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Abstract:
Findings of a study of 1980-1981 award accuracy of the Basic Educational Opportunity Grants (BEOGs), or Pell Grants, are summarized. The study is the first stage of a three-stage quality control project and includes recommended corrective actions to reduce inaccuracies in the grant awards. A sample of 4,500 students were selected as representative of the 2.36 million students in the BEOG recipient population as of fall 1980. Data were collected from federal tax returns, interviews with student recipients and their parents, tax assessors' statements regarding home values, student records on file in college financial aid offices, and interviews with financial aid administrators describing the characteristics and administrative practices at their institutions. It was found that an estimated $650 million (nearly 30 percent of all program dollars) was awarded incorrectly in 1980-1981, more than 70 percent of all program participants received incorrect awards, funds overawarded exceeded funds underawarded by more than four to one, and an estimated $352 million was awarded to 450,000 students (19 percent of all recipients) who were ineligible under 1980-1981 program requirements. The majority of this error was due to information supplied by students on the application form. Institutional procedures caused somewhat less error, and error by application processors was minimal. Recommended corrective actions are of two kinds: those that can be instituted within the scope of the current delivery system, and those that can be instituted in the context of a radical restructuring of the system. It is suggested that students be required to prove need rather than claiming need without presenting verifying information. (SW)
QUALITY IN THE BASIC
GRANT DELIVERY SYSTEM

Executive Summary

Submitted to
Office of Student Financial Assistance
Department of Education

Contract No. 300-80-0952

April 1982

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EXECUTIVE SUMMARY

In September 1980 the U. S. Department of Education’s [ED] Office of Student Financial Assistance [OSFA] contracted with Advanced Technology, Inc., of McLean, Virginia, and its subcontractor, Westat, Inc., of Rockville, Maryland, to document the accuracy of 1980-81 Pell Grant awards, analyze the major types of error found, determine the probable causes of the error, and recommend actions to reduce error. The completed study finds that an estimated $650 million (nearly 30 percent of all program dollars) was awarded incorrectly in 1980-81, more than 70 percent of all program participants received incorrect awards, funds overawarded exceeded funds underawarded by more than 4 to 1, and an estimated $352 million was awarded to 450,000 students (19 percent of all recipients) who were ineligible under 1980-81 program requirements. These findings are consistent with a previous quality control study (which found 23 percent of program dollars and 59 percent of awards to be in error) and with a recent data match with Internal Revenue Service household income data (which found that 27 percent of all eligible Pell Grant applicants who were tax filers misreported Adjusted Gross Income by more than $200).

The study of 1980-81 award accuracy is the first major deliverable under a three-stage ED quality control project.

BACKGROUND

The concern for quality control in the Pell Grant program has increased with its extraordinary growth in both dollar volume (from $50 million to $2.4 billion) and student participation levels (from 185,000 to 2.7 million) since its inception in 1973. A wide-ranging series of quality control efforts were ordered, funded, and initiated in the years preceding this study. These efforts included (1) computer edits of application data; (2) selective validation of application data by financial aid administrators; (3) analysis of 1978-79 grant award accuracy; (4)
program reviews by Central and Regional ED staff; (5) audits and audit reviews; (6) data match with other Federal sources of information; (7) training of financial aid administrators; and (8) field testing of application forms.

The performance of these efforts had not been studied comprehensively. These efforts were instituted independently, and there is little information that, taken as a group, they have significantly reduced error or improved program management substantially. The primary objectives of this study of 1980-81 Pell Grant awards are therefore to:

- Document the program-wide Pell Grant error rate
- Identify the principal types and probable causes of error
- Assess the effectiveness of validation
- Recommend corrective actions to reduce major errors found in the program

FINDINGS

Overall

The findings indicate substantial dollar error in awards to students during the 1980-81 academic year. Dollar error is actual award disbursements as listed in records at the sampled undergraduate institutions in the spring of 1981 minus what Advanced Technology calculated the correct disbursement to be, using the best available information on application data, cost of attendance, and enrollment status. Total dollar error is estimated to be $275 per recipient, or $650 million of the $2.2
billion (30 percent) awarded to the 2.36 million recipients represented by the sample. An estimated 71 percent of the recipients received an incorrect award.

