Pell Grant Program
Best Practices Report

Prepared for the Program Analysis Division
Of The
Office of Federal Student Aid

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July 31, 2002

Table of Contents

1. INTRODUCTION

The Federal Student Aid (FSA) office of the Department of Education is engaged in an extensive effort to improve its services to the education community through a series of initiatives. One of these initiatives is a comprehensive review of the Pell Grant program. The goal of this initiative is to reduce errors in awards while maintaining or improving the services to and satisfaction of the Pell Grant recipients and the schools and other institutional partners involved in the Pell Grant program.

As part of this comprehensive effort, FSA has engaged in best practices research, through the Program Analysis Division (PAD) of FSA. The purpose of this research is to determine if there are approaches used by schools, other government agencies, financial institutions or identified in publications or by researchers that can be considered as best practices for controlling or reducing errors in income-based programs. The assumption behind this research is that some of these best practices can be used to improve FSA's ability to prevent and/or detect award errors that lead to over/underawards under the Pell Grant Program. This Report summarizes the results of the Best Practices research done by PAD

In addition to this Introduction, this Report is divided into five sections. These sections summarize the results of the Pell Grant Best Practices research project as of July 30, 2002. The five sections are:

In addition, this report contains the following four appendices.

2. BACKGROUND INFORMATION

The goal of the Pell Grant Best Practices research project is to identify ways to reduce award errors in the Pell Grant program in accordance with the Department of Education's strategic goal, Education Objective 6.4 – Modernize the Student Financial Aid assistance programs and reduce their high-risk status – and FSA's Performance Plan 9 – Develop a new verification process that will drive an over/underaward reduction through targeted improved verification. Achieving the above should lead to reductions in the current baseline Pell Grant award error rate by 10% in FY2003 and 20% in FY2004. (See Appendix 1 for more information on Objective 6.4 and Performance Plan 9.) Through this research, FSA is endeavoring to identify and adapt the best practices used by private financial institutions,

state and federal government agencies, schools, and other entities to enhance the ability of its verification system to prevent and detect errors in the Pell Grant process, especially errors that produce overawards.

Currently FSA uses a statistical model to identify applicant groups with a high probability of errors that will change the Expected Family Contribution (EFC) and hence the size of the Pell Grant award. The identified applicant groups are around 30% of all Pell Grant applicants. The schools, which applicants from the identified groups will be attending, are asked to verify certain key data elements from the FAFSA forms of the applicants. The key data elements examined when an applicant is selected for verification are 1) household size; 2) number enrolled in college; 3) Adjusted Gross Income; 4) U.S. income tax paid; and 5) certain untaxed income and benefits. Among the forms of untaxed income and benefits examined are: 1) Social Security benefits; 2) child support; 3) IRA/Keogh deductions; 4) foreign income exclusions; 5) earned income credit; and 6) interest on tax-free bonds.

To accomplish its goal, PAD personnel have conducted telephone and in-person interviews with over 50 people. More specifically, PAD personnel have interviewed administrators at 10 schools, 25 staff at 14 federal and state government agencies to include FSA staff, personnel at 6 associations, personnel from 2 financial institutions, 8 researchers at various institutions, and personnel from 3 contractors providing services to FSA. See Appendix 2 for a more detailed listing of contacts.

3. INITIAL SET OF SUGGESTED BEST PRACTICES

Based on the interviews conducted with schools, government agencies, financial institutions, and researchers, FSA has identified: 1) principles for preventing and/or detecting errors; 2) activities designed to improve verification effectiveness; 3) activities designed to prevent errors and 4) activities requiring policy and/or programmatic changes. The following subsections contain the principles and activities identified as suggested Best Practices for the Pell Grant program. The individuals and organizations listed in the footnotes associated with a given principle and/or activity are the people – and their associated organization – who identified the principle.

3.1 Principles for Preventing and/or Detecting Errors

In conducting the research of best practices for income-based programs a number of suggested actions were identified. These actions encompass a series of potential approaches for reducing errors that can result in over/underawards of Pell Grant money. While each of the suggested actions is important, none of them can address all of the expectations for enhancements in the Pell Grant verification program. In addition, trying to apply these approaches to the current work being done to control error rates in the Pell Grant program could easily lead to disjointed and counterproductive activities. In fact the real power of the suggested actions comes when they are joined together in an integrated business strategy. A core element in building an integrated business strategy is having an easy to understand statement of vision and mission and a governing set of principles for achieving the vision/ mission that can form a focus and lens through which the many activities required to build a

dynamic organization can be viewed. For the current comprehensive review of the Pell Grant program discussed in the Introduction and Background sections of this Report, the vision/mission is to develop a new verification process that will drive an over/underaward reduction through targeted improved verification that leads to reductions in the current baseline Pell Grant award error rate of 10% in FY2003 and 20% in FY2004.

This section of the Report presents a summary of seven principles for achieving the above vision/mission. These principles have been derived from principles identified during the Best Practices research project for controlling errors and fraud and abuse in income-based programs. The seven principles identified during the Best Practices research are:

1) People are more precise when they know a 3rd party reports on data.[1]
2) Organize services around customer types.[2]
3) Automate as much of a program's processes as possible.[3]
4) Measure results by impact and fraction of customers affected.[4]
5) Develop service improvements to meet needs of future customers.[5]
6) Concentrate on front-end activities whenever possible and practical.[6]
7) Identify and measure concentrations of risk.[7]

The following subsections discuss each of these principles and provide some examples of how they might be applied to the Pell Grant program.

3.1.1 People are more precise when they know a 3rd party reports on data

During a telephone discussion with Jeff Liebman of the JFK School of Government at Harvard University, he noted that people tend to be more precise about the information they supply if they know an independent 3rd party, like an employer, reports on it.[8] In a telephone discussion with Rona Rustigian of the Social Security Administration, she identified a number of instances where obtaining independent third party information identified a number of self-reporting errors by applicants for social security benefits.[9] In two of the examples cited by Ms. Rustigian some of the officials at the Social Security

[1] Principle identified in a telephone discussion on April 30, 2002, with Jeff Liebman at the John F. Kennedy Harvard School and a telephone discussion on June 18, 2002 with Rona Rustigian of the Social Security Administration's OIG.
[2] Principle identified in a July 16, 2002, telephone discussion with Al Hyde of the Brookings Institute about the way that the telephone companies have organized their services to meet the targeted needs of large businesses, small businesses, and individuals. Principle found in excerpts from the government report supplied by Al Hyde on July 30, 2002, on Reinventing Service at the IRS: Report of the Customer Service Task Force, published by the IRS, January 1998, page 59.
[3] Principle identified in a July 16, 2002, telephone discussion with Al Hyde of the Brookings Institute.
[4] Principle identified in a July 16, 2002, telephone discussion with Al Hyde of the Brookings Institute
[5] Principle identified in a July 16, 2002, telephone discussion with Al Hyde of the Brookings Institute
[6] Principle identified by Tom Stanton of Johns Hopkins University
[7] Principle identified in a July 1, 2002 telephone discussion with Tom Stanton of Johns Hopkins.
[8] Principle identified in an April 30, 2002 telephone discussion with Jeff Liebman at the John F. Kennedy School of Government at Harvard University.
[9] Principle reinforced in a June 18, 2002 telephone discussion with Rona Rustigian, Audit Director of the Northern division of the Social Security Administration.

Administration had not expected there to be a significant difference between the information that was being self-reported and the information being asked for from independent 3rd parties.

