

**April 7, 2014**

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What Works Clearinghouse Quality Review Team  
National Center for Education Evaluation and Regional Assistance  
Institute of Education Sciences, U.S. Department of Education  
555 New Jersey Avenue NW  
Washington, DC 20208

Dear What Works Clearinghouse Quality Review Team,

We are writing to request that the WWC reconsider a rating of "meets evidence standards without qualification" that it has given to Mathematica's evaluation of the Upward Bound program. For reasons described below, we believe that there are major flaws in the evaluation design and analysis that the evaluator failed to acknowledge, resulting in incorrect impact estimates for the program's major outcomes. An independent analysis of the same data that attempts to address these flaws shows positive program impacts on college enrollment, application for financial aid and BA attainment. Since this evaluation has had a particularly large role in shaping policy debates and proposals, we believe that it is appropriate for WWC to reexamine its earlier rating in light of the evidence we present.

We also have concerns at the apparent conflict of interest given that, Mathematica was the contractor for the What Works Clearinghouse and that the ratings are included in the September 2009, *Practice Guide Helping Students Navigate the Path to College: What High Schools Can Do*, for which Mathematica staff are co-authors.

This request for rescinding the rating pertains to the following reports.

- Myers, D., Olsen, R., Seftor, N., Young, J., & Tuttle, C. (2004). *The impacts of regular **Upward Bound**: Results from the third follow-up data collection*. Princeton, NJ: Mathematica Policy Research.  
Rating: Meets evidence standards without reservations  
Reviewed using: [WWC Procedures and Standards Handbook](#)  
Reviewed in Practice Guide: [Helping Students Navigate the Path to College: What High Schools Can Do](#)
- Seftor, N. S., Mamun, A., & Schirm, A. (2009). *The impacts of regular **Upward Bound** on Qpostsecondary outcomes 7–9 years after scheduled high school graduation*. Princeton, NJ: Mathematica Policy Research.  
Rating: Meets evidence standards without reservations  
Reviewed using: [WWC Procedures and Standards Handbook](#)  
Reviewed in Practice Guide: [Helping Students Navigate the Path to College: What High Schools Can Do](#)

We are Dr. David Goodwin and Dr. Margaret Cahalan<sup>1</sup>. We served respectively as the first and last Contracting Officers Technical Representative (COTR) while serving within the Policy and Program Studies Services (PPSS) within the US Department of Education (ED). PPSS was the unit within ED responsible for technical oversight of the National Evaluation of Upward Bound.

During the final contract, after concerns about the study were raised, PPSS staff conducted a special Quality Assurance (QA) review and re-analysis of the data (PPSS QA review). This review found a number of unaddressed statistical and evaluation research accuracy and proprietary standards violations in the Mathematica Upward Bound reports that were serious enough to affect the validity and accuracy of the basic Mathematica conclusions from the study. The concerns raised by the ED PPSS monitoring staff concerning the Mathematica conclusions were made only after a long and careful review of the study methods and a complete set of data files. Files reviewed included the randomization file, the baseline survey and 5 follow-up surveys, 10 years of the Federal aid application and award files and 10 years of National Student

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<sup>1</sup> Dr. Margaret Cahalan, is currently the Vice President for Research and Director of the Pell Institute for the Study of Opportunity in Higher Education of the Council for Opportunity in Education (COE). Dr. David Goodwin, who recently retired from the Gates Foundation is an Independent Consultant. He is the former PAS Division Director of the Policy and Program Studies Services (PPSS) of the US Department of Education (ED). Dr. Goodwin, served as the first Technical Monitor of the UB Evaluation, in the 1990s and at the time of the final contract served as Dr. Cahalan's supervisor. Dr. Cahalan, as a contractor served as the Project Director for several TRIO evaluations and performance reporting contracts, including the National Evaluation of Student Support Services and the Design Phase of the National Evaluation of Talent Search. After joining ED in late 2004, Dr. Cahalan supervised the COTR staff responsible for monitoring the final contract for the Mathematica UB evaluation and herself served as the Technical Monitor in the final months of the UB evaluation. In interest of full disclosure, Dr. Cahalan would like to note that she served as the Associate Director of the Survey and Information Services Division of the DC Mathematica Office from 1996 to 2002. During this time she supervised those persons in the Mathematica Survey Division responsible for the student follow-up surveys and transcript data collections and coding for the third and beginning of the fourth follow-up for the Mathematica Upward Bound evaluation. Her responsibilities did not include study design, analysis and reporting which were conducted under the Mathematica Research Division. During this time she was unaware of the major sampling and non-sampling error issues discussed in this document, however she did articulate concerns about issues of the 26 percent waiting list drop-outs, alternative service receipt by the control group, and survey non-response issues.

Clearinghouse (NSC) files. ED-PPSS also consulted with external experts who replicated the data re-analyses results. Although many of these statistical and evaluation research errors were identified prior to the final report's publication, departing political appointees decided to publish the report in early January of 2009.

In this letter we provide a summary of why we are registering this request for rescind of the rating of the Mathematica reports. This letter is accompanied by 4 attachments that provide key documentation of the material relevant to this request.

