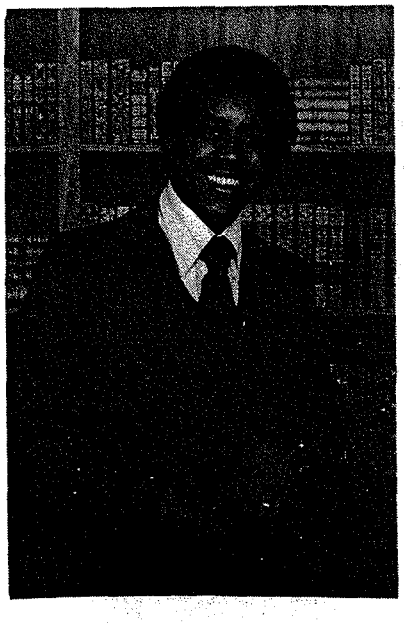
TOWARD A TIME EFFICIENT METHOD FOR RE-COMPUTATION OF BASIC GRANT ESTIMATES

by Robert C. Deboe

With the passage of the Middle Income Student Assistance Act and consequent proliferation of new applicants for financial assistance, aid officers are becoming more cognizant of the need for innovative, time efficient methods to provide services to students. Onerous mechanical tasks are being computerized and new methods are assiduously developed to simplify the arithmetic processes inherent in needs analysis.

At California State University, Fresno, one such arduous but necessary task has been the re-computation of Basic Grant index estimates reported by the College Scholarship Service when the student has reported incorrect data that result in net changes in excess of tolerance levels. The financial aid office utilizes U.S. Office of Education tolerance levels — $500 change in Effective Family Income for dependent students and $100 for independent students. It has been found that for many low and moderate income families having minimal assets, recomputation of eligibility indexes, even when the tolerance levels are exceeded, does not result in monetary changes. Therefore, the financial aid office set out to develop as income matrix to be used in determining whether or not a dependent student would be eligible for a maximum Basic Grant award.



Robert Deboe, an Administrative Fellow with the California State Universities and Colleges, is a Ph.D. Candidate in Adult Education at Indiana University and a past counselor in the Office of Financial Aids at California State University, Fresno.

The idea of an income matrix for ascertaining Basic Grant eligibility change is neither original nor profound. The U.S. Office of Education's publication on 1979-80 Validation Procedures includes income tables to be used in deciding whether or not an incorrect Student Eligibility Report (SER) should be corrected and re-submitted. However, utilization of the Office of Education table is predicated on the student having a zero eligibility index, which for dependent students precludes any student assets. We were in need of a matrix that would allow a margin for minimal student assets while simultaneously controlling, by criteria, the contribution from those assets to the eligibility index. Specifically, at California State University, Frenso, students living on and off-campus can receive maximum Basic Grant awards if their eligibility indexes are less than or equal to 550 and 850, respectively. Thus, we sought to develop an income matrix, holding contribution from assets constant, that would yield eligibility indexes less than or equal to 550 for students living on-campus and 850 for those living off-campus.

The Basic Grants student eligibility index for dependent students is derived by considering three contribution sources:

1. Contribution from parents' annual adjusted income (total taxable and non-taxable income plus one half of veteran's educational benefits),
2. Contribution from parents' assets, and
3. Contribution from student's assets.

Given the above contribution sources, the following criteria were developed *a priori*
to control for the latter two contribution sources:

A. Parents' "Home and other Assets" must be less than or equal to $25,000, and
B. If farm and/or business assets are reported, total assets must be less than $50,000, and,
C. Student's assets must be less than or equal to $300.

Criteria A and B were defined to equal the Basic Grant asset protection allowance so that there can be no contribution from parents' assets. Criterion C allows a margin for student assets and ensures that the contribution from those assets will be less than 100. (Note that contribution from student assets equals 33 percent of total assets.)

For the contribution sources, let CPI, CPA, and CSA represent contributions from parents' income, parents' assets, and student's assets, respectively. Also, let MR represent the Multiple Student Calculation Percent Rate based on the number of family members in college as calculated by the U.S. Office of Education. Finally, let EI represent the Student Eligibility Index. Then,

$$(\text{CPI} + \text{CPA})\ \text{MR} + \text{CSA} = \text{EI}.$$

As imposed by criteria A and B, $\text{CPA} = 0$.

Therefore,

$$(\text{CPI} + 0)\ \text{MR} + \text{CSA} = \text{EI}.$$

But since $\text{CSA} < 100$ then,

$$(\text{CPI} + 0)\ \text{MR} + 100 \geqq \text{EI}$$

or,

$$\text{EI} \leqq (\text{CPI})\ \text{MR} + 100.$$

As previously mentioned, in order to be eligible for a maximum Basic Grant at California State University, Fresno, students living off-campus must have eligibility indexes less than or equal to 850. Therefore, the following inequality must hold true for those students living off-campus and who are from families having one dependent in college (MR=1.0):

$$EI < (CPI)\ (MR) + 100 \leq 850$$

Then,

$$(CPI)\ (MR) \leq 750$$

$$(CPI)\ (1) \leq 750$$

$$(CPI) \leq 750$$

Since contribution from income (CPI) is equal to annual adjusted income minus the total of U.S. taxes and other offsets to income, multiplied (total difference) by 10.5 percent, then the following must be true:

[Adjusted income minus (tax plus offsets)] (.105) $\leq$ 750.

