.2%	105.4%	92.7%	96.5%
Average per Headcount, BSU Group	2,966	4,522	8,213	7,508
BOISE STATE UNIVERSITY	2,349	4,123	6,961	6,472
BOISE STATE AS A % OF GROUP AVERAGE	79.2%	91.2%	84.8%	86.2%
Average per Headcount, ISU Group	2,966	4,522	8,213	7,508
IDAHO STATE UNIVERSITY	2,695	5,328	8,652	8,023
ISU AS A % OF GROUP AVERAGE	90.8%	117.8%	105.3%	106.9%
Average per Headcount, LCSC Group	2,716	4,245	7,507	6,987
LCSC	1,954	4,723	7,381	6,677
LCSC as a % of Group average	72.0%	111.3%	98.3%	95.6%
Average per Headcount Student, UI Group	4,669	7,416	14,802	12,095
UNIVERSITY OF IDAHO	3,225	6,858	11,462	10,083
UI as a % of Group average	69.1%	92.5%	77.4%	83.4%
Average per Headcount Student, All Groups	3,413	5,327	10,022	8,759
Average, Idaho Institutions	2,656	5,251	8,692	7,907
Idaho as a % of All Groups average	77.8%	98.6%	86.7%	90.3%

In FY 1998-99, the Idaho public higher education institutions received less unrestricted educational and general revenue per full-time equivalent student than did the peers, \$12,629 per FTES for the peers and \$11,543 for Idaho. Similarly, the Idaho institutions received less revenues per FTE student from the combination of state and local appropriations and tuition and fee revenues than did the peers, \$10,983 per FTES for the peers and \$10,501 for Idaho.

In FY 1998-99, the Idaho public higher education institutions received less unrestricted educational and general revenue per full-time equivalent student than did

the total of all institutions in similar classifications, \$12,451 per FTES for the comparators and \$11,543 for Idaho. Similarly, the Idaho institutions received less revenues per FTE student from the combination of state and local appropriations and tuition and fee revenues than did the comparators, \$10,881 per FTES for the peers and \$10,501 for Idaho.

If funding was distributed equitably among the four Idaho institutions, it would have been expected that each of the institutions would be at approximately the same level of funding per student relative to its peers. That is, funding among the Idaho institutions would be considered to be equitable if each Idaho institution received approximately the same percent of average peer revenues per student. This would require that Boise State University, Idaho State University, Lewis-Clark State College, and the University of Idaho all be at 90 percent of the peer level of tuition and fee revenues per student, for example.

Because some states provide funding based on headcount students rather than full-time equivalent students, revenues per student were based on the two different student counts. Using both should control for differences among state policies. Similarly, because states maintain different tuition policies, not only were tuition and fees per student and state appropriations per student compared, but also the combination of tuition and state/local appropriations per student was compared. This controls for states whose policy is one of high tuition and relatively lower state appropriations and those states whose policy is low tuition, and relatively higher state appropriations.

The peer data related to FY 1999 revenues for the Idaho institutions and their peers indicate that funding is not equitably distributed among the four Idaho institutions.

Similar analyses were completed using the national data set. National numbers, which include the peer institutions as well as every other public institution in the same classifications, were used to demonstrate that the peers were not chosen based on funding criteria. The data using the national sample (shown in Exhibit 3) demonstrated the same pattern of inequity in funding as the peer institutions. For example, the University of Idaho received 85.9 percent of the average state appropriations per headcount student received by the peers while Idaho State University received 118.7 percent of the average.

Therefore, based on both sets of data, it was concluded that equity did not exist.

To make a determination on equitable distribution of state resources among the Idaho institutions, it is not sufficient to compare data from the Idaho institutions to their peers and to other institutions in the same classification. Many factors contribute to differences in funding, including distribution of students among levels and programs. An institution that enrolls a greater percentage of students in graduate programs would be expected to have more revenues (and expenditures) per student than an institution that enrolled only undergraduate students. Similarly, because certain academic disciplines are resource intensive (such as engineering and health sciences), institutions enrolling a greater proportion of students in those disciplines would be expected to incur greater costs, and have more revenues to support those costs.