A breakdown of the $650 million is shown in Figure 1 and can be viewed from two perspectives: program integrity and budgetary. From the program integrity perspective overawards and underawards are of equal importance and need to be corrected through thoughtful action. An estimated 71 percent of recipients had award discrepancies in excess of $2. The magnitude of this error is $650 million. An estimated 44 percent of recipients represented by the sample had award errors in excess of $150. This represents approximately $600 million in program error. Figure 2 displays ranges of error.

From the budgetary perspective, "net error" (overawards versus underawards) provides a useful estimate of the costs associated with error. The "net error" of $402 million is composed of $526 million in overawards to 50 percent of the recipients (approximately 1.2 million students) and $124 million in underawards to 21 percent of the recipients (approximately one-half million students).

Regulations require a financial aid transcript [FAT] for transfer students and a statement (or affidavit) of educational purpose [AEP] for all students in the grant recipient's student aid file. Corrective actions designed to eliminate error associated with the lack of an AEP on file have already been initiated by ED and should not be a problem in future years. If one
<table>
<thead>
<tr>
<th>Institution Error</th>
<th>DOLLARS</th>
<th>ALL ERROR</th>
<th>NET ERROR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$363 M</td>
<td>$42%</td>
<td>$364</td>
</tr>
<tr>
<td>Student Error</td>
<td>$318 M</td>
<td>38%</td>
<td>$355</td>
</tr>
<tr>
<td>Sum of Student &amp;</td>
<td>$681 M</td>
<td>71%</td>
<td>$407</td>
</tr>
<tr>
<td>Institution Errors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dollar Error</td>
<td>$850 M</td>
<td>71%</td>
<td>$388</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Institution Error</th>
<th>OVERAWARDING ERROR</th>
<th>UNDERAWARDING ERROR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DOLLARS</td>
<td>% OF RECIPIENTS</td>
</tr>
<tr>
<td>Institution Error</td>
<td>$272 M</td>
<td>26%</td>
</tr>
<tr>
<td>Student Error</td>
<td>$270 M</td>
<td>29%</td>
</tr>
<tr>
<td>Sum of Student and Institution Errors</td>
<td>$542 M</td>
<td>50%</td>
</tr>
<tr>
<td>Total Dollar Error</td>
<td>$526 M</td>
<td>50%</td>
</tr>
</tbody>
</table>

1Amount of total institutional error plus all student error per recipient totaled independently.
2Mean for all recipients with error.
3All disbursements to students who are ineligible due to institutional error are counted as institutional error in these computations. If SEI error among recipients missing affidavits or statements of educational purpose, or financial aid transcripts, is added to this figure, student error totals $352 million (net student error is $246 million).
4Unduplicated count of institution and/or student error.
5Mean for all students with overaward (underaward).

