REVISION OF THE NEED FORMULA FOR THE MINNESOTA STATE SCHOLARSHIP AND GRANT PROGRAMS

With Action of the Coordinating Board

March 1980

STAFF TECHNICAL PAPER

COORDINATION THROUGH PLANNING AND RESEARCH

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Staff Technical Paper

Prepared by the staff
of the
Minnesota Higher Education
Coordinating Board

ACTION OF THE COORDINATING BOARD

The Minnesota Higher Education Coordinating Board is responsible for establishing the formula by which student financial need is determined for administration of the State Scholarship and Grant Programs. The current need formula has been in use for six years, during which time changes in the federal Basic Educational Opportunity Grant (BEOG) Program and inflation have eroded its effectiveness. The formula was reviewed during a three month period by the staff of the Coordinating Board in consultation with the Higher Education Advisory Council, the Financial Aid Advisory Committee, and representatives of post-secondary students. Changes supported by the attached staff technical paper were proposed to the Coordinating Board in March 1980.

On March 27, 1980 the Coordinating Board approved the following changes in the formula used to determine student financial need for academic year 1980-81 (see Table 2 on Page 8 of the Staff Technical Paper for comparison of the old and new formulas):

- A calculated cost of education shall be determined for each institution, consisting of the following:
    1) tuition and mandatory fees;
    2) living allowance of $1,750, and;
    3) miscellaneous allowance of $1,000.

- The living allowance for on-campus students of any institution whose 1979-80 board and room charge exceeded $1,750 shall be set to an amount equaling that 1979-80 charge.

- An adjusted cost of education shall be used in the need formula, and it shall represent 85% of the calculated cost of education.

- The expected student contribution used in the need formula shall include a $700 summer earnings expectation for all students.

The Coordinating Board also directed the staff to study and report on the impact of the revised need formula during preparation of the budget request for the 1982-83 biennium.

TABLE OF CONTENTS

LIST OF TABLES

REVISION OF THE NEED FORMULA FOR THE MINNESOTA STATE SCHOLARSHIP AND GRANT PROGRAMS

I. Introduction

The Minnesota State Scholarship Program was founded in 1967 by the state legislature and was expanded to include the Minnesota State Grant-in-Aid Program in 1969. Appropriations to fund these programs have grown from $250,000 for academic year 1967-68 to $22.2 million for academic year 1979-80.

The Minnesota Higher Education Coordinating Board (MHECB) has the responsibility for administering these programs which make awards based on financial need to Minnesota residents attending eligible in-state post-secondary institutions.[1] The state programs operate in conjunction with the federal government's Basic Educational Opportunity Grant (BEOG) Program, and together they form the foundation of a Minnesota student's financial aid.

The method by which financial need is determined must be approved by the Coordinating Board and takes into account:

1) the cost of education at the institution in which the student is enrolled, and;
2) the ability of the student and his or her family to contribute toward the cost of education.[2]

This paper reviews the current method of determining need and proposes changes for future administration of the programs.

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[1]Minnesota Statutes, Section 136A.121(1978)

[2]Minnesota Code of Agency Rules, Section 2.0104(1978)

II. Current Formula

The method by which financial need has been determined in the Minnesota programs is defined broadly by the following formula:

	Cost of Education
minus:	Expected Parental Contribution
minus:	Expected Student Contribution
equals:	Financial Need

Each component of the need formula is described below.

A. Cost of Education. Composition of the cost of education for each student has followed the federal guidelines for administration of the BEOG program. Three aspects of expense are considered:

1) tuition and mandatory fees;

2) living allowance, and;

3) miscellaneous allowance.

Tuition and mandatory fees vary from institution to institution and represent the cost to the student of a full-time nine-month period of study. The size of the living allowance depends primarily on whether a student lives in a dormitory on-campus or lives off-campus, either in rental housing or with parents. For the on-campus resident the allowance varies from institution to institution and represents the charge for a nine-month, 21-meal per week dormitory contract; the typical rooming arrangement is double-occupancy. For the off-campus resident the living allowance is fixed at $1,100 for all students. This allowance has not changed in six years.