One method of recognizing the differences between the costs of providing instruction in different disciplines and at different levels of student enrollment is to weight the credit hours. In other words, to make all weighted credit hours equal, formulas are developed that relate the costs of providing instruction in all disciplines at all levels. Idaho's weighted credit hours are a method of distributing equitable amounts for each credit hour produced at an institution.

Therefore, one of the assessments of funding equity within the Idaho system is to evaluate funding per weighted credit hour. Multiple assessments of equity based on the weighted credit hour were completed: State General Account Funds plus State Endowment Funds per weighted credit hour, Student Fees and Miscellaneous Revenue Funds per weighted credit hour, and Total Appropriated Funds per weighted credit hour.

In addition, calculations were completed for the same revenue categories using full-time equivalent students, full-time equivalent students enrolled in academic programs in the fall semester, and headcount students. The additional calculations were included because not all costs/revenues are related to instruction. Colleges and universities serve multiple constituencies and provide public service, research, and economic development activities as well as instruction. Not all differences in funding that are necessary to ensure equity in resource allocation can be captured by examination of weighted credit hours. For example, differences in mission related to serving the local community are not captured by weighted credit hours. Nor are differences related to the research mission or special programs such as Agricultural Experiment Stations and Cooperative Extension. Unfortunately, workload measures that would incorporate the different missions were not available for this analysis.

Data were compared in these appropriations categories over the ten-year time period, FY 1992 to FY 2001. The staff of the State Board of Education provided appropriations data, student enrollment, and weighted credit hour data. Exhibits 4, 5, 6, and 7 display the analysis for weighted student credit hours, full-time equivalent students, full-time equivalent academic students, and headcount students.

If funding were being allocated in a manner that would provide equity as measured by equal amounts per weighted student credit hour, then it would be expected that the total amounts appropriated per weighted student credit hour would be equal at each college or university. It would not be necessary for student fees or state general and endowment funds to be equal, because the allocation decision could consider the ability of the institution to generate revenues as one component of the equitable amount being distributed.

If funding were equitable in FY 1992, as measured by total appropriations per weighted student credit hour, for funding per weighted student credit hour to be considered equitable in FY 2001, then it would be expected that the same relative relationships would exist in FY 2001 as existed in FY 1992. The relationships did not stay the same. If this funding were to be considered equitable, there should not be more than a 10 percent difference between the high and the low institutions. This "standard" is called the "Federal Disparity Measure" and is one of the measures used to determine equity of funding in education finance court cases.

**EXHIBIT 4
COMPARISONS OF APPROPRIATIONS PER WEIGHTED STUDENT CREDIT HOUR**

	FY1992	FY1993	FY1994	FY1995	FY1996	FY1997	FY1998	FY1999	FY2000	FY2001
State General and Endowment Funds:										
Boise State University	81	75	81	93	94	95	93	93	98	104
Idaho State University	87	81	84	86	87	87	92	100	105	112
Lewis-Clark State College	96	88	92	104	99	103	115	127	1245	133
University of Idaho	115	106	112	121	123	126	131	131	136	143
Student Fees and Miscellaneous Revenues:										
Boise State University	15	17	20	25	26	25	26	27	28	31
Idaho State University	14	15	17	19	20	19	23	25	28	30
Lewis-Clark State College	20	21	24	31	34	34	37	40	39	40
University of Idaho	17	18	20	26	30	30	32	31	32	33
Total Appropriations:										
Boise State University	96	92	100	118	120	120	119	119	126	135
Idaho State University	100	96	101	106	107	107	115	126	133	143
Lewis-Clark State College	116	109	116	135	132	137	152	166	163	172
University of Idaho	132	124	132	148	153	155	163	162	169	177