However, since the matrix will be used for all students who meet the beforementioned criteria, we can only consider offsets that have universal applicability, namely, the family size offset. Thus, the following inequality is employed:

(Adjusted income minus family size offset) . (.105) $\leq$ 750

It follows that

(Adjusted income minus family size offset) $\leq$ $7,142,

And,

Adjusted income $\leq$ family size offset plus $7,142.

In summary, a dependent student at California State University, Fresno, who lives off-campus and meets the specified criteria will receive a maximum Basic Grant award if his/her family's annual adjusted income does not exceed the family size offset by more than $7,142.

The same procedure holds true for dependent students from families having two or more dependents in college.

Off-campus (two in college; MR = .7)
Let Adj = annual adjusted income, FS = family size offset, MR = multiple student calculation rate, and CSA = contribution from student's assets.
Then,

$$EI < (Adj - FS)\ (.105)\ (MR) + CSA \leq 850$$

$$(Adj - FS)\ (.105)\ (.7) + 100 \leq 850$$

$$(Adj - FS)\ (.0735) \leq 750$$

$$(Adj - FS) \leq \$10,204.$$

And,
Adjusted Income $\leq$ family size offset plus $10,204
Note that for students having zero assets, the following inequality is true:

$$(Adj - FS)\ (.105)\ (MR) + 0 \leq 850$$

After repeated computation for students living both on and off-campus who are from families having one, two, and three in college respectively, the following income matrix was derived:

ANNUAL ADJUSTED INCOME LEVEL
for Maximum Basic Grant Eligibility

Family Size *	Student Assets	Number in College 1 Away	1 Dorm	2 Away	2 Dorm	3 Away	3 Dorm
	0	12,545	9,688	16,014	11,932		
2	≤ 300	11,592	8,735	14,654	10,572		
	0	13,495	10,638	16,964	12,882	21,590	15,876
3	≤ 300	12,542	9,685	15,604	11,522	19,685	13,971
	0	14,945	12,088	18,414	14,332	23,040	17,326
4	≤ 300	13,992	11,135	17,054	12,972	21,135	15,421
	0	16,145	13,288	19,614	15,532	24,240	18,526
5	≤ 300	15,192	12,335	18,254	14,172	22,335	16,621
	0	17,245	14,388	20,714	16,632	25,340	19,626
6	≤ 300	16,292	13,435	19,354	15,272	23,435	17,721
	0	18,195	15,338	21,664	17,582	26,290	20,576
7	≤ 300	17,242	14,385	20,304	16,222	24,385	18,671
	0	19,295	16,438	22,764	18,682	27,390	21,676
8	≤ 300	18,342	15,485	21,404	17,322	25,485	19,771
	0	20,345	17,488	23,814	19,732	28,440	22,726
9	≤ 300	19,392	16,535	22,454	18,372	26,535	20,821
	0	21,345	18,488	24,814	20,732	29,440	23,726
10	≤ 300	20,392	17,535	23,454	19,372	27,535	21,821

* For family size greater than ten, add $1,000 for each additional dependent.

There are several benefits in each campus developing a matrix similar to the above. First, the matrix can be derived in a few hours and can be used throughout the academic year. Second, use of the matrix can reduce critical man hours needed to re-compute indexes by staff persons. At Fresno, the financial aids office routinely reviews the Basic Grant estimate index reported by the College Scholarship Service (CSS) when budgeting the student for institutional aid. Since incorrect data on the Student Aid Application for California (SAAC) usually necessitates recomputation of the Basic Grant estimate prior to budgeting the student, use of the matrix allows the office to process expeditiously institutional awards for early disbursements. After the submittal of a Student Eligibility Report (SER), the financial aids offices uses the standard BEOG Worksheets to determine the existence of discrepancies. However, worksheet computation does not impede the awarding process for institutional aid.

No empirical study has been undertaken to determine the amount of time saved by the use of the matrix. However, it appears reasonable that approximately 10-15 minutes could be saved on the amount of time needed to recompute a Basic Grant eligibility index by hand. This potential savings is significant when one considers that:

1. California State University-Fresno Office of Financial Aid receives over 4,000 aid applications annually (excluding Guaranteed Student Loan applicants);

2. Basic Grant eligibility indexes must be computed for all applicants determined eligible for institutional aid; and

3. A substantial percentage of aid applicants are eligible for maximum Basic Grant award.

Therefore, use of the matrix should allow the Financial Aids Office to forego the cumbersome task of Basic Grant recomputations for a sizeable number of studests and help ameliorate the perennial problem of inadequate staffing in an era of expanding service demands.