The impact of this principle on the Pell Grant program is visible in the practices at some of the schools that were interviewed during the Best Practices research project. More specifically, during the interviews with the schools:

1) The interviewees at six schools stated that obtaining information from an applicant's W-2 form provides very useful information about the applicant's untaxed income.[10] In general the schools using the W-2 form found that it was more useful than the applicant's tax return for providing information about untaxed income.

2) Leslie Bridson of Boston University observed that requiring third party verification of the number of people in an applicant's parents' household who will be college students in the upcoming academic year has enabled Boston University to catch a frequent source of applicant error.[11]. According to Ms. Bridson, the number of persons said to be in college is a frequent source of error. As a result Boston University requires all of its Pell recipients to supply proof – in the form of a transcript, proof of tuition payment, or other hard evidence – that each dependent identified on the FAFSA as being in college is in fact attending school. Given the experience at Boston University it is interesting to note that while 60% of the respondent schools said they verified the number of dependents reported to be in school, five of the six schools said that they only required self-verification.

3) The interviewees at two schools stated that obtaining divorce papers, especially the child support documents, provided a very useful tool for identifying sources of income and establishing the custody status of an applicant.[12]

Section 6 of this Report contains a table of databases – suggested by a number of different interviewees – that FSA may want to consider utilizing as independent third party sources to verify reported information especially with the five data elements that schools must verify – household size, number enrolled in college, Adjusted Gross Income, U.S. income tax paid, and certain untaxed income and benefits.

[10] The utility of using information from an applicant's W-2's to confirm the untaxed income of an applicant's parents (if dependent) was cited by Janet Sain of ECPI College of Technology in a May 29, 2002 telephone discussion, Erik Melis of George Mason University in a May 7, 2002 telephone discussion, Judy Florian of Macomb Community College in a May 13, 2002 telephone discussion, Carolyn Zehren of Minnesota State University in a May 6, 2002 telephone discussion, Marc Brenner of Ohio Technical College in a June 4, 2002 telephone discussion, and Susan Murphy of University of San Francisco in a May 13, 2002 telephone discussion.

[11] Information identified in an April 30, 2002 telephone discussion with Leslie Bridson of Boston University.

[12] Information identified in an a June 4, 2002 telephone discussion with Marc Brenner of Ohio Technical College and a May 29, 2002 telephone discussion with Janet Sain of ECPI College of Technology.

Given the above observations a best practice principle that FSA should investigate further is the confirmation of information reported on the FAFSA through third party sources wherever possible as opposed to relying on self-reporting. This principle is consistent with FSA's current efforts to receive enabling legislation to conduct IRS matches of applicant income information on the FAFSA form.

3.1.2 Organize services around customer types

In a telephone discussion with Al Hyde of the Brookings Institute, he noted that organizations with programs organized around processes tend to have a higher error rate than ones organized around customer types.[13] During the telephone discussion, Al Hyde cited the telephone companies as an example of businesses that organize their services around customer types instead of processes. As he noted during the discussion, the telephone companies are organized around services to large businesses, small businesses, and residential customers. Each of these groups has unique needs and concerns. By targeting services to each group, application forms and service offerings can be crafted to meet the needs and interests of each customer group.

A review of the Reinventing Service at the IRS: Report of the Customer Service Task Force indicates that the IRS is using a similar practice. As noted in this Report, the Task Force was able to document "how different the needs and concerns were of different customer segments."[14] The data reviewed by the Task Force identified "five different customer segments – individuals, the self-employed, small businesses, large businesses, and tax preparers."[15] The Task Force also "found that each group had very different needs at different points in time."[16] Given these differences, the IRS has organized a number of its services around each of these groups. For example, in order for telephone assistance to meet the needs of the various groups it must take into account the IRS found that:

1) "Small business people … want to be able to reach the IRS after business hours and on weekends."[17]
2) "Large businesses want to get through during business hours but want their employees to be able to call the IRS after work."[18]
3) "Individuals and the self-employed want to talk to the IRS almost any time of day – whatever accommodates their particular situation."[19]

During the course of the interviews with administrators at various schools and state student aid agencies, it was learned that schools and state agencies that target aspects of their verification efforts to account for the unique attributes of their student population sometimes verify variables other than the five data elements that schools must verify – household size,

[13] Principle identified in a July 16, 2002, telephone discussion with Al Hyde of the Brookings Institute.
[14] Reinventing Service at the IRS: Report of the Customer Service Task Force, published by the IRS, January 1998, p.59.
[15] Idem.
[16] Idem.
[17] Ibid., pp. 59 and 61.
[18] Ibid., p. 61.
[19] Ibid., p. 61.

number enrolled in college, Adjusted Gross Income, U.S. income tax paid, and certain untaxed income and benefits – when they are asked to do a verification. The schools identifying their unique variables did so in response to challenges arising from the special needs of each of their groups of applicants. For example:

1) Pat Hurley, at Glendale Community College, stated that a disproportionate number of the College's immigrant students do not answer question 31 "Will you have a high school diploma or GED before you enroll?" correctly because they interpret it as asking about US high schools only and not about high school equivalents in foreign countries. Hence, some immigrant students unknowingly disqualify themselves for Pell Grants.

2) Carolyn Zehren at Minnesota State University stated that because her school is located within a half mile of North Dakota, a number of students answer question 24, "What is your state of legal residence?" incorrectly. Ms. Zehren indicated that the answer to this question can have an impact on the applicant's EFC due to Minnesota having a higher tax rate.

3) Sherry Fox with the NJ Guaranty Agency stated that in a wealthy state like New Jersey, her Agency has saved money by examining the assets of aid applicants. She estimated that the $165 million Tuition Aid Grant (TAG) awards might be forced to pay out 10's of millions of dollars more if the assets of an applicant's family were not reviewed. She proposed that FSA examine the impact of applicant assets to determine what impact differing asset amounts have on an applicant's EFC.

3.1.3 Automate as much of a program's processes as possible

In a telephone discussion with Al Hyde of the Brookings Institute, he noted that the greater the people to people interaction in a program the higher the error rate.[20] Hence, to reduce error rates an organization should strive to automate as much of its program's processes as possible.

The impact of this principle is visible in a finding of the Reinventing Service at the IRS report which notes that "information technology has enabled banks and credit card companies … to offer information and service 24 hours a day with even higher standards of accuracy, courtesy and convenience."[21] In response to this trend the IRS has made automating its processes a cornerstone of its efforts to become more efficient and customer friendly. For example:

1) "The IRS will increase the number of forms that can be filed electronically and educate customers about the benefits of electronic filing …."[22]

[20] Principle identified in a July 16, 2002, telephone discussion with Al Hyde of the Brookings Institute.
[21] Reinventing Service at the IRS: Report of the Customer Service Task Force, published by the IRS, January 1998, p.58.
[22] Ibid., p. 7.

2) In 1999 the IRS will work to enable taxpayers to file paperless returns by eliminating the need for mailing in W-2s and other forms and for paper signatures."[23]

3) "…beginning in 1999 taxpayers who file electronically will be able to pay their taxes with a direct withdrawal from their bank accounts."[24]

This principle is also consistent with:

1) Efforts by the Students Channel and a number of schools to have applicants file their applications using the web FAFSA.

2) The suggestion by Susan Murphy of the University of San Francisco that applicants using the web FAFSA be required to complete certain boxes (for example the number of people in an applicant's parents' household and the number of these individuals who will be college students in the upcoming academic year) before they can go on to the next question.