**EXHIBIT 5
COMPARISONS OF APPROPRIATIONS PER FULL-TIME EQUIVALENT STUDENT**

	FY1992	FY1993	FY1994	FY1995	FY1996	FY1997	FY1998	FY1999	FY2000	FY2001
State General and Endowment Funds:										
Boise State University	4,156	3,894	4,153	4,797	4,871	4,996	5,097	5,357	5,408	5,726
Idaho State University	4,740	4,398	4,737	4,913	4,900	5,021	5,273	5,778	5,983	6,307
Lewis-Clark State College	3,749	3,427	3,448	3,857	3,894	4,127	4,359	4,820	4,891	5,750
University of Idaho	6,722	6,180	6,403	7,075	7,235	7,554	7,831	8,302	8,477	8,838
Student Fees and Miscellaneous Revenues:										
Boise State University	770	869	1,007	1,316	1,367	1,317	1,419	1,535	1,563	1,703
Idaho State University	745	817	958	1,098	1,126	1,102	1,308	1,469	1,572	1,696
Lewis-Clark State College	791	817	907	1,161	1,329	1,348	1,386	1,506	1,526	1,718
University of Idaho	970	1,024	1,139	1,541	1,749	1,782	1,882	1,985	2,016	2,054
Total Appropriations:										
Boise State University	4,926	4,763	5,160	6,113	6,238	6,313	6,516	6,892	6,971	7,419
Idaho State University	5,485	5,215	5,695	6,011	6,026	6,122	6,581	7,247	7,555	8,003
Lewis-Clark State College	4,540	4,244	4,355	5,018	5,222	5,475	5,745	6,326	6,417	7,468
University of Idaho	7,693	7,204	7,543	8,616	8,984	9,336	9,713	10,288	10,493	10,892

**EXHIBIT 6
COMPARISONS OF APPROPRIATIONS PER ACADEMIC FULL-TIME EQUIVALENT STUDENT**

	FY1992	FY1993	FY1994	FY1995	FY1996	FY1997	FY1998	FY1999	FY2000	FY2001
State General and Endowment Funds:										
Boise State University	4,485	4,155	4,420	5,122	5,199	5,364	5,490	5,792	5,826	6,116
Idaho State University	5,469	5,009	5,364	5,552	5,565	5,640	5,966	6,537	6,797	7,095
Lewis-Clark State College	4,696	4,256	4,215	4,774	4,772	5,068	5,280	5,858	5,972	6,966
University of Idaho	6,722	6,180	6,403	7,075	7,235	7,554	7,831	8,302	8,477	8,838
Student Fees and Miscellaneous Revenues:										
Boise State University	831	927	1,072	1,405	1,459	1,413	1,528	1,660	1,684	1,819
Idaho State University	859	931	1,084	1,241	1,279	1,238	1,480	1,662	1,786	1,908
Lewis-Clark State College	991	1,014	1,109	1,437	1,628	1,655	1,678	1,831	1,864	2,081
University of Idaho	970	1,024	1,140	1,541	1,749	1,782	1,882	1,985	2,016	2,054
Total Appropriations:										
Boise State University	5,315	5,082	5,492	6,528	6,658	6,777	7,018	7,452	7,510	7,935
Idaho State University	6,329	5,939	6,449	6,793	6,844	6,878	7,447	8,200	8,582	9,003
Lewis-Clark State College	5,688	5,270	5,324	6,211	6,401	6,723	6,958	7,689	7,838	9,046
University of Idaho	7,693	7,204	7,543	8,616	8,985	9,336	9,712	10,288	10,493	10,892