**FIGURE 1**

ESTIMATED INSTITUTION AND STUDENT ERROR, 1980-81
### Figure 2

**Dollar Error by Ranges**

<table>
<thead>
<tr>
<th>Award Error</th>
<th>All Student &amp; Institution Error</th>
<th>Student &amp; Institution Error Not Including AEP/FAT Error</th>
<th>Student Error Not Including AEP/FAT Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>$551 and less</td>
<td>2.3%</td>
<td>2.5</td>
<td>0.7</td>
</tr>
<tr>
<td>$51 to $550</td>
<td>5.0%</td>
<td>5.6</td>
<td>2.1</td>
</tr>
<tr>
<td>$151 to $250</td>
<td>3.7%</td>
<td>3.9</td>
<td>1.6</td>
</tr>
<tr>
<td>$51 to $150</td>
<td>6.1%</td>
<td>6.4</td>
<td>3.0</td>
</tr>
<tr>
<td>$3 to $50</td>
<td>3.9%</td>
<td>4.3</td>
<td>2.0</td>
</tr>
<tr>
<td>$2 to $2</td>
<td>29.8%</td>
<td>32.3</td>
<td>59.7</td>
</tr>
<tr>
<td>$3 to $50</td>
<td>8.2%</td>
<td>8.8</td>
<td>4.9</td>
</tr>
<tr>
<td>$51 to $150</td>
<td>8.0%</td>
<td>8.4</td>
<td>5.7</td>
</tr>
<tr>
<td>$151 to $250</td>
<td>6.4%</td>
<td>6.7</td>
<td>4.7</td>
</tr>
<tr>
<td>$251 to $550</td>
<td>11.4%</td>
<td>11.0</td>
<td>7.6</td>
</tr>
<tr>
<td>More than $550</td>
<td>15.3%</td>
<td>10.2</td>
<td>7.9</td>
</tr>
</tbody>
</table>

- Award Errors in Excess of $150: 44.1%
  - 39.9
  - 24.6
- Award Errors in Excess of $250: 34.0%
  - 29.3
  - 18.3
does not count a missing AEP or FAT in the student aid file as an error, then total dollar error is reduced to $527 million for 69 percent of the recipients. This is composed of $392 million in overawards to 46 percent of all recipients and $135 million in underawards to 23 percent of all recipients. Figure 3 displays program error not including AEP or FAT.

**Student Error**

The application data element contributing the most toward student dollar error was adjusted gross income (AGI). If all AGI figures submitted on application forms were corrected, net overawards would decrease by $101 million. The next largest contributors toward error were incorrect application entries for income of the dependent student and spouse, home equity, household size, and assets of the dependent student and spouse. Figure 4 displays the impact of the seven items leading to the highest application-related student error.

On average, study data show that the higher a recipient's family AGI, nontaxable income, assets, or own income, the greater the likelihood and magnitude of estimated application-related student error. Further, there is a marked tendency to understate income. As a result, the distribution of awards by income range, as reported using student application data, significantly overstates the number of low-income students receiving aid and understates the number of wealthier students receiving aid.

For example, an estimated 70,000 dependent students reported AGIs of under $6,000 (23 percent of all dependent students...
<table>
<thead>
<tr>
<th>Institution Error(^1)</th>
<th>$211 M</th>
<th>37%</th>
<th>$241</th>
<th>$11 M</th>
<th>37%</th>
<th>$14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Error(^1)</td>
<td>$352 M</td>
<td>41%</td>
<td>$363</td>
<td>$246 M</td>
<td>41%</td>
<td>$254</td>
</tr>
<tr>
<td>Sum of Student &amp;</td>
<td>$563 M</td>
<td>69% (^4)</td>
<td>$346</td>
<td>$257 M</td>
<td>69% (^4)</td>
<td>$158</td>
</tr>
<tr>
<td>Institution Errors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dollar Error</td>
<td>$527 M</td>
<td>69% (^4)</td>
<td>$323</td>
<td>$256 M</td>
<td>69% (^4)</td>
<td>$158</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Institution Error(^1)</th>
<th>$111 M</th>
<th>20%</th>
<th>$236</th>
<th>-$100 M</th>
<th>17%</th>
<th>-$243</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Error(^1)</td>
<td>$299 M</td>
<td>31%</td>
<td>$403</td>
<td>-$53 M</td>
<td>10%</td>
<td>-$233</td>
</tr>
<tr>
<td>Sum of Student and</td>
<td>$410 M</td>
<td>46% (^4)</td>
<td>$381</td>
<td>-$153 M</td>
<td>23% (^4)</td>
<td>-$284</td>
</tr>
<tr>
<td>Institution Errors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dollar Error</td>
<td>$392 M</td>
<td>46% (^4)</td>
<td>$364</td>
<td>-$135 M</td>
<td>23% (^4)</td>
<td>-$250</td>
</tr>
</tbody>
</table>

\(^1\) Missing affidavits or statements of educational purpose and financial aid transcripts are not included as institutional error. Any cases with error greater than two dollars are included.