3) The suggestions, included under the above principle 1, to use existing databases to verify certain data elements from the FAFSA form.

3.1.4 Measure results by impact and fraction of customers affected

In a telephone discussion with Al Hyde of the Brookings Institute, he noted that one measure of the effectiveness of a proposed solution for controlling errors and fraud and abuse is the nature of the impact and the percentage of the customer base that is affected by a solution.[25]

1) In support of this principle, two of the proposed measures of the impact of the best practices identified during this research effort are:1) the impact of a practice on a school's error rate; and 2) the percentage of schools using a given practice.

2) In line with this principle, it is recommended that further research be done to determine the nature of the impact of requiring a third party verification of the number of dependents in college. This recommendation is based on the possibility that there may be a significant impact on the verification efforts of a sizable number of schools if third party verifications of the number of dependents in school were required. In support of this supposition:

    a) While 60% of the schools interviewed verified the number of household members in college only one, Boston University, required third party verification of this data element.
    b) In addition, Boston University stated that a significant percentage of its applicants were unable to support the statement that household members in addition to the

[23] Idem.
[24] Idem.
[25] Principle identified in a July 16, 2002, telephone discussion with Al Hyde of the Brookings Institute.

applicant will be attending college in the upcoming academic year when asked to produce independent verification.

3.1.5 Develop service improvements to meet needs of future customers

In a telephone discussion with Al Hyde of the Brookings Institute, he noted that in developing solutions to improve program accuracy one should think about the type of service to be provided to future customers instead of focusing efforts on solving problems for past customers.[26] This principle recommends that organizations should: 1) define the characteristics, needs, and wants of future customers; 2) determine the nature, quality and methods of service delivery to meet the needs and wants of future customers; and 3) examine and modify current service quality and delivery methods to meet those wants and needs instead of concentrating time and effort on solving service issues that meet the needs and wants of past customers. An implicit assumption behind this principle is that people are becoming increasingly used to receiving targeted services via electronic media. Hence, service delivery that takes advantage of this trend can reduce cost and improve customer service.

1) The example given to illustrate this principle was the Social Security Administration that sought to meet the needs of its client base for information by treating everyone equally using staff on the telephones instead of identifying what information needs could be met with an automated information system. The net result is that the Social Security Administration is currently getting around 120 million telephone calls per year.[27]

2) A potential example of how this principle might work with the Pell Grant program is illustrated by combining this principle with principle 2 (organize services around customer types) and principle 3 (automate as much of a program's processes as possible). Applying these three principles to the FAFSA form leads to the conclusion that the developers of the web version of the FASFA may want to redesign it to provide specialized assistance for certain applicant populations with identified challenges to completing the form correctly. Examples of populations of this type are:

    a) Immigrant applicants needing assistance on correctly answering question 31about whether the applicant will have a high school diploma or GED before enrolling in college. According to Pat Hurley, at Glendale Community College, some immigrant filers interpret this question as only referring to United State high schools and therefore disqualify themselves for aid by answering "No" to this question even though they will have a degree from a high school or high school equivalent institution from a foreign country.

    b) Students attending colleges and universities close to state lines. According to Carolyn Zehren at Minnesota State University some of the students attending Minnesota State become confused about their residency status. This can occur in

[26] Principle identified in a July 16, 2002, telephone discussion with Al Hyde of the Brookings Institute.
[27] Statistic obtained during a July 16, 2002, telephone discussion with Al Hyde of the Brookings Institute.

part because a given student may find an apartment in one state in year one and another state in year two.

3.1.6 Concentrate on front end activities whenever possible and practical

In a telephone discussions on July 1, 2002, with Tom Stanton of Johns Hopkins University about the most efficient method for reducing errors in income based programs he noted that one should try to engage in filtering applications on the front end to avoid errors. The exception to this advice would occur when front end filtering is overly expensive or simply impractical in which case one can go to monitoring a process on the back end.[28]

In examining this principle as it applies to the results of the Best Practices research, two forms of front end filtering emerge as viable strategies for the Pell Grant program for reducing errors in the granting of awards. The two forms of front end filtering are:

1) Prevention activities in the form of educating the applicant population prior to their completing the FAFSA form.

2) Automated reviews of the five data elements that schools must verify – household size, number enrolled in college, Adjusted Gross Income, U.S. income tax paid, and certain untaxed income and benefits – to flag them for probable errors prior to the FAFSA's being submitted for EFC calculations.

In the telephone interviews with the ten schools contacted during the Best Practices Research, a recurring theme was the effort that each school devoted to educating applicants and their parents in order to prevent errors from occurring. When questioned about the effort devoted to prevention activities, each of the respondents stated that they felt the time was well worth the effort and resulted in fewer repetitive questions from applicants and a reduction in potential errors during the completion of the FAFSA form. Among the prevention activities engaged in by the schools that were interviewed were the following:

1) Using a Web site to communicate FAQ's and provide information alerts about potential challenges in completing the FAFSA.
2) Urging students to file their FAFSA electronically.
3) Traveling to area high schools to make presentations to groups of students, parents, and counselors.
4) Working with students through workshops and counseling sessions to inform them of challenges and to address the unique needs of each student.

In support of this concept, "[I]ncreasingly the IRS and other regulatory agencies are concluding that giving more attention to early intervention and preventing problems have a significant impact on compliance."[29]

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[28] Principle identified by Tom Stanton of Johns Hopkins University

[29] Reinventing Service at the IRS: Report of the Customer Service Task Force, January 1998, published by the IRS, page 68.

An illustration of this principle is found on page 2 of the Reinventing Service at the IRS report which states "that agencies that treat people like customers and partners can be more successful in encouraging people to obey the law, and can then focus enforcement efforts on those who deliberately violate it. For example, until the U.S. Customs Service began working with airlines, importers and the rest of the trade community, Customs at the Miami Airport had a history of long lines for passengers and endless waits for cargo. Customs designed and implemented a plan that enabled them to identify high risk passengers or freight before a plane landed. This resulted in an increase in drug seizures, faster passage through customs for law-abiding passengers and less waiting time for importers."[30]

The combination of the prevention activities at the respondent schools and the proactive efforts of the Customs Service cited in the IRS document support the principle that to reduce errors in the Pell Grant program FSA should concentrate on front end activities whenever possible and practical. This principle, when combined with principle 1 – People are more precise when they know a 3rd party reports on data – and principle 3 – Automate as much of a program's processes as possible – suggest a strategy for the Pell Grant program that selects a set of applicant criteria that can be checked against existing databases and can be used to run a set of qualifying validations of FAFSA data points for accuracy prior to calculating the EFC for each applicant. By increasing the amount of front end filtering that is done the verification process can be used to identify those FAFSA applications for which:

1) The applicant asserts that the front-end filter did not consider a relevant piece of data.
2) An institution in reviewing an ICIR has reason to suspect that something is amiss.

The Social Security Administration uses this technique to eliminate applicants for social security benefits who are either in jail or fugitive felons. According to Rona Rustigian Audit Director of the Northern Division of the Social Security Administration (SSA), checking applicants for social security benefits against federal, state, county, and local prison populations has saved the SSA an estimated $3.4 billion over seven years. In addition, based on a pilot program of matching social security applicant files with fugitive felon files for a dozen or so states the SSA made an estimated $76 million in over payments from August 1996 through June of 2000. In addition, until a full match of all fugitive felon databases is done Ms Rustigian estimates that there will continue to be around $30 million in over payments per year.