**EXHIBIT 7
COMPARISONS OF APPROPRIATIONS PER HEADCOUNT STUDENT**

	FY1992	FY1993	FY1994	FY1995	FY1996	FY1997	FY1998	FY1999	FY2000	FY2001
State General and Endowment Funds:										
Boise State University	2,938	2,742	2,857	3,253	3,364	3,457	3,472	3,691	3,780	4,034
Idaho State University	3,673	3,390	3,646	3,719	3,742	3,882	4,104	4,463	4,489	4,641
Lewis-Clark State College	2,770	2,521	2,519	2,814	3,009	3,244	3,382	3,716	4,000	4,448
University of Idaho	5,336	4,942	5,191	5,690	5,828	6,220	6,500	6,743	7,055	7,355
Student Fees and Miscellaneous Revenues:										
Boise State University	544	612	693	892	944	911	967	1,058	1,093	1,200
Idaho State University	577	630	737	831	860	852	1,018	1,135	1,179	1,248
Lewis-Clark State College	585	601	663	847	1,027	1,059	1,075	1,161	1,248	1,329
University of Idaho	770	819	924	1,239	1,409	1,467	1,562	1,613	1,678	1,710
Total Appropriations:										
Boise State University	3,482	3,354	3,550	4,145	4,308	4,368	4,439	4,748	4,873	5,234
Idaho State University	4,250	4,020	4,383	4,550	4,601	4,734	5,122	5,597	5,668	5,889
Lewis-Clark State College	3,355	3,121	3,182	3,661	4,036	4,303	4,457	4,877	5,249	5,778
University of Idaho	6,106	5,761	6,114	6,930	7,237	7,688	8,062	8,356	8,733	9,065

None of the 12 measures in these 4 exhibits of the allocation of resources found equity within the Idaho system. Use of the weighted credit hour was an attempt to measure vertical equity (the unequal treatment of unequals) while the other three student counts were attempts to gauge the existence of horizontal equity. The federal disparity standard used in education finance court cases was the standard against which variation in resources per weighted student credit hour was judged.

Although the variance on several of the measures decreased over time in percentage terms, the dollar variance increased on all 12 measures. The large variances on the 12 measurements of equity in the distribution of resources suggest that **funding among the four institutions is not equitable.**

Development of Consensus on Guiding Principles for Review of the Allocation Mechanism

The Technical Advisory Committee agreed on a set of guiding principles to assist in evaluation of the allocation or funding mechanism. The purpose of the guiding principles is to provide an objective framework for evaluating policy alternatives. The set of guiding principles selected is shown in Exhibit 8.

Review of Best Practices in Funding Formulas

In this component of the study, MGT provided a review of and information on the allocation methods or funding formulas that have been used by systems or states for higher education funding. The review examined the history of the use of funding formulas, the development of allocation mechanisms, economies of scale and scope, guiding principles, other states formulas, and best practices. The best practices delineated in the review were used as benchmarks or guides to recommendations for the improvement of the Idaho allocation model.

Review of the Allocation Mechanism

In this step of the study, the five parts to the Idaho allocation methodology (Base, Enrollment Workload Adjustment, Operations and Maintenance Funds, Decision Units, and Special Allocations) were reviewed using the guiding principles, best practices, and comparisons of spending patterns between the Idaho institutions and their peers.

Base Allocation. The base allocation, which comprises the largest portion of the allocation, does not meet the equity criteria, although it is simple to understand, concerned with stability, and goal-based. The enrollment workload adjustment is the most complicated of the steps in the allocation and was evaluated from several perspectives.

Weights. One of the primary methods used to provide equity in resource allocation is the use of weights. Weighted student credit hours are used in the Idaho workload adjustment as a means of equalizing the costs across academic disciplines and across levels. Lower division, upper division, graduate, and first professional are the four levels recognized in the Idaho calculations.