\(^2\) Amount of error associated with all types of total institutional error plus all types of student error per recipient totaled independently.

\(^3\) Mean for all recipients with error.

\(^4\) Unduplicated count of institution and/or student error.

\(^5\) Mean for cases with error.

**FIGURE 3**

ESTIMATED INSTITUTION AND STUDENT ERROR NOT INCLUDING AEP/FAT ERROR, 1980-81
<table>
<thead>
<tr>
<th>APPLICATION ITEM</th>
<th>ASSOCIATED DOLLAR ERROR (NET IN MILLIONS)</th>
<th>RESULTING INCREASE IN AWARDS PER RECIPIENT (NET)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjusted Gross Income</td>
<td>$101</td>
<td>$43</td>
</tr>
<tr>
<td>Student/Spouse 1979 Income</td>
<td>$ 43</td>
<td>$18</td>
</tr>
<tr>
<td>Home Equity</td>
<td>$ 38</td>
<td>$16</td>
</tr>
<tr>
<td>Household Size</td>
<td>$ 38</td>
<td>$14</td>
</tr>
<tr>
<td>Student/Spouse Assets 1979</td>
<td>$ 26</td>
<td>$11</td>
</tr>
<tr>
<td>Nontaxable Income (Other than Social Security)</td>
<td>$ 22</td>
<td>$ 9</td>
</tr>
<tr>
<td>Number in Postsecondary Education Institutions</td>
<td>$ 14</td>
<td>$ 6</td>
</tr>
</tbody>
</table>

1 For policy purposes, the data from our sample are extrapolated to program-wide error levels. Note that there is substantial overlap of error amounts, so column total is larger than actual total student error. Data are rounded to the nearest million.

2 Data are rounded to the nearest dollar.

FIGURE 4

IMPACT OF SELECTED INCORRECT APPLICATION ITEMS ON STUDENT DOLLAR ERROR
reporting AGIs of under $6,000) when, in fact, the parental AGIs were over $12,000. These students were overawarded by over $76 million. Overawards are clustered in higher income groups and underawards in lower income groups. The effect of obtaining correct financial information could therefore be to decrease the funding now going to higher income groups and increase the funding now going to lower income groups.

Institution Error

Figure 5 displays the components of institutional dollar error. Excluding AEP and FAT error, the net overaward would drop from $181 million (see Figure 1) to $11 million (see Figure 3). The $11 million would be composed of $111 million in overawards to 20 percent of all recipients and $100 million in underawards to 17 percent of all recipients.

Apart from missing AEPs and FATs, a small portion of the institutional error is due to incorrect program eligibility determinations. Most is due to incorrect institutional monitoring of enrollment status or cost of attendance and to calculation error (a variety of bookkeeping and disbursement discrepancies). These errors work in both directions, and are almost equally divided among overawards and underawards. However, total dollars in error are substantial and deserving of further analysis and corrective actions.

The findings indicate a wide diversity in satisfactory academic progress policies and inconsistency among institutions in the application of these policies to financial aid recipients.
<table>
<thead>
<tr>
<th>Component</th>
<th>Estimated Dollar Error</th>
<th>Percent of All Recipients</th>
<th>Mean Absolute Error for Recipients with Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Institution Error</td>
<td>$363 Million</td>
<td>42%</td>
<td>$364</td>
</tr>
<tr>
<td>Institution Error without AEP/FAT Error</td>
<td>$211 Million</td>
<td>37%</td>
<td>$239</td>
</tr>
<tr>
<td>Components</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AEP/FAT Error</td>
<td>$169 Million</td>
<td>7.7%</td>
<td>$933</td>
</tr>
<tr>
<td>Enrollment Status Error</td>
<td>$94 Million</td>
<td>18.2%</td>
<td>$219</td>
</tr>
<tr>
<td>Cost of Attendance</td>
<td>$63 Million</td>
<td>15.0%</td>
<td>$177</td>
</tr>
<tr>
<td>Calculation Error</td>
<td>$29 Million</td>
<td>15.6%</td>
<td>$79</td>
</tr>
<tr>
<td>Program Eligibility Error</td>
<td>$25 Million</td>
<td>1.3%</td>
<td>$789</td>
</tr>
<tr>
<td>BA and Citizenship Error</td>
<td>$3 Million</td>
<td>2.2%</td>
<td>$849</td>
</tr>
</tbody>
</table>

1 Component figures are computed independently for each type of error. The sum therefore exceeds the total of all error, because error has been counted more than once in all cases where more than one type of error occurs.