3.1.7 Identify and Measure Concentrations of Risk

Sometimes when trying to determine what measures to use to determine the amount of risk associated with a program finding an exact measure can be very difficult. During a telephone discussion with Tom Stanton, of Johns Hopkins University, he noted that emphasis should be placed on identifying andmeasuring concentrations of risk. He also stated that developing measures of risk could sometimes be daunting. He went on to note that when identifying measures of risk one may want to choose an item that is easy to

[30] Reinventing Service at the IRS: Report of the Customer Service Task Force, January 1998, published by the IRS, page 2.

measure and can be used with a minimum of expense or hassle even though it may not be exactly on target.[31]

During a telephone conversation with Ted Macaluso with the Food Stamp program he emphasized the focus of the Agriculture Department's investigations on businesses that engage in food stamp fraud. While the mechanics of the Food Stamp program are very different from the Pell Grant program, applying the principle of measuring the concentrations of risk suggests that the Pell Grant program may want to focus some of its activities on schools that have a propensity to do an inadequate job of verifying the information submitted by their students.

The existence of schools that either do not complete the required verifications or that do so incorrectly is documented in a Final Audit Report by the OIG of the Effectiveness of the Department of Education's Student Financial Aid Application Verification Process.[32] According to this Report, of the six schools chosen by the OIG for visits by its staff "the six schools reported inaccurate verification results for 198 (63 percent) of our sampled recipients and did not complete the required verification for 70 (22 percent) of the sampled recipients."[33]

These results would suggest that there might exist a concentration of risk for over/ underawards at some of the schools awarding Pell Grants. To the extent that this supposition is valid the Probit measure of schools at risk used by CM&O to determine which schools need case management attention[34] might be used to identify the schools that are prone to do a less than thorough job of verifying their student information. While this measure may not be exactly on target for locating students with high error rates, it has the advantage of being a readily available measure that can be used with a minimum of expense or hassle. It is therefore recommended that a pilot test be run to determine whether the Probit measure of schools at risk can increase the ability of FSA to identify high concentrations of students with errors in the data contained in their FAFSA applications.

3.2 Activities Designed to Improve Verification Effectiveness

During the course of researching best practices for income-based programs that might be applicable to the Pell Grant program, a number of practices were identified. The practices contained in this section are a subset of all of the practices identified that are designed to improve the effectiveness of the Pell Grant program. The key practices contained in this section were chosen either because of the number of schools using it or because the school(s) using it deemed it to have a significant impact on the final calculation of an applicant's EFC. The activities included in this section are:

1) Verify people in an applicant's parents' household

[31] Principle identified in a July 1, 2002 telephone discussion with Tom Stanton of Johns Hopkins University.
[32] Final Audit Report (Control Number ED-OIG/A06-A0020) on the Effectiveness of the Department's Student Financial Aid Application Verification Process.
[33] Ibid., p. 5.
[34] The Probit Measure of Schools at Risk, prepared by the Oak Ridge National Laboratory, November 2000.

2) Request W-2's to look at untaxed income
3) Verify dependents enrolled in school
4) Request divorce papers
5) Use a logistic regression model
6) Implement an individualized verification/modeling system

3.2.1 Verify people in an applicant's parents' household

During the interviews with personnel at the ten schools included as part of the Best Practices research project, it was determined that 60% of the schools interviewed requested verification of the number of people in an applicant's parents' household.[35] However, a number of schools augmented this general practice with more specific requirements to include:

1) Erik Melis of George Mason University who pays particular attention to persons who are wards of the court because of the confusion that can arise due to an applicant not accurately identifying their custodial status.

2) Pat Hurley of Glendale Community College who is especially attentive to those situations in which an applicants family size is not equal to the number of exemptions claimed by the applicant (independent student) or the applicant's parents (dependent student).

3.2.2 Request W-2's to look at untaxed income

During the interviews with personnel at the ten schools included as part of the Best Practices research project, it was determined that 60% of the schools interviewed requested students and/or their parents to provide the school with W-2's. The W-2's were examined to verify information about the amount of untaxed income and benefits received by a student and/or his/her parents. Each of the schools engaged in this practice stated that the W-2's were a lot more helpful in determining the untaxed income of a student and/or his/her parents than the income tax form.

The schools involved in requesting the W-2 forms and the individuals who were interviewed were:

1) ECPI College of Technology – Janet Sain
2) George Mason University – Erik Melis
3) Macomb Community College – Judy Florian
4) Minnesota State University – Carolyn Zehren (parents only)
5) Ohio Technical College – Marc Brenner

[35] Erik Melis of George Mason University, Pat Hurley of Glendale Community College, Craig Cornell of Kent State University, Judy Florian of Macomb Community College, Marc Brenner of Ohio Technical College, and Susan Murphy of the University of San Francisco cited the utility of requesting verification of the number of people in an applicant's parents' household.

6) University of San Francisco – Susan Murphy

3.2.3 Verify dependents enrolled in school

During the interviews with personnel at the ten schools included as part of the Best Practices research project, it was determined that 60% of the schools interviewed requested verification of the number of dependents enrolled in school. As noted in section 3.1.1 People are more precise when they know a 3rd party reports on data, Leslie Bridson of Boston University observed that requiring third party verification of the number of people in an applicant's parents' household who will be college students in the upcoming academic year has enabled Boston University to catch a frequent source of applicant error.[36]
The schools involved in requiring the verification of the number of dependents enrolled in a college or university were:

1) Boston University – Leslie Bridson (3rd party verification)
2) ECPI College of Technology – Janet Sain (self verification)
3) Minnesota State University – Carolyn Zehren (self verification)
4) Ohio Technical College – Marc Brenner (self verification)
5) Penn State University – Shari Howell (self verification)
6) University of San Francisco – Susan Murphy (self verification)

3.2.4 Request divorce papers

During the interviews with personnel at the ten schools included as part of the Best Practices research project, it was determined that two of them requested divorce papers (esp. child support documents) to verify the custody status and income of an applicant.

The schools involved in requesting divorce papers are:

1) ECPI College of Technology – Janet Sain
2) Ohio Technical College – Marc Brenner

3.2.5 Use a logistic regression model

During the interviews with personnel at the ten schools included as part of the Best Practices research project, it was determined that Penn State University uses a logistic regression model to identify potential filers with errors. According to Shari Howell and her staff, during the May 6, 2002 telephone interview with them, the logistic regression model used by Penn State University contains the following ten (10) variables:

1) Number in college
2) Cost of attendance
3) Ethnicity
4) Total income
5) Need (Cost of a Penn State education minus the applicant's EFC)

[36] Information identified in an April 30, 2002 telephone discussion with Leslie Bridson of Boston University.

6) Total Pell
7) 3 institutional specific aid measures
8) College work study.

As noted in section 5.1 Quantitative Measures of this Report, according to Penn State University, their logistic regression model reduced overawards in the 600 person sample population that they selected for comparative purposes by 87.8% while the CPS edits only reduced it by 35.4%. The same logistic regression model reduced underawards by 42.2% versus 32.6% for the CPS edits. In addition, Penn State University stated that they attained these results even though they only verified 10% to 15% of the applicant pool versus the 30% verification requirement for the CPS edits.

3.2.6 Implement an individualized verification/modeling system

During the interviews with personnel at the ten schools included as part of the Best Practices research project, it was determined that four of the schools interviewed had implemented an individualized verification/modeling system. In some cases such as with the University of San Francisco the motivation for the individualized verification system was the significant amount of institutional money distributed as scholarship aid. With Minnesota State University, Penn State University, and Kent State University a significant factor with the individualized verification system was the level of automation used by the schools in an effort to decrease the cost and increase the accuracy of their verification efforts.