EXHIBIT 8
DESIRED CHARACTERISTICS OF AN ALLOCATION OR FUNDING FORMULA

Characteristic	Summary Description
A. Equitable	The funding formula 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.
B. Adequacy-Driven	The funding formula should determine the funding level needed by each institution to fulfill its approved mission.
C. Goal-Based	The funding formula should incorporate and reinforce the broad goals of the state for its system of colleges and universities as expressed through approved missions, quality expectations and performance standards.
D. Mission-Sensitive	The funding formula 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.
E. Size-Sensitive	The funding formula should reflect the impact that relative levels of student enrollment have on funding requirements, including economies of scale .
F. Responsive	The funding formula should reflect changes in institutional workloads and missions as well as changing external conditions in measuring the need for resources.
G. Adaptable to Economic Conditions	The funding formula 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.
H. Concerned with Stability	The funding formula should not permit shifts in funding levels to occur more quickly than institutional managers can reasonably be expected to respond.
I. Simple to Understand	The funding formula 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.
J. Adaptable to Special Situations	The funding formula 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 formula 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 formula 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 formula should provide incentives for institutional effectiveness and efficiency and should not provide any inappropriate incentives for institutional behavior.
N. Balanced	The funding formula should achieve a reasonable balance among the sometimes competing requirements of each of the criteria listed above.

The Idaho mechanism includes in its weights additional consideration for the special missions or primary areas of emphasis at each of the institutions. Thus, this component of the allocation mechanism can be judged to be **mission-sensitive**, and **responsive** to changing institutional workload and missions.

The Idaho weights vary by course level and by category of instructional discipline. The maximum weight given any category is 6.50 for graduate instruction in engineering, the health professions, and computer and information sciences. The weights used by other states tend to be higher at the doctoral level and lower at the master's level than the Idaho weights. In his meta-analysis of the discipline costs of instruction, Brinkman found that upper division costs were, on average, 1.6 to 1.8 times as much as lower division instruction. Masters' level was 4 to 5 times as much; and doctoral education was 8 to 9 times the cost of lower division instruction. The Idaho weights at the upper division and graduate level do not conform to the weights Brinkman found in his meta-analysis, and also vary from the weights used by other states.

Because the assignment of proper weights to instructional disciplines by level of instruction is so critical to the **equity** of any funding or allocation methodology, it is essential that the weights used for the Idaho institutions reflect actual differences in the costs of instruction. As the weights currently exist, masters' level instruction in some disciplines may receive a larger allocation than is necessary to provide **adequate** funding; on the other hand, doctoral level instruction may not be receiving a sufficiently large enough allocation to ensure either **equity or adequacy**.

Rolling three-year Average. Idaho uses a rolling three year average of enrollments to calculate the workload adjustment. A rolling three-year average provides a buffer for institutions when enrollments are declining, and is consistent with the guiding principles stability and responsiveness. However, Idaho includes only one-third of any changes in enrollment or workload in the adjustments. As a result, over time, increases in enrollments are not reflected in institutional budgets, and decreases in enrollments result in funding of "phantom students." This one adjustment has contributed significantly to inequity in the institutional allocations over time.

Exclusion of Professional/Technical Education. Allocation of resources to institutions for the needs of professional/technical and veterinary/medical/dental students is not a component of the general education funding mechanism being evaluated in this study. Institutions receive separate allocations from the State Board of Education for these programs, resulting in lack of coordination and complexity in planning and managing the institutions. When evaluated by the guiding principles, exclusion of these students is dis-equalizing, not mission-sensitive, and inadequate.

Treatment of Non-Resident Students. Non-resident full fee paying students are not included in the workload calculations of the allocation methodology. As operationalized in Idaho, this policy fails the criterion reliant on valid and reliable data, and introduces the opportunity for incentives for inappropriate behavior.

Operations and Maintenance Funds. Each of the four institutions is allocated resources for the operation and maintenance of new educational and general capital improvement projects. In general, these funds are allocated in an equitable manner, are size-sensitive, responsive, adaptable to economic conditions, and reliant on valid data.

Decision Units. Each university and college has received a number of above-the-base budget allocations related to items such as salary increases. These items are based on each university's proportionate share of the base, by Board policy, and thus are equitable.

Special Allocations. Since 1991, each university has received special allocations for items that are of particular interest to the Board such as classroom technology. Each of these allocations is consistent with the mission-sensitive, goal-based, and adaptable to special situations criteria. However, these allocations tend to be dis-equalizing.