The miscellaneous allowance is intended to cover the cost of books, transportation, and all other personal expenses incurred during a nine-month period of study. The allowance is fixed at $400 for all students; it also has not been changed in six years. Table 1 gives examples of the cost of education for a student attending a low, a moderate, and a high cost Minnesota institution during the 1979-80 academic year. There are marked cost differences among institutions as well as between on- and off-campus students attending the same institution.

Table 1

Composition of the Off-Campus and On-Campus Academic Year Cost of Education for Three Minnesota Institutions

Minnesota State Scholarship and Grant Programs

1979-80

Allowance	North Hennepin Community College Off-Campus	North Hennepin Community College On-Campus	Duluth Campus University of Minnesota Off-Campus	Duluth Campus University of Minnesota On-Campus	Carleton College Off-Campus	Carleton College On-Campus
Tuition	$ 575	NA	$1,135	$1,135	$4,375	$4,375
Living	1,100	NA	1,100	1,750	1,100	1,800
Misc.	400	NA	400	400	400	400
TOTAL	$2,075	NA	$2,635	$3,285	$5,875	$6,575

The Coordinating Board has recognized that certain aspects of the cost of education in the need formula have not kept pace with inflation. These allowances have been kept artifically low as one means of insuring that all those who can demonstrate need under the current approach to the cost of education receive an award. Some compensatory accommodations have been made; summer earnings have been exempted for the dependent student to compensate for the meagerness of the miscellaneous allowance, for example.

The circumstances of the current year offer an opportunity to make adjustments which seem reasonable in light of inflation. Expansion of the federal government's BEOG program has covered student financial need which otherwise would have been funded by the state program. Because the Minnesota program is meeting the need of all current year applicants at the level mandated by the legislature, and is doing so at a total spending figure below the current year's appropriation, it is reasonable to consider liberalizing adjustments to the cost of education component of the need formula.

B. Expected Parental Contribution. The parents of a dependent student are expected to contribute to the financing of their son or daughter's education to the extent that they are able.[3] A reasonable expected contribution is derived from an analysis of parents':

1) current year earnings, and;

2) total assets.

This analysis is based upon a computerized formula authorized by the U.S. Education Department and used nationally. The expected parental contribution can be any dollar amount from zero upward and, in many cases, exceeds the cost of education.

C. Expected Student Contribution. There are three potential sources from which a student may contribute to the financing of his or her education:

1) nine-month academic year earnings;

2) three-month summer earnings, and;

3) savings and other assets.

The first two sources are exempted for the dependent student, but are included for the independent student. A fixed percentage contribution is expected of all students from savings and other assets.

III. Objectives of the Revision

The staff of the Coordinating Board has evaluated the current method of determining student financial need in consultation with the Coordinating

[3] A dependent student is one who has: (a) been claimed by parents as an income tax exemption, or; (b) received $750 or more in support from parents, or; (c) resided with parents for six weeks or more. The converse is true of an independent student.

Board's Financial Aid Advisory Committee and numerous members of the financial aid community. Having identified certain shortcomings in the current method, this paper proposes revisions to accomplish the objectives of greater realism, equity, and simplicity in the Scholarship and Grant Program, and to do so in a way which can adjust to limitations in state funding.

A. Greater Realism. The dollar amounts used in the cost of education should reflect the actual costs which the student encounters in pursuing an education. The tuition aspect of the cost of education has been adjusted annually, as has the living allowance for on-campus students. However, the miscellaneous allowance for all students and the living allowance for off-campus students have not changed in six years, during which time the inflation rate has averaged 7.7. percent annually.[4] A living allowance of $1,100 was perhaps reasonable in 1975; a realistic cost of education component in the need formula should be adjusted periodically to keep pace with inflation, however.

Likewise, the expected student contribution should reflect the actual ability of the student to finance his or her education. At a time of relatively low unemployment, and with a typical course of study allowing a 12-week summer break, it is reasonable to assume that a student will work in the summer and will earn an amount in excess of actual living expenses for that period of time. The formula does not currently assume this.