3.3 Activities Designed to Prevent Errors

During the course of researching best practices for income-based programs that might be applicable to the Pell Grant program, a number of practices were identified. The practices contained in this section are a subset of all of the practices identified that are designed to prevent errors in the Pell Grant program. The key practices contained in this section were chosen either because of the number of schools using it or because the school(s) using it deemed it to have a significant impact on the ability of applicants to avoid errors when completing their FAFSA application. The activities included in this section are:

5) Use Web site to communicate FAQ's and alerts
6) Urge students to file their FAFSA electronically
7) Make group presentations to students, parents, and counselors
8) Use workshops/counseling sessions to inform students

3.3.1 Use Web site to communicate FAQ's and alerts

During the interviews with personnel at the ten schools included as part of the Best Practices research project, the following schools stated that they used their Web site to communicate FAQ's and alerts.

1) Boston University – Leslie Bridson
2) George Mason University – Erik Melis

3) Kent State University – Craig Cornell
4) Minnesota State – Carolyn Zehren
5) Penn State University – Shari Howell
6) Macomb Community College – Judy Florian

3.3.2 Urge students to file their FAFSA electronically

During the interviews with personnel at the ten schools included as part of the Best Practices research project, the following schools stated that they urged students to file their FAFSA electronically.

1) Kent State University – Craig Cornell
2) Minnesota State University – Carolyn Zehren
3) Penn State University – Shari Howell

3.3.3 Make group presentations to students, parents, and counselors

During the interviews with personnel at the ten schools included as part of the Best Practices research project, the following schools stated that they use high school tours/presentations to inform students, parents, and counselors how to complete the FAFSA form and how to avoid making errors:

1) George Mason University – Erik Melis
2) Kent State University – Craig Cornell
3) Macomb Community College – Judy Florian
4) Minnesota State – Carolyn Zehren
5) University of San Francisco – Susan Murphy

3.3.4 Use workshops/counseling sessions to inform students

During the interviews with personnel at the ten schools included as part of the Best Practices research project, the following schools stated that they use workshops/counseling sessions for students to inform them how to complete the FAFSA and avoid making errors:

1) Glendale Community College – Pat Hurley
2) Minnesota State University – Carolyn Zehren
3) Kent State University – Craig Cornell
4) ECPI College of Technology – Janet Sain

3.4 Activities Requiring Policy and/or Programmatic Changes

During the course of researching best practices for income-based programs that might be applicable to the Pell Grant program, a number of practices were identified. The practices contained in this section are a subset of all of the practices identified that would require programmatic and/or policy changes before they can be implemented. The practices contained in this section were chosen either because of the number of schools and/or

government agencies suggesting it or because it is deemed as having the potential to have a significant impact on either the cost of managing the Pell Grant program or a significant impact on the final calculation of an applicant's EFC. The activities included in this section are:

1) Increased interaction amongst QA schools
2) Review schools prone to have applicant errors
3) Increase error edits of the web FAFSA
4) Eliminate annual re-certification of poor families
5) Use state system classification and certification of needy

Items 1, 2, and 3 will be examined further as part of the Best Practices study. Item 4 may be impacted by the research being done on the Pell study on stable EFC. Item 5 is currently beyond the scope of this study.

3.4.1 Increased interaction amongst QA schools

Of the ten schools contacted about best practices four of them were Quality Assurance (QA) schools. During the interviews with personnel at the four QA schools Leslie Bridson at Boston University and Shari Howell at Penn State University expressed a desire for more interaction amongst the QA schools.

Increasing the interaction amongst the QA schools would, at minimum, require programmatic changes in the QA schools initiative. As part of future efforts under the Best Practices study, it is recommended that contact be made with various individuals within the Schools Channel to determine the feasibility and desirability of the Schools Channel sponsoring and/or facilitating additional interactions among the QA schools.

3.4.2 Review schools prone to have applicant errors

As noted in section 3.1.7 Identify and Measure Concentrations of Risk in this Report, FSA may want to examine more closely colleges and universities that are prone to do a less than thorough job of verifying their student information thereby increasing the likelihood of there being undetected errors in applicant information. Selecting students for verification based on the schools that they attend and taking additional steps to ensure that the information submitted by these students is properly verified would be a policy and programmatic change in the process used to verify information under the Pell Grant program.

As part of future efforts under the Best Practices study, it is recommended that contact be made with various individuals within the Schools and Students Channels to determine the feasibility and desirability of FSA targeting students who attend schools that are prone to do a less than thorough job of verifying their student information. If this recommendation is accepted the Schools and Students Channels will also need to develop a process for ensuring that the information submitted by these students is properly verified.

3.4.3 Increase error edits of the web FAFSA

During the interviews with personnel at the ten schools included as part of the Best Practices research project Susan Murphy at the University of San Francisco proposed that certain boxes on the web FAFSA must be filled in before one can go to the next question. She used as examples of the boxes that might be targeted for this treatment the number of members in the family and the number of members of the family enrolled in college. Making these kinds of edit changes with the web FAFSA would be a programmatic change in the functioning of this form.

As part of future efforts under the Best Practices study it is recommended that contact be made with various individuals within the Students Channel to determine the feasibility and desirability of making these changes in the web FAFSA form.

3.4.4 Eliminate annual re-certification of poor families

During the interviews with personnel at the ten schools included as part of the Best Practices research project Judy Florian at Macomb Community College proposed that the verification process could be simplified and made less expensive if poor families did not have to re-certify that they are needy every year. Implementing this practice would be a major policy change in the process used to establish a student's eligibility for a Pell Grant. Research currently underway to determine the stability of the Expected Family Contribution for a student during their time in school may provide facts that can be used to judge the advisability of this suggestion.

3.4.5 Use state system classification and certification of needy

During the interviews with personnel at the ten schools included as part of the Best Practices research project, Judy Florian at Macomb Community College proposed that the verification process could be simplified and made less expensive if FSA were to use the state system classification and certification of needy to qualify students for aid under the Pell Grant program.

While this proposal might, if implemented, produce a cost effective way to manage the Pell Grant program, researching the policy and programmatic changes required to make this proposal a reality are outside of the scope of the Best Practices research project.

4. Error Rates of Other Government Programs

In an effort to determine how well or poorly FSA is doing in controlling the level of over and underaward errors in its Pell Grant program the Best Practices research project has identified the error rates of a number of income-based programs administered by federal and state agencies. The results of this research are contained in this section.

According to the 2000-2001 Title IV/Federal Pell Grant Program End of Year Report[37] total expenditures for the Pell Grant program for award year 2000-2001 were $7,956,304,184.[38] Based on an analysis completed by the Program Analysis Division the over and under awards for award year 2000-2001 were $272 million and $64 million respectively for a total absolute award error of $336 million. This dollar level of award error translates to 3.4% overaward error rate, a 0.8% underaward error rate, and a 4.2% absolute award error rate for the Pell Grant program.

The above error rates compare very favorably with the range of error rates for the Aid For Dependent Children (AFDC), Earned Income Tax Credit (EITC), and Food Stamp programs. It also compares favorably with the IRS uncollected taxes rate.

Two of the researchers interviewed during telephone and in person discussions stated that the error rates of other government programs were as follows.