In addition to evaluation of the allocation mechanisms by the criteria, comparisons were made to expenditures of peer and comparator institutions. These comparisons were completed to provide another measure of the equity of the allocation methodology. Because expenditures are so closely related to revenues, they are another measure of the equity and adequacy of funding.

Exhibit 9 summarizes the comparisons between the Idaho institutions and their peers while Exhibit 10 provides comparisons to the average expenditures for all institutions in the Carnegie classifications from which the peers were drawn. In FY 1998-99, the Idaho public higher education institutions expended less for unrestricted educational and general goods and services per full-time equivalent student and per headcount student than did the peers, \$12,896 per FTES and \$10,242 per headcount student for the peers and \$10,920 and \$8,222 for Idaho. Similarly, the Idaho institutions expended less per FTE student for Instruction and Instruction – related items than did the peers, \$7,572 per FTES for the peers and \$7,388 for Idaho.

In FY 1998-99, the Idaho public higher education institutions expended less for unrestricted educational and general expenditures per full-time equivalent student than did the total of all institutions in similar classifications, \$12,230 per FTES for the peers and \$10,920 for Idaho. Idaho institutions, however, expended more per student for Academic Support than did the comparator institutions, \$1,603 per FTES for Idaho compared to \$1,425 for the comparators, and less than the comparators for Instruction and Instructional-Related items.

If funding were distributed equitably among the four Idaho institutions, it would have been expected that each of the institutions would be able to expend resources at approximately the same level per student relative to its peers. That is, funding among the Idaho institutions would be considered to be equitable if each Idaho institution spent approximately the same percent of average peer expenditures per student.

The peer data related to FY 1999 expenditures for the Idaho institutions and their peers indicate that spending is not equal among the institutions. Since funding is correlated so closely with spending, we can conclude again that funding is not equitably distributed among the four Idaho institutions.

EXHIBIT 9
COMPARISONS OF FY 1999 UNRESTRICTED EXPENDITURES PER STUDENT
IDAHO INSTITUTIONS AND THEIR PEERS

	Instruction	Academic Support	E & G Expenditures	Instruction and Instruction-Related*
Average per FTE, BSU Peers	4,840	1,393	10,301	7,008
BOISE STATE UNIVERSITY	4,687	2,174	10,217	7,430
BOISE STATE AS A % OF PEER AVERAGE	96.8%	156.1%	99.2%	106.0%
Average per FTE, ISU Peers	5,266	1,544	11,485	7,548
IDAHO STATE UNIVERSITY	5,477	1,040	9,781	7,008
AS A % OF PEER AVERAGE	104.0%	67.4%	85.2%	92.9%
Average per FTE, LCSC Peers	4,194	923	9,378	6,136
LCSC	4,709	1,530	9,564	7,191
LCSC as a % of peer average	112.3%	165.8%	102.0%	117.2%
Average per FTE, UI Peers	5,848	1,654	14,667	8,186
UNIVERSITY OF IDAHO	5,611	1,541	13,210	7,776
UI as a % of peer average	96.0%	93.2%	90.1%	94.9%
Average per FTE Student, All Peers	5,319	1,508	12,896	7,572
Average, Idaho Institutions	5,196	1,603	10,920	7,388
Idaho as a % of peer average	97.7%	106.3%	84.7%	97.6%
Average per Headcount, BSU Peers	3,525	1,014	7,502	5,104
BOISE STATE UNIVERSITY	3,205	1,486	6,986	5,080
BOISE STATE AS A % OF PEER AVERAGE	90.9%	146.5%	93.1%	99.5%
Average per Headcount, ISU Peers	4,070	1,193	8,877	5,833
IDAHO STATE UNIVERSITY	4,261	809	7,610	5,453
AS A % OF PEER AVERAGE	104.7%	67.8%	85.7%	93.5%
Average per Headcount, LCSC Peers	3,513	773	7,854	5,139
LCSC	3,534	1,148	7,178	5,397
LCSC as a % of peer average	100.6%	148.5%	91.4%	105.0%
Average per Headcount Student, UI Peers	4,986	1,410	12,506	6,980
UNIVERSITY OF IDAHO	4,612	1,266	10,857	6,390
UI as a % of peer average	92.5%	89.8%	86.8%	91.6%
Average per Headcount Student, All Peers	4,225	1,198	10,242	6,013
Average, Idaho Institutions	3,913	1,207	8,222	5,564
Idaho as a % of peer average	92.6%	100.8%	80.3%	92.5%