B. Greater Equity. As is demonstrated above, one classification of student has been allowed an annual adjustment in living allowance while the living allowance of another classification has been held constant. When actual expenses for both types of students have been subject to the same inflationary forces, it is unreasonable to treat them differently.

[4]Source: U.S. Bureau of Labor Statistics, Monthly Labor Review

One reason for hesitating to adjust the living allowance for off-campus students has been a need to ration limited resources. It is likely that realistic cost figures for all students would result in total spending greater than the state appropriation. A more equitable approach to rationing appropriated funds would involve an across-the-board reduction in the cost of education component of the need formula.

C. Greater Simplicity. The proliferation of student classifications and the inclusion of expense allowances which differ greatly for identical goods or services not only make the program more difficult and costly to administer, but also lead to accusations of preferential treatment for some. This leads to cynicism about the program and a potential erosion of public support. The State Scholarship and Grant award, in conjunction with the federal BEOG award, forms the foundation of the student's financial aid package. It should, therefore, be geared to the typical case. To the extent that additional discretionary funds are available at the campus level, it must be assumed that the campus financial aid officer will fill out the packaging of awards to insure that deviations from the typical case are recognized and dealt with appropriately.

Consequently, distinctions among institutions and types of students in the non-tuition expenses ought to be eliminated wherever justified by available data.

D. Adjusted to Match Funding Limits. In the past a rationing of limited resources has been achieved by using unrealistic cost figures for some students. An equitable rationing procedure is one that operates across-the-board. Two methods could be used in implementing a reduction in spending:

1) reduce by a constant dollar amount, or;

2) reduce by a constant percentage.

The first method has the drawback of disproportionally reducing initially lower dollar amounts. The second method, while allowing for dollar reductions which are exactly proportional to the initial dollar amount, does not necessarily result in equal dollar reductions. A mixture of these approaches is preferred if rationing is required: first, bring the cost to the minimal realistic level through constant dollar reductions; then, make final adjustments with constant percentage reductions.

IV. Revised Formula

With the above objectives in focus, the following revisions to the method of determining student financial need are proposed. Table 2 outlines the components of the proposed formula and compares them with the current formula.

A. Cost of Education: Tuition and Mandatory Fees. This aspect of educational cost should vary by institution of the student's choice, as it does currently. Tuition costs should continue to be updated annually and work in tandem with existing tuition policies. No change is proposed in this area.

Rationale: State policy recognizes that a wide range of instructional costs exists as a consequence of varying levels of public and private institutional subsidy, and allows individual student need to reflect this range. This policy achieves the objective of realism.

B. Cost of Education: Living Allowance. Under the proposed change, this aspect of educational cost would be constant for all institutions and all types of students in a given year. It may be adjusted annually to reflect the prevailing rate of inflation. For 1980-81, the proposed living allowance is $1,750.

Rationale: Projected average cost of on-campus board and room in the four-year private institutions in 1980-81 will be $1,600; in the University of Minnesota system the average cost is projected at $1,900.

Table 2

Components of the Need Formula for Off-Campus and On-Campus Students under the Present and Proposed Methods

Minnesota State Scholarship and Grant Programs

1979-80 and 1980-81

	1979-80		1980-81	
Component	Off-Campus	On-Campus	Off-Campus	On-Campus
Cost of Education:				
Tuition and Fees	actual	actual	actual	actual
Living Allowance	$1,100	actual	$1,750	$1,750
Misc. Allowance	$ 400	$ 400	$1,000	$1,000
% Recognized	100%	100%	85%	85%
Parental Contribution	ACT calc.	ACT calc.	ACT calc.	ACT calc.
Student Contribution:				
From Academic Year Earnings	ACT calc.[a]	ACT calc.[a]	ACT calc.[a]	ACT calc.[a]
From Summer Earnings	$ 0[b]	$ 0[b]	$ 700	$ 700
From Savings/Assets	ACT calc.	ACT calc.	ACT calc.	ACT calc.

Note: ACT calc. represents the results of Uniform Methodology calculations performed by the American College Testing Service.