1)	AFDC	4 – 10%	- per Wendell Primus[39]
2)	EITC	30%	- per Jeff Liebman[40]
		20%	- per Wendell Primus
3)	Food Stamps	4 – 10%	- per Wendell Primus
4)	IRS	16%	- per Jeff Liebman
		10 – 15%	- per Wendell Primus

In an effort to verify the estimates given by the researchers, a review of available literature was conducted. Based on the literature review the following additional information was learned about the error rates of other government programs:

1) AFDC
   a) "… quality control data suggest an overpayment rate of **6 percent for AFDC** (Committee on Ways and Means 1998)."[41]

2) EITC

   a) "Tabulations from the 1985 and 1988 IRS Taxpayer Compliance Measurement Program (TCMP) surveys first presented by Holtzblatt (1991) and Scholtz (1990)

[37] 2000-2001 Title IV/Federal Pell Grant Program End of Year Report, Submitted to the U.S. Department of Education Office of Postsecondary Education, by NCS Pearson.
[38] Ibid., p. 14.
[39] Wendell Primus is with the Center on Budget and Policy priorities. An in person meeting was held with him at FSA on 6/20/02.
[40] Jeff Liebman is with the JFK School of Government at Harvard University. A telephone interview was held with him on 4/30/02.
[41] Liebman, Jeffrey B., "Who Are the Ineligible EITC Recipients? Prepared for a conference of the Joint Center for Policy Research, "the Earned Income Tax Credit: Early Evidence," Evanston, Ill., October 1999, p. p. 1.

found that **one-third of EITC recipients were not eligible for the credit**, primarily because they did not have eligible children."[42]

b) "The IRS and Treasury also estimated that if certain new enforcement procedures first in effect during the 1997 filing season had been in effect in 1995, the error rate would have been reduced further, to about **20.7 percent**."[43]

3) Food Stamp program

a) "…the Food Stamp program reduced its national error rate from 8.9 percent in 2000 to 8.7 percent in 2001.[44]

4) IRS

a) "Last year, IRS enforcement efforts collected $30 billion in revenue beyond taxes paid voluntarily, pushing the collection rate up to 87 percent."[45]

In addition to the estimates of error rates for the AFDC, EITC, and Food Stamp programs, "Medicare reported a reduction in its erroneous payment rate from 6.8 percent in 2000 to 6.3 percent in 2001."[46]

5. MEASURES

In conducting the Best Practices study three approaches for measuring the effectiveness of the various suggested methods have been identified. The three methods are:

1) Quantitative measures reported by a given school.
2) Percentage of schools utilizing a given measure.
3) Impact of a given practice on reducing the error rate at a given school

5.1 Quantitative Measures

According to Penn State University, their logistic regression model reduced overawards in the 600 person sample population that they selected for comparison by 87.8% while the CPS edits only reduced it by 35.4%. The same logistic regression model reduced underawards by 42.2% versus 32.6% for the CPS edits. In addition, Penn State University stated that they

[42] Liebman, Jeffrey B., "Who Are the Ineligible EITC Recipients? Prepared for a conference of the Joint Center for Policy Research, "the Earned Income Tax Credit: Early Evidence," Evanston, Ill., October 1999, p. 1.
[43] McCubbin, Janet. EITC Noncompliance: The Misreporting of Children and the Size of the EITC. U.S. Department of the Treasury, Office of Tax Analysis . Prepared for a conference of the Joint Center for Poverty Research, "Earned Income Tax Credit: Early Evidence." Evanston, Ill., October 1999.
[44] Office of Management and Budget, Progress Implementing the President's Management Agenda, July 26, 2002, p5.
[45] Reinventing Service at the IRS: Report of the Customer Service Task Force, January 1998, published by the IRS, page 67.
[46] Office of Management and Budget, Progress Implementing the President's Management Agenda, July 26, 2002, p5.

attained these results even though they only verified 10% to 15% of the applicant pool versus the 30% verification requirement for the CPS edits.

According to Kent State the following selection criteria led to EFC changes 65% or more of the time for the verified populations. The number of verified persons in each case is greater than 100 persons.

1) Reported parents' taxes paid is > 35% of AGI and AGI is not equal to 0 or is blank (parents of dependent students) – 81.2% EFC change
2) Reported taxes paid is > 35% of AGI and AGI is not equal to 0 or is blank (dependent students) – 86.6% EFC change
3) Student Worksheet C is > 50% of student total income (dependent students) – 75.2% EFC change
4) Parents AGI is < 25% of total father income earned and mother income earned (dependent student) – 67.3% EFC change.

5.2 Impact of a Practice on a School's Error Rate

The following schools reported numbers for the impact that specific practices had on their error rates:

1) According to the University of San Francisco, 70% of their errors are due to errors in the following four factors:

    a) Income taxes paid
    b) Number in household
    c) Number in College
    d) Untaxed income.

2) According to Macomb Community College, 45% of filers reported the amount of taxes reported not of taxes paid.

5.3 Percentage of Schools Using a Given Measure

For practices used by four or more schools, the following is the percentage of schools that reported using a given practice to reduce their error rates:

1) 60% of the schools that were interviewed engaged in the following practices:

    a) Request verification of the number in a household.
    b) Request W-2's to look at untaxed income.
    c) Request verification of the number of dependents enrolled in school.

2) 40% of the schools had their own verification/modeling system.

6. DATABASES THAT MIGHT BE USED TO AUGMENT VERIFICATION EFFORTS

As noted by Jeff Liebman, a professor at the John F. Kennedy School of Government at Harvard University, people tend to be more honest if they know that an independent third party reports on their income. In addition, when Boston University required students to provide independent verification of other family members attending college a significant number of them were not able to verify the attendance. Given the above observations, I engaged in research on potential sources of information for verifying key data from an applicant's FAFSA form. The databases contained in the following table contain information about various data elements that FSA may want to investigate further as possible sources of verification information.

	Description	Source	Data Elements	Reference:
Federal Databases				
	Prisoner Enrollment Rolls	SSA	Income equivalent received	Rona Rustigian-SSA
	Federal Case Registry of Child Support Orders	HHS	Child name & dollar support	Janet Holtzblatt-IRS
	Fugitive Felons	SSA	Child support	Rona Rustigian-SSA
	KidLink		Dependents born after 1999	Janet Holtzblatt-IRS
	SSA Recipients	SSA	Income	Rona Rustigian-SSA
	Death Master file	SSA	Income	Rona Rustigian-SSA
	Unemployment Compensation		Income Employment status	Wendell Primus-Ctr Bdgt
	National Directory of New Hires a component of the Federal Parent Locator Service (FPLS).	HHS	Employment status Income	Jeremy Cox-GAO Wendell Primus-Center on Budget & Policy Priorities
Private Databases				
	Enrollment	Clearinghouse	Sibling in sch'l	

	Description	Source	Data Elements	Reference:
Source Documents				
	Divorce papers	State gov'ts	Child support Alimony Bills paid	Janet Sain-ECPI
	Tax returns & all schedules	Individuals	Income	Pat Hurley-Glendale Marc Brenner-OH Tech
	W-2 forms	Individuals	Untaxed income	Leslie Bridson-Boston Univ
	1040	Individuals	Taxes paid	Leslie Bridson-Boston Univ
	1099	Individuals	Self employment income	Marc Brenner-OH Tech

APPENDIX 1
FSA PERFORMANCE GOAL

The 2001 GAO Performance and Accountability Series and High Risk Update reported that, as of June 2000, neither the Department's 1999 Performance Report nor the Department's 2001 Strategic Plan included goals and objectives aimed at reducing the risk of fraud, waste, or error in the student aid programs. As a result of the GAO report, the Department and SFA developed the following goals in their Strategic/Performance Plans.