2 Estimated breakdown of institutional error components using spring 1981 data. Final component figures will be derived from institutional reconciliation rosters as part of Stage Two of this project.

**FIGURE 5**

SUMMARY OF INSTITUTIONAL DOLLAR ERROR INCIDENCE AND ABSOLUTE VALUE
(e.g., separate policies are sometimes applied to students from disadvantaged backgrounds, and probation periods were extended in individual cases). In many cases, institutional satisfactory progress policies do not take into account withdrawals from courses and do not have any requirement that students make normal progress toward an educational degree or certificate. These findings corroborate a recent GAO report on satisfactory academic progress.

The issue of satisfactory academic progress is being addressed by new ED rules, to be proposed, that encourage institutional self-regulation and responsibility.

Current Validation Efforts

One method used by OSFA to improve the accuracy of application data is validation—a process in which a sample of applicants are selected and certain data items are verified by financial aid office personnel. Unlike this study which verified all application data, ED-mandated validation requires only certain data items to be checked. Thus, this study will necessarily reveal discrepancies not uncovered during validation. An estimated $146 in absolute award discrepancy due to student error per validated recipient remained after validation.

For 12.8 percent of recipients in the sample who were flagged for validation, documentation of income was not found in the student financial aid file. Where income documentation was found in cases flagged for validation, income information was not within accepted tolerance in 11 percent of the cases. This
suggests further improvements in the validation process are necessary. The average absolute award discrepancy due to student error was $112 for recipients randomly flagged for validation. By contrast, the absolute award discrepancy due to student error was $135 for recipients not flagged for validation. This $23 average improvement is one measure of the effect of validation on student error.

Processor Error

An analysis of the error rates associated with data entry by Multiple Data Entry (MDE) application processors revealed little error. The results indicated an estimated 1 data entry error for every 37 applications (2.7 percent).

An estimated 78 percent of all data entry errors were never corrected by the applicants. In fact, of all data entry errors that were to the disadvantage of the applicants 60 percent were never corrected by the applicants.

CORRECTIVE ACTIONS

One objective of the Pell Grant program is to treat students of equal financial circumstances equally. The magnitude and frequency of incorrect awards indicate that this objective is not being achieved. In response to the problems just described, Advanced Technology proposed corrective actions to reduce error, increase equity, and assure integrity in the program. An assumption was made, based on the study findings, that error was primarily caused by the complexity of application information and award determination procedures and by the self-reporting nature
of the program. As a result the recommendations for corrective action focused on simplification of procedures and verification of data.

Advanced Technology proposed two kinds of corrective actions. Many of the recommendations included are now being considered for implementation; however, the listing of these recommendations does not imply concurrence by ED. Final decisions on acceptance or rejection of the recommendations have not been made by ED. The first kind of corrective actions is mechanical actions to make changes within the scope of the current delivery system for Pell Grants. The second consists of major structural changes in the way Pell Grants are distributed to students. Whereas the mechanical approach aims to control on a continuing basis the error levels within the current delivery system, the structural approach aims to eliminate certain persistent errors by more radical means. Structural changes are necessary given the assumption that corrections to the existing delivery system will not bring the error down to a satisfactory level.