[a]for independent students only; exempted for dependent students

[b]for dependent students only; summer earnings have been combined with academic year earnings and subjected to the ACT needs analysis for independent students

The median living allowance for off-campus apartment residents to be used by financial aid officers in administering their campus-based programs in 1980-81 is $1,750.[5] This change will achieve the objectives of greater realism, equity and simplicity.

C. Cost of Education: Miscellaneous Allowance. This aspect of educational cost should be constant for all institutions and all types of students in a given year. It may be adjusted annually to reflect the prevailing rate of inflation. For 1980-81, the proposed miscellaneous allowance is $1,000.

Rationale: The typical miscellaneous allowance to be used by financial aid officers in administering their campus-based programs in 1980-81 is $1,000. This includes $250 for books, $250 for transportation, and $500 for other personal expenses. This change will achieve the objective of greater realism.

D. Cost of Education: Percentage Recognized. Although in the past 100 percent of the calculated cost of education was entered into the need formula, it is proposed that a constant of 100 percent or less of the calculated cost of education be recognized and entered into the need formula for each institution. The percentage may move downward from 100 to the extent that funding limitations dictate. For 1980-81, the proposed percentage is 85.

Rationale: To the extent that rationing of funds is required, the potential for reduction of award should be shared by all applicants. This change will achieve the objective of greater equity and will allow for spending within the appropriation limits.

[5] Source: Survey of a stratified sample of financial aid offices in Minnesota conducted by the Financial Aid Division, MHECB

[6] Ibid.

E. Expected Parental Contribution. No changes are proposed in the treatment of this component.

F. Expected Student Contribution. In addition to the fixed percentage contribution from savings and assets, it is proposed that a constant dollar amount from summer earnings should be expected from all students. It may be adjusted annually as appropriate. For 1980-81, the proposed summer earnings expectation is $700.

Rationale: It is unreasonable to assume that a student earns nothing that could be contributed to the cost of education during the 12-week summer break. $700 represents slightly less than one-half of what a person, working 40 hours per week at the prevailing minimum wage, could earn in 12 weeks. This change will achieve the objective of greater realism.

Summary. Under the proposed revisions, the method by which financial need would be determined in the Minnesota program is defined broadly by the following formula:

	(Cost of Education) x 0.85
minus:	Expected Parental Contribution
minus:	Expected Student Contribution
equals:	Financial Need

V. Impact of the Revision

The impact of the proposed adjustments in the need formula was estimated by means of a computerized simulation. The 48,739 applicants for 1979-80 award were the population on which the simulation was performed. This made it possible to compare the size and distribution of awards under the proposed formula to actual current year awards. The model applies revised assumptions about the calculation of need to each student in the 1979-80 pool. Appendix A outlines the assumptions and methodology employed in the simulation.

The effects of the proposed changes estimated from this simulation will be considered in terms of their impact on:

1) students;

2) post-secondary systems, and;

3) aggregate state spending in academic year 1980-81.

A. Impact on Students. This approach to need determination is not guaranteed to yield an award identical to that of the preceding year for any individual student. Indeed, only 24 percent of the students would show no change in award under the revised formula, all other things being equal. This is contrasted with 65 percent of the students who would experience an increase, and 11 percent who would see a decrease in award from the previous year. Some low-need students who received an award in 1979-80 would receive no award in 1980-81.

The increased awards result primarily from the lifting of constraints on the living allowance for the 54 percent of the application population who live off-campus. The decreased awards result from reducing the actual cost of education from 100 to 85 percent; this has the greatest impact on those on-campus students whose current year dormitory rates are already at or above $1,750.

Appendix B outlines a supplemental proposal which is intended to adjust for the most extreme expected decreases in award under the basic model.

Because the revised cost of education for the off-campus student typically results in a larger dollar amount than was used in 1979-80, there are students who were not eligible for an award in 1979-80 but who would be eligible in 1980-81. Such students represent 8 percent (4,000 students) of the 1979-80 application population.

B. Impact on Post-Secondary Systems. One of requirements for the formula revision was that it not result in a decrease in state funding to any system.

This objective is achieved with the proposed formula; all systems would experience increases in excess of 10 percent. Table 3 shows the system-by-system spending distribution of 1979-80 compared with 1980-81 projections. Note that some bottom line revisions are required to adjust for expected expansion in the statewide applicant pool (15 percent), and expected refunds (10 percent) resulting from withdrawal from school or transfer to ineligible institutions.