- Education Objective 6.4 – Modernize the Student Financial Aid assistance programs and reduce their high-risk status. Measure 3 – Erroneous financial aid grant payment awards based on IRS match and improved verification: Set base line using IRS actual data (FY 2002), Baseline minus 10% (FY 2003), Baseline minus 20 % (FY 2004).

- FSA Performance Plan 9 – Develop a new verification process that will drive an over/underaward reduction through targeted improved verification.

In addition, the President's Management Agenda for FY 2002 reported that:

> "GAO (also) has cited EDs inability to verify students' income effectively as a weakness in the student aid programs that leaves them vulnerable to fraud and error. (…) A test match between ED and Treasury compared the income students reported on their aid applications to IRS income data. Preliminary results of that test estimate that the Pell Grant program made overawards of $400 million in 2000-2001 (and underawards of $100 million) because students or their parents misreported their income in their student aid applications."

Appendix 2
INTERVIEWEES

Organization		Person
Government Agencies		
Dept of Ed-Budget Services		Mike Carpenter
Dept of Ed-Office of Postsecondary Ed		David Bergeron
FDA – Food Stamp Program		Ted Macaluso
HUD – Qlty Cntrl for Rental Assist …		Joseph Riley
Illinois State SURS- Illinois Dept. of Public Aid (IDPA)		Wynona Johnson
IRS		Ed Emblom
IRS		Mike Albert
IRS		Janet Holtzblatt
Medicaid-(Medicaid Fraud Control Unit)-Texas		Scott Stephenson
Medicaid-(Medicaid Fraud Control Unit)-Texas		Charles Hafer
N.J. Guaranty Agency		Sherry Fox
OMB		David Rowe
OMB		Daniel I. Werfel
Pennsylvania Higher Education Assistance Agency (PHEAA)		Mary Beth Kelly
Planning & Evaluation Service		Daniel Goldenberg
Social Security Administration		Rona Rustigian
Texas State SURS		Aurora F. Lebrun
University of California system		Nancy Coolidge
Veterans Administration		John Hyle
Associations		
Assoc -- AASCU		Pat Smith
Assoc – CBA		John Dean
Assoc – NASFAA		Dallas Martin
Assoc – NACUBO		Jay Morley
Assoc - NHCAA; National Health Care Anti-Fraud Association		William J. Mahon
Workgroup - National Medicaid and Fraud and Abuse Initiative's Information Systems		Pam Antlitz
Financial Institutions		
Fin Inst – First Union		Tom Levandowski
Fin Inst – Formerly with USA Bank		Albert Hyacinth
Schools		
QA Sch'l – George Mason University		Erik Melis
QA Sch'l – Boston University		Leslie Bridson
QA Sch'l – Kent State University		Craig Cornell

QA Sch'l – Penn State University		Shari Howell
Non-QA – Macomb Community Coll		Judy Florian
Non-QA – University of San Francisco		Susan Murphy
Non-QA – Glendale Community Coll		Pat Hurley
Non-QA – ECPI College of Technology		Janet Sain
Non-QA – Ohio Technical College		Marc Brenner
Non-QA – Minnesota State University – Moorhead		Carolyn Zehren, Director
Academic Researchers		
Rsrchr - Brookings Institute		Al Hyde
Rsrchr		Frank Kesterman
Non-Prft - Center on Budget & Policy Priorities		Wendell Primus
Rsrchr - Harvard, J.F. Kennedy Sch'l		Jeff Liebman
Rsrchr - John Hopkins, Int'l Sch Bus		Tom Stanton
Rsrchr – Skidmore College		Sandy Baum
Rsrchr -- UCLA		Tom Kane
Rsrchr -- Westat		Alex Ratnofsky
Private Organizations		
NCS/Credit Central, Inc.		Steve Starkweather

APPENDIX 3
SUMMARY OF THE PELL VERIFICATION PROCESS AS OF MARCH 31, 2002

The Pell Grant program, like most dynamic programs, changes over time as FSA works to enhance the performance and effectiveness of the Program. In an effort to document the status of the Pell verification process at the start of the work on best practices, this section of the Report has been created.

As an initial step in this process this document provides a high level summary of the current verification processes used to reduce errors in the awards made under the Pell Grant Program. This high level summary is intended to serve as a baseline so that the nature and impact of future changes in the verification process can be easily identified.

3.1. OVERALL OBJECTIVE OF VERIFICATION

The Federal Student Aid (FSA) office of the Department of Education currently requires schools to verify a percentage of their applicants for Pell grants. The goal of this verification effort is to ensure program integrity in the Pell Grant Program.

3.2. VERIFICATION PROCEDURES: TWO COMPONENTS

In support of this Objective, FSA operates a two-pronged approach for ensuring program integrity. This approach involves conducting verifications of student applications for Pell assistance identified through the Central Processing System (CPS) and the Quality Assurance (QA) Schools program.

The CPS is programmed to flag students for verification[47] and schools must verify the applicants selected up to a maximum of 30% of their applicant pool. However, some schools, especially those providing substantial amounts of institutional aid, verify more than 30% of their applicants.

Under the QA program, schools do not have to adhere to the 30% verification requirement of the Pell Program. Instead, schools are free to develop their own criteria and percentage of applications to verify. Some schools under the QA program verify less than 30% of their applicants while other schools verify substantially more than 30%. All of the schools under the QA program utilize the QA software tool (QA tool) to analyze their applicant population.

3.2.1. Central Processing System

Within the larger Pell program, the process for identifying which applicants to verify begins with the creation of a statistical analysis model by MACRO International (MACRO). MACRO is a firm under the NCS-Pearson contract that works with the Students Channel of FSA. In deciding which groups to select for verification, MACRO uses an Automatic

[47] Student Financial Aid Handbook: Application and Verification Guide, 2001-2002. AVG-40 and AVG-41.

Interaction Detection (AID)[48] statistical tool. CPS uses the output of the MACRO model when identifying and selecting the groups for verification. A general description of the MACRO model is set forth in the following section.

3.2.1.1. MACRO Verification Model

MACRO uses a regression tree approach of statistical modeling that has as its goal the creation of a tree of mutually exclusive and collectively exhaustive groups. These groups are derived on the basis of characteristics that would likely result in major award differences (such as dependency status) and on a statistical basis to maximize the difference between the tendency of applicants to correct their application outside of verification versus being forced to correct their application through verification.

MACRO's statistical data analysis uses data from the previous award year and continues through a series of steps to the creation of two distinct work files, development of cluster categorizations, implementation of data partitions from cluster segmentation, analysis of the partitions, and a final evaluation of the results produced by the model.

For AY02/03, the AID model was applied separately to dependent and independent students. Following this first "partitioning" of the data, however, the same processes are followed for both the dependent and independent categories even though the process may identify different group characteristics as important for dependent and independent students. Partitions are identified by means of a series of categorized clusters that are created through calculated indices. These indices, as previously noted, are built upon the maximum difference between the tendency of applicants to correct their application outside of verification versus being forced to correct their application through verification. These calculated indices are created by taking the largest average difference between self-correcting and non-self correcting applicants and dividing these averages by the root mean square of standard deviation. This process leads to a split that creates two clusters. Each cluster is analyzed independently and the process is repeated until no further partitioning is possible.