In presenting the mechanical recommendations, a distinction is made among corrective actions involving the student, the institution, and the application processor. For each of these entities, recommendations were developed by first categorizing the problems and establishing broad themes for solutions. To a degree, the recommendations represent choices. The adoption of a particular strategy for error control may alleviate the need for certain of these recommendations.
Mechanical Actions - Student Error

Student error may be addressed by three central themes:

- Asking the applicant to prove need.
- Improving the identification and validation of likely erroneous applications.
- Making the application form itself less error prone.

In turn, a set of seven action recommendations to address these themes was proposed:

- Issue a valid Student Eligibility Report (SER) only when an IRS 1040 or a certification of public assistance accompanies the application or alternatively only when a signed release for IRS data match accompanies the application.
- Continue ED-mandated validation but use the selection criteria developed in Stage One.
- Publicize to students the validation activity and its possible consequences.
- Establish one individual at each regional office to be responsible for following up on each institutional referral from that region.
- Change the definition of dependency status to exclude current year estimates.
- Obtain the names of household members who will be enrolled in postsecondary education institutions during the award year.
- Improve the definition of various items on the application form.

Mechanical Actions - Institution Error

Problems in the institutional component are also addressed by three central themes:

- Creating an incentive in the program for students to complete course work.
- Changing administrative procedures to promote program compliance and reduce delay.
• Adding new verification requirements for critical application items

To address these problems more concretely, the following six corrective actions were proposed:

• Introduce a program-wide minimum credit requirement in place of satisfactory progress policies designed by institutions.

• Restructure the payment schedule to broaden cost of attendance and dollar award categories.

• Have institutions complete a mid-year student validation roster in addition to the one required at the end of the award year for reconciliation of disbursements.

• Allow financial aid officers [FAOs] to recalculate Student Eligibility Indexes [SEIs] based on corrected data and make first disbursements to students while waiting for receipt of the corrected SERs from the processors.

• Specify a new edit for the processor edit system that will trigger a validation flag if students show dependency status change between years.

• Require that eligible recipients, until the time of the first disbursement, correct SER data regarding household size and the number in college to reflect their actual situations.

Mechanical Actions - Processor Error

Finally, problems fit into three major corrective action themes for processors:

• Rationalizing internal processing procedures

• Improving management decision-making tools

• Improving the efficiency of communications with students

Advanced Technology proposed 13 recommendations to meet these potential problem areas. These are generally of a technical nature and do not alter the application procedure to a large degree.
Structural Changes

Based on the hypothesis that there is a certain level of error endemic to the current delivery system (i.e., error that cannot be controlled by mechanical corrective actions), Advanced Technology explored the decision procedures necessary before developing a structural redesign of the Federal student aid delivery system. It is imperative to undertake a systematic exploration of policy preferences, constraints, and assumptions prior to full-scale development of alternative delivery methods. However, it is instructive to highlight the shapes that a new delivery system might take.

As a part of this stage of the project, preliminary ideas for changes in the application, institutional, and processor components of the student aid delivery system were outlined.

The major trade-off in the redesign of the application process is between a streamlined, simple application form with only a handful of easily verifiable data items and an application with sufficient family financial data to permit discrimination of "wealth" among applicants and to take into account special or unusual financial situations. Implicit in the decision process is the question of whether discrimination of "wealth" is best done at the Federal level through a complex formula or at the institutional level through individual attention. Three alternatives were considered:

- The "micro" application procedure consisting of very few verifiable data elements for any or all of the student aid programs
The short form/long form application procedure which allows applicants to file a "micro" form or a standard needs analysis form if the latter would better reflect their financial situations.

The dual needs analysis procedure which mandates the "micro" form for Pell Grants but allows campus aid offices the option of using a standard needs analysis form for other types of Federal financial assistance.

For institutional procedures, the redesign and use of the current payment document, the Student Eligibility Report (SER), were considered. Options described included the use of an optical scanner payment card that would be used by a central controller to monitor disbursements and expenditures closely, release and control funds to institutions, and maintain checks on student enrollment status and cost of attendance.