The move of students from non-need to real-need status noted above occurs primarily in the State University, Community College, and Area Vocational-Technical Institute systems. However, the projected number of awards does not decrease in any system.

C. Impact on Aggregate State Spending. Another requirement for the formula revision was that it accommodate the limits imposed by the legislative appropriation for 1980-81. The revised formula is projected to accomplish this objective if all assumptions noted in Appendix A are valid. The best estimate is that this formula would result in state spending of $28.06 million; Appendix A outlines the error margin that could be expected. Table 4 shows the available funds for 1980-81. The appropriations exceed projected spending by $190,000; the cost of the supplemental proposal in Appendix B would absorb the remainder of the appropriation.

It must be emphasized that spending projections have been derived from a simulation performed on the 1979-80 applicant pool. If the 1980-81 applicants reflect substantially different characteristics, these figures could be altered. If the model underestimates the size of awards as a result of deviation from the assumptions, it could become necessary to spend monies from the 1979-80 carry-over, which are also shown in Table 4.

Table 3

Comparative Warranted Spending by System

Minnesota State Scholarship and Grant Programs

1979-80 (actual) and 1980-81 (projected)

		1979-80		1980-81	
System	Number of Applicants	Dollars (in millions)	Percent of Total	Dollars (in millions)	Percent of Total
University of Minnesota	10,509	$ 4.21	19.4	$ 4.78	17.6
State Universities	10,965	2.73	12.6	4.19	15.5
Community Colleges	4,660	0.85	4.0	1.47	5.4
Area Voc-Tech Institutes	7,762	1.63	7.5	2.61	9.6
Private 4-Year	12,318	10.66	49.2	11.91	43.9
Private 2-Year[a]	2,525	1.58	7.3	2.16	8.0
SUBTOTAL (base population)	48,739	$21.66	100.0	$27.12	100.0
Projected 15% expansion in applicant pool				4.06	
SUBTOTAL (warranted awards)				$31.18	
Projected 10% refund of warranted awards				(3.12)	
TOTAL PROJECTED SPENDING				$28.06	

[a]includes Private Junior Colleges, Private Vocational Institutes, and Private Health Care Training Programs

Table 4

Sources and Amounts of Funding

Minnesota State Scholarship and Grant Programs

1980-81

Source	Amount
Basic Appropriation from the 1979 Minnesota Legislature	$23,152,000
Special Appropriation from the 1979 Minnesota Legislature[a]	$ 3,668,000
State Student Incentive Grants from the U.S. Education Dept.	$ 1,470,087
SUBTOTAL (appropriated)	$28,290,087
Carry-over from 1979-80 appropriation (projected)	$ 4,255,000
TOTAL AVAILABLE FUNDING	$32,545,087

[a]Appropriated to cover the mandated increase in maximum award from $1,100 to $1,250 and the mandated acceptance of initial applications from juniors and seniors

VI. Future Adjustments to the Formula

Ideally, adjustments to the formula for determining student financial need for the Minnesota State Scholarship and Grant Programs should occur in a systematic fashion. The formula has not been adjusted regularly because of the state policy to tie Minnesota programs to federal assistance programs. This policy was logical for purposes of maximizing Minnesota's use of federal sources of aid. It was also reasonable to adopt the need formula used for federal programs. However, the failure of state and federal policy to adjust for inflation in certain parts of the cost of education has gradually resulted in inequity in the determination of student financial need. This has led to the current proposal.

In addition to the revision of the need formula proposed here, a systematic process for adjusting the formula in the future should be established. The first step in this process would include the adoption by the Coordinating Board of a policy on such adjustments. The policy statement would provide guidelines for adjustment, as well as procedures for initiating change.

It is proposed that these considerations be included in the deliberation of the Coordinating Board concerning the 1982-83 biennial appropriation.