Evaluation of the model begins with the partition with the largest difference in index between the selected group and an immune group of individuals who will not be selected for verification. A selected and immune group of clusters is selected at each stage. The model is referred to as "adequate" when there is no terminal cluster that is greater than 15% of total applicants. Each terminal cluster is referred to as the "transaction selection criteria". There must be at least 400 applicants in each of the selected and immune groups.

Once the transaction selection criteria are identified, two groups of applicants are selected for verification. The first group consists of 2.5% of the applicants to be verified and 2.5 % of the applicants to be immune from verification in each of the transaction selection criteria. The second group consists of **all** of the applicants, except the 2.5% who are in the immune group, in each of the transaction selection criteria selected for verification that have the greatest difference between self-correction and forced correction through verification. The

[48] Section 2 – Verification System Analysis Process p. 2-2.

total number of transaction selection criteria chosen for verification may be as small as three or four. The total percentage of applicants selected from these two groups is the 30% of applicants mentioned earlier.

For FASFA forms selected by CPS for verification, there are five data elements, reported by the students, that the schools must verify. The five data elements are:[49]

1. Household size
2. Number enrolled in college
3. Adjusted Gross Income (AGI)
4. U.S. income tax paid
5. Certain untaxed income and benefits.

For an application selected for verification, a school must verify up to six specific types of untaxed income and benefits. The six types of untaxed income and benefits are:[50]

1. Social Security benefits
2. Child support
3. IRA/Keogh deductions
4. Foreign income exclusions
5. Earned income credit
6. Interest on tax-free bonds.

3.2.2. Quality Assurance Program

The Quality Assurance (QA) program, initiated in 1985 by the IQC Pilot Project, Institutional Quality Control Project[51], developed its program requirements to help schools improve aid administration and to help schools improve service to their students.

Schools participating in the Quality Assurance program can develop verification procedures that are different from those specified in the SFA regulations[52] under the CPS program. Under the QA program, schools can obtain relief from the CPS verification activities.[53] They are able to develop their own verification systems and procedures according to their individual student populations. Within this program schools are the leads for specialized pilot practices and share results. Schools under the QA program use the QA tool to analyze their applicant populations.

The Quality Assurance tool, commonly referred to as the QA tool, has recently been modified as a central component of the QA program. The QA tool is available for any school to use, whether it is a QA school or non-QA school, starting for award year 2002-

[49] Ibid., p. AVG-44.
[50] Ibid., p. AVG-51.
[51] Quality in Student Financial Aid Programs, A New Approach, p. 150.
[52] Ibid., p. AVG-42.
[53] New Tools for All Schools; Technology Support for Institutional Verification from the Quality Assurance Program (FSA), p. 1-4.

2003.[54] This recently upgraded tool can create reports that identify confusing FAFSA parts, can be incorporated to analyze
FAFSA application information on ISIR and can determine impact changes on EFC and Pell eligible applicants.[55] Reports produced from the QA tool can explore how well verification is working.[56]

3.3. CONCLUSION

As noted above, the two components of the Federal Student Aid's verification process for ensuring program integrity in the Pell grant program are CPS and the QA program. CPS selects applicants for verification based on the results of the MACRO verification process, AID. The QA program uses a variety of methods for selecting applicants for verification and the QA tool to analyze a school's applicant pool.

[54] Ibid., p. AVG-51.
[55] Ibid., p. AVG-51.
[56] Idem.

APPENDIX 4
SUMMARY OF INTERVIEWS

As a result of the interviews conducted with schools, government agencies and researchers, the following determinations have been made about applicants for awards under income based programs in general and Pell applicants in particular. The information obtained from the interviews has been divided into general observations about applicants under income-based programs and Pell applicants. The individuals and organizations listed after each determination are the people – and their associated organization – who identified a given attribute.

4.2. Pell Applicants

1) Estimated tax filers have a high error rate.
   a) George Mason University – Erik Melis
   b) Minnesota State University – Carolyn Zehren
   c) Penn State University – Shari Howell

2) Independent applicants have a lower error rate than dependent applicants.
   a) Kent State University – Craig Cornell

3) Marital status changes tend to cause people to misreport their marital status:

   a) Divorced and separated filers sometimes do not know what to report.
      i) ECPI College of Technology – Janet Sain
      ii) George Mason University – Erik Melis
      iii) Macomb Community College – Judy Florian

   b) Recently married filers sometimes do not know what to report.
      i) ECPI College of Technology – Janet Sain

4) Reporting of taxes paid is a source of error for a number of applicants:

   a) Taxes paid versus taxes withheld are sometimes misreported.
      i) Boston University – Leslie Bridson
      ii) Kent State University – Craig Cornell
      iii) Macomb Community College – Judy Florian
      iv) Minnesota State – Carolyn Zehren
      v) Penn State University – Shari Howell
      vi) University of San Francisco – Susan Murphy

   b) Taxes paid are greater than 50% of AGI is a trigger for school to verify a FAFSA.
      i) George Mason University – Erik Melis

   c) Parents sometimes report untaxed income incorrectly.
      i) Boston University – Leslie Bridson

ii) George Mason University – Erik Melis
iii) Kent State University – Craig Cornell
iv) Macomb Community College – Judy Florian
v) Minnesota State – Carolyn Zehren
vi) Ohio Technical College – Marc Brenner
vii) Penn State University – Shari Howell
viii) University of San Francisco – Susan Murphy

5) Filers with incomes below a certain level should be reviewed for filing errors:

a) Zero income filers (whether $0 AGI or $0 income) should be reviewed.
i) ECPI College of Technology – Janet Sain
ii) Glendale Community College – Pat Hurley
iii) Kent State University – Craig Cornell
iv) University of San Francisco- Susan Murphy (barter system example!)

b) Family income <= a given dollar amount per person (varies between $1,250 and $1,500) are selected for verification by schools.
i) Glendale Community College – Pat Hurley
ii) Macomb Community College – Judy Florian

6) Third parties completing FAFSAs are more prone to error than self filers:

a) Some families using financial advisors inflate the number of children in school.
i) Minnesota State – Carolyn Zehren (rumor)

b) Lawyer advised at least one woman receiving social security benefits not to include benefits on application.
i) Minnesota State – Carolyn Zehren

c) Accountants filling out forms tend to use IRS and not FAFSA rules.
i) Minnesota State – Carolyn Zehren

7) Certain instructions seem to cause confusion among the following groups of applicants:

a) Immigrant groups do not always understand instructions.
i) Glendale Community College – Pat Hurley

b) Drug conviction question sometimes causes confusion.
i) Ohio Technical College – Marc Brenner

c) Students in schools bordering other states tend to confuse their residency status.
i) Minnesota State – Carolyn Zehren

d) Schedule A for tax return is sometimes confused with Schedule A for the FAFSA.
i) George Mason University – Erik Melis

e) 401(k)s could be subject to error rates or reported incorrectly:
    i) George Mason University- Erik Melis

8) Dependency status other than an age-based attribute (household size) can sometimes cause errors.
    a) George Mason University – Erik Melis
    b) Glendale Community College – Pat Hurley (family size not = exemptions)
    c) Kent State University – Craig Cornell
    d) Macomb Community College – Judy Florian
    e) Ohio Technical College – Marc Brenner
    f) University of San Francisco – Susan Murphy

9) The number of reported dependents in college is sometimes a source of error.
    a) Boston University – Leslie Bridson
    b) ECPI College of Technology – Janet Sain (self verification)
    c) Minnesota State University – Carolyn Zehren (self verification)
    d) Ohio Technical College – Marc Brenner
    e) Penn State University – Shari Howell (self verification)
    f) University of San Francisco – Susan Murphy