Finally, in the area of application processor redesign, the following three procedures were explored:

- Total integration of Federal student aid processing
- Remote entry capability of Federal student aid processing
- Combined Federal transfer payment application processing

**METHODOLOGY**

The methodology used to accomplish the Stage One objectives is briefly described. For more information see Quality in the Basic Grant Delivery System, Volume 3, Methodology.

**Sample Design**

The primary objective of the sample design was the selection of a probability sample of students enrolled at educational
institutions involved in the 1980-81 Pell Grant program. To accomplish this, institutions and students were selected in two stages: (1) stratification and random selection of 305 institutions and (2) stratification and random selection of approximately 4,500 Pell Grant recipients from these institutions. Over 90 percent of all students and parents in the sample responded with an interview. The total population represented by our sample (students who received awards by October 1980) is approximately 2.36 million Pell Grant recipients. This comprises roughly 83 percent of all Pell Grant recipients for 1980-81 and represents over $2.2 billion in awards. Both the institution and student sample sizes were large enough to ensure the required statistical precision.

Data Set

The data came from:

- 4,304 interviews with student recipients
- 3,829 interviews with recipients' parents
- 5,161 certified Internal Revenue Service copies of tax returns for recipients and for their parents
- 270 financial institutions, giving bank account information for a subset of recipients and parents
- 569 statements of recipients' or parents' home values provided by tax assessors (adjusted to local market values)
- 4,553 Student Record Abstracts [SRAs] drawn from the financial aid and accounting files of the 305 institutions the recipients attend
- Interviews with financial aid administrators describing characteristics and administrative practices of the 305 institutions
In addition, data were analyzed from the computerized files of Pell Grant transactions and corrections for each recipient in the sample and for a control group of Pell Grant recipients selected to measure possible experimental effects of our project on students and institutions.

**Limitations and Considerations**

Calculations of error are based on a set of definitions which take the year-long Pell Grant program cycle into consideration. The data upon which students were paid were verified against the most stringent documentation collected through interviews, record search, IRS 1040 match, and inquiries to financial institutions and county tax assessors offices. The total award error used in this report is the difference between actual and planned disbursements recorded on institutional business office files in the spring and expected disbursements calculated using the best SEI and the cost and enrollment data found in the spring. The universe from which the sample was taken excludes consideration of four groups:

- Applicants for Pell Grants who were rejected by the application processing system and never "reentered" the system
- Applicants who were determined to be eligible but were never given awards
- Applicants who applied later in the award year (after October 1980)
- Applicants who filed a Special Condition Application (Supplemental Form)
The data from institutions were collected in April and May of 1981. Between this period and the period when institutions submit their final reconciliation rosters to ED, institutions might have corrected certain institutional errors. This report does not reflect this self-correction. A follow-up analysis is being conducted now to determine the impact of institutional self-corrections on the error rate.

Finally, several factors contribute to make the error figures somewhat conservative (that is, error was understated). These include:

- The sample represents approximately 83 percent of all recipients and excludes recipients who filed later in the award year and recipients who filed a supplemental form. If error among late filers and supplemental filers was similar to error among recipients represented by the sample, the estimates of dollar error are 17 percent lower than true error for the program for 1980-81.

- The study was not designed to study fraud or intentional misreporting of data by applicants. For example, if an applicant failed to disclose a source of nontaxable income on the application and further failed to disclose this source to the study data collectors, no error would be uncovered.

- Evidence from a review of transaction history file data suggests that the behavior of students and/or institutions was affected by our data collection. Sampled students submitted corrected SERs more often than non-sampled students at the same institutions, had fewer additional corrections, and had higher SEIs than students in a control group. This evidence points toward experimental bias in the direction of underestimating program error.

In the first stage of this quality control project, Advanced Technology has documented the discrepancy rates and magnitudes of error in the Pell Grant program for 1980-81. They
have also examined the causes of the errors and recommended management actions to reduce them. In subsequent stages, Advanced Technology will design and implement an ongoing quality control system to regularly monitor the integrity of the Pell Grant program. They will also provide assistance with regard to corrective action proposals being considered by ED and conduct analyses of issues raised as a consequence of the first-stage findings.