- Instruction and instruction-related expenditures include academic support and student services expenditures.

EXHIBIT 10
COMPARISONS OF FY 1999 UNRESTRICTED EXPENDITURES PER STUDENT
IDAHO INSTITUTIONS AND NATIONAL AVERAGES FOR SIMILAR INSTITUTIONS

	Instruction	Academic Support	E & G Expenditures	Instruction and Instruction-Related
Average per FTE, BSU Group	4,772	1,261	10,238	6,800
BOISE STATE UNIVERSITY	4,687	2,174	10,217	7,430
BOISE STATE AS A % OF GROUP AVERAGE	98.2%	182.3%	99.8%	109.3%
Average per FTE, ISU Group	4,772	1,261	10,238	6,800
IDAHO STATE UNIVERSITY	5,477	1,040	9,781	7,008
AS A % OF GROUP AVERAGE	114.8%	84.3%	95.5%	103.1%
Average per FTE, LCSC Group	4,382	1,002	9,358	6,225
LCSC	4,709	1,530	9,564	7,191
LCSC as a % of Group average	107.5%	152.6%	102.2%	115.5%
Average per FTE, UI Group	7,209	2,087	17,163	10,154
UNIVERSITY OF IDAHO	5,611	1,541	10,857	7,776
UI as a % of Group average	77.8%	73.8%	77.0%	76.6%
Average per FTE Student, All Groups	5,449	1,425	12,230	7,720
Average, Idaho Institutions	5,196	1,603	10,920	7,388
Idaho as a % of Group average	95.4%	112.5%	89.3%	95.7%
Average per Headcount, BSU Group	3,741	988	8,026	5,331
BOISE STATE UNIVERSITY	3,205	1,486	6,986	5,080
BOISE STATE AS A % OF GROUP AVERAGE	85.7%	159.9%	87.0%	95.3%
Average per Headcount, ISU Group	3,741	988	8,026	5,331
IDAHO STATE UNIVERSITY	4,261	809	7,610	5,453
ISU AS A % OF GROUP AVERAGE	113.9%	83.7%	94.8%	102.3%
Average per Headcount, LCSC Group	3,435	786	7,336	4,880
LCSC	3,534	1,148	7,178	5,397
LCSC as a % of Group average	102.9%	146.1%	97.8%	110.6%
Average per Headcount Student, UI Group	6,144	1,779	14,628	8,654
UNIVERSITY OF IDAHO	4,612	1,266	10,857	6,390
UI as a % of Group average	75.1%	71.2%	74.2%	73.8%
Average per Headcount Student, All Groups	4,386	1,147	9,844	6,214
Average, Idaho Institutions	3,913	1,207	8,223	5,564
Idaho as a % of All Groups average	89.2%	105.3%	83.5%	89.5%

Development of Recommendations

There are five separate components of the enrollment workload adjustment that were examined in Section E of the report, all of which were contributing to inequities in the funding formula. In addition the components can be adjusted to meet more completely the guiding principles or criteria discussed in Section D. The following options and recommendations were made related to weights, funding of only a portion of the adjustment, exclusion of professional/technical education credit hours, the use of the rolling three year average, and treatment of non-resident students.

One of the primary methods used to provide equity in resource allocation is the use of weights. Weighted student credit hours are used in the Idaho workload adjustment as a means of equalizing the costs across academic disciplines and across levels. Lower division, upper division, graduate, and first professional are the four levels recognized in the Idaho calculations. Academic disciplines also are grouped into four categories. The maximum weight given any category is 6.50 for graduate instruction in engineering, the health professions, and computer and information sciences.