APPENDIX A

ASSUMPTIONS AND METHODOLOGY OF THE SIMULATION

In making the simulations, a number of assumptions were made, either implicitly in the choice of applicants, or explicitly in the programming of the model. Among the key implicit assumptions are the following:

1) the distribution of students among the post-secondary institutions will be the same in 1980-81 as in 1979-80;

2) the proportion of students within each institution who reside on-campus in dormitories will be the same in 1980-81 as in 1979-80;

3) the proportion of independent students within each institution will be the same in 1980-81 as in 1979-80;

4) no change in student assets relative to 1979-80;

5) all other things being equal, inflation in parental income since 1979-80 will be compensated by increased allowances for family living expense in the Uniform Methodology;

6) no change in federal BEOG award relative to 1979-80.

The explicit assumptions programmed into the model are the following:

1) the maximum state award in 1980-81 will be $1,250 -- up from $1,100 in 1979-80;

2) on the average, changes in the Uniform Methodology treatment of assets will result in a $300 decrease in expected parental contribution relative to 1979-80; this $300 is subtracted from the current parental contribution figure for all students and will tend to increase need;

3) tuition may increase from the 1979-80 charges; in most cases the projected tuition was solicited from institutional financial aid offices and used in the simulation.

To this basic simulation model were added variable dollar amounts for living allowance, for miscellaneous allowance, for summer earnings expectation, and for the percentage used in downwardly adjusting the actual cost of education. The figures outlined in the proposal in this paper proved to be optimal in terms of a number of criteria:

1) total spending was projected to be within the limits of the 1980-81 appropriation;

2) every system (e.g., Community Colleges, Four-Year Private Colleges, etc.) show an increase in aggregate state spending of at least 10 percent over 1979-80;

3) decreases from 1979-80 award for <u>any individual student</u> were held to a minimum.

It is important to note that the initial level of spending is projected from the 1979-80 pool of applicants. There are two factors not noted in the assumptions above which will affect the number of awards from the 1980-81 pool of applicants relative to the current pool and thus alter the amount of spending. The first is the expectation that the number fo applications will increase by approximately 15 percent. This expectation is consistent with a three year trend in which a larger and larger percentage of post-secondary students apply for financial aid; the expected number of freshmen entering the pool in 1980-81 is greater than the number of senior who will be leaving the pool at the end of the 1979-80 academic year. Also, the 1979 legislature mandated that juniors and seniors who had not applied as freshmen or sophomore be allowed to apply in 1980-81.

The second factor is the fact that at least 10 percent of the warranted awards -- which are included in the current year figures in Table 3 -- are not spent because of transfer to ineligible institutions, withdrawal from school, or adjustments to the amount of the award. This results in a reduction in spending of approximately 10 percent.

The revised estimated spending for 1980-81 is, therefore, $28.06 million. Given the number of assumptions made in the simulation process, it is reasonable to expect spending to fluctuate between -5 percent and +5 percent, or between $26.66 million and $29.46 million.

APPENDIX B

SUPPLEMENTAL PROPOSAL

Under the revised formula, an off-campus student whose financial circumstance and dependence status have not changed would see a notable increase in the size of award in 1980-81 over 1979-80. Typically, an on-campus student will see a slight decrease in the state award, which can be compensated at the campus financial aid office because of the increase in state money flowing to off-campus students.

However, if an institution has used a high (i.e., greater than $1,750) board and room allowance in the past, the expected decrease in the award size for an on-campus student can be sizeable. If such an institution has a financial aid population which is predominantly on-campus, this loss can be compounded to represent a net decrease in state funding for that institution.

As a means of minimizing the impact of this phenomenon a "grandfather" clause is proposed to supplement the main budget proposal: the living allowance of $1,750 will be increased <u>for on-campus students only</u> by a dollar amount equal to the difference between the 1979-80 board and room allowance and $1,750 for any institution whose 1979-80 board and room allowance was larger than $1,750. This would mean that, if a school charged $1,850 for board and room in 1979-80, the 1980-81 living allowance will be $1,850 instead of $1,750.

As a practical matter, this proposal goes a long way toward resolving the problems caused by the formula revision for the few institutions which would otherwise experience a net loss in state funding from 1979-80 to 1980-81.

The projected cost of implementing this proposal is $150,000.