- **Attachment A:** Excerpt of UB Study Conclusions from the Executive Summary of the 2009 Mathematica Final Report (Seftor et.al 2009)
- **Attachment B:** Documentation of Key Standards Violations in the Mathematica Reports from the National Evaluation of Upward Bound (Prepared for this submission)
- **Attachment C:** Additional Documentation with Examples of Output from Logistic and Instrumental Variables Regression Models (taken from appendices B and D of Cahalan, 2009)
- **Attachment D:** *Flawed Contractor Reports from the National Evaluation of Upward Bound Masked Significant and Substantial Positive Impacts* (forthcoming, Cahalan and Goodwin, 2014)

As noted, Attachment A, to this letter is taken from the Executive Summary of the final (Seftor et.al. 2009) Fifth Follow-up report in which Mathematica lists major findings. Consistent with their earlier report published in 2004 (Myers et.al. 2004), Mathematica concluded and publically reported to Congress, OMB, and UB Stakeholders that Upward Bound did not have “detectable impacts” on the key legislative goals of the program. These impacts related to postsecondary entrance, application and award of financial aid, and attainment of postsecondary degrees or credentials. The only overall impact reported by Mathematica in their conclusions was a large impact on the award of *postsecondary certificates*.

When PPSS internal monitoring staff did a Quality Assurance (QA) review of the study, they found that the reports were based on a flawed sample design and flawed random assignment implementation. These issues were serious enough that all of the Mathematica impact estimates contained both representational error and a substantial systematic bias in favor of the control group. The analyses procedures followed by Mathematica also contributed to the erroneous conclusions because the contractor failed to standardize outcome measures for a sample that spanned 5 years of expected high school graduation. Mathematica also made improper use of the National Student Clearinghouse (NSC) data for survey non-respondents at a time when coverage was too low for enrollment and had not yet begun for degrees. The combined biases contained in the Mathematica impact estimates were serious enough to have resulted in a Type II statistical error of failure to detect positive impacts when they are present and the publication of erroneous evaluation conclusions concerning the Upward Bound program in both 2004 and 2009. The PPSS re-analysis work also found that when the identified error issues were addressed using standards-based statistical analyses that statistically significant and substantial positive impacts were observed for the Upward Bound program on key legislative goals of the program.

## Standards Used in ED-PPSS QA Review and in Mitigation Re-Analyses

Listed below are the major education research standards and guidelines used and Exhibit 1 lists the specific standards and guidelines we believe are applicable to our concerns.

- *U.S. Department of Education Information Quality Guidelines (ED Guidelines)*
- *Joint Committee on Standards for Educational Evaluation (JCSEE)*. <http://www.jcsee.org/>
- *National Center for Education Statistics (NCES) Statistical Standards---*  
<http://nces.ed.gov/statprog/>
- *What Works Clearinghouse Standards (WWC) ---*  
<http://ies.ed.gov/ncee/wwc/references/iddocviewer/doc.aspx?docid=19&tocid=1/>
- *American Educational Research Association (AERA) Standards for Reporting on Empirical Social Science Research* in AERA Publications [http://www.sagepub.com/upm-data/13127\\_Standards\\_from\\_AERA.pdf](http://www.sagepub.com/upm-data/13127_Standards_from_AERA.pdf)

Exhibit 2 identifies, and the pages to follow summarize, 10 interrelated violations of these standards in the Mathematica UB reports. These are the major reasons why, we, as persons who have carefully examined the data from this study, believe the above referenced reports should not be given the WWC rating of “meets evidence standards without reservations.”

## Exhibit 1

### Key Information Quality Guidelines and Standards that are Applicable to the Concerns with Regard to the *Mathematica Upward Bound Reports*

#### Department of Education Quality Information Guidelines

Research and Evaluation information products should, at a minimum: ...

- Pose the research or evaluation question in a balanced and unbiased manner;
- Provide an unbiased test of the question; ...
- Present conclusions that are strongly supported by the data; ....
- Confirm and document the reliability of the data, and acknowledge any shortcomings or explicit errors in any data that is included;
- The source of data should be reliable. The sample should be drawn from a complete list of items to be tested or evaluated, and the appropriate respondents should be identified, *correctly sampled*, and queried
- Appropriate steps should be taken to *ensure that the respondents are a representative sample*;

#### What Works Clearinghouse Handbook of Procedures and Standards

A study may fail to meet WWC evidence standards if .....

- It does not include a valid or reliable outcome measure, or does not provide adequate information to determine whether it uses an outcome that is valid or reliable. ....
- The intervention and comparison groups are not shown to be equivalent at baseline
- The overall attrition and or differential attrition rate exceeds WWC standards for an area.
- The measures of effect cannot be attributed solely to the intervention

.....

#### NCES Statistical Standards Concerning Non-Response and Coverage

- **STANDARD 2-2-4:** A nonresponse bias analysis is *required* at any stage of a data collection with a unit response rate less than 85 percent. The extent of the analysis must reflect the magnitude of the nonresponse (see Standard 4-4).
- **STANDARD 3-1-2:** NCES data collections that are used as sampling frames for other NCES surveys must strive for coverage rates in excess of 95 percent overall and for each major stratum. **STANDARD 3-1-3:** If there is not evidence of a coverage rate of at least 85 percent of the target population, then frame enhancements such as frame supplementation or dual frame estimation must be incorporated into the survey study design.