Several recommendations were offered related to weights to improve the equity of distribution. The weights are shown in Exhibit F – 2 in the body of the report.

Recommendation 1: Primary Emphasis Area Weights

Option A: Additional weights to recognize special missions or primary areas of emphasis at each of the institutions should continue to be included in the calculation in much the same manner as now.

Option B: Additional weights to recognize special missions or primary areas of emphasis at each of the institutions should continue to be included in the calculation. However, if all four institutions receive additional weights for one discipline such as Education, then the extra weighting should be incorporated into the overall weights.

Recommendation 2: Weightings by Level and Discipline:

Option 1: Differentiate the credit hour weights by 5 levels (lower division, upper division, masters, doctoral, and professional) and 8 discipline categories to reflect more accurately legitimate differences in the costs of providing instruction across disciplines and levels.

Option 2: Differentiate the credit hour weights by 5 levels (lower division, upper division, masters, doctoral, and professional) and the current 4 discipline categories.

Either of these options increase the equity of the distribution by recognizing legitimate cost factors in the production of student credit hours.

Recommendation 3: Rolling Three-Year Average:

Change the Board policy on the rolling three-year average to the following: “The total budget base of the institutions shall be divided by the three-year moving average of total weighted credit hours for the prior year. The resultant amount per credit hour shall be multiplied by the change from the prior three-year moving average of weighted credit hours for each institution to calculate the adjustment by institution.”

Adoption of this recommendation will increase both the adequacy and equity of the allocation mechanism.

Recommendations 4 and 5: Professional/Technical and Veterinary/Medical Students:

Recommendation 4: Continue to allocate funds for the instructional requirements of professional/technical and Veterinary/Medical students through the current and separate methodology.

Recommendation 5: Count professional/technical and Veterinary/Medical students in all components of the allocation mechanism, except instruction.

When taken together, these two recommendations will increase the equity of the allocation, provide for coordinated planning, and recognize the additional costs of providing services to professional/technical and Veterinary/Medical students.

Recommendation 6: Non-resident students:

Option 1: Count all credit hours earned by non-resident students in the workload adjustment as is done now for those non-resident students who do not pay full fees.

Option 2: Count credit hours earned by non-resident students who are receiving a full or partial waiver of fees. Limit the number of full-time equivalent student waivers to a specific percentage of the student body and the total dollar amount of waivers to a specific percentage of tuition revenues.

Adoption of either of these options will reduce the opportunity for “gaming” the funding mechanism and level the playing field related to the provision of services to non-resident students. This recommendation recognizes that non-resident student enrollment provides economic and social benefits to the State of Idaho.

Recommendation 7: Special Allocations:

When special allocations are made to more than one of the institutions for the same purpose (such as technology grants), distribute funds to the institutions in proportion to the enrollment, number of staff members, size of budget, or other measure of workload related to the special allocation.

This recommendation addresses the inequities introduced to the base when special allocations above the base are made on a “flat grant” basis. Equity is achieved when the allocation is made on the basis of workload.

Recommendation 8: Base Budgets:

A new base should be calculated based on “best practices,” the guiding principles or criteria for an allocation model, and using the recommendations for weights and the three-year rolling average of student counts enumerated above. In future years, this calculated amount should be the continuation base budget to which or from which adjustments are made. The base amount should be phased in over three years.

This recommendation provides a new base that encompasses the desired characteristics of a good resource allocation model, including equity, adequacy, mission-sensitive, size-sensitive, and reliant of valid and verifiable data. The model presented in the body of the report is intended to be an example of what the base allocations to the institutions might look like under a more equitable base.

The recommendation was developed after examination of inequity from three different perspectives. In the next two months, it is suggested that the universities and Board staff will work to fine tune the recommendations for presentation to the Board at its August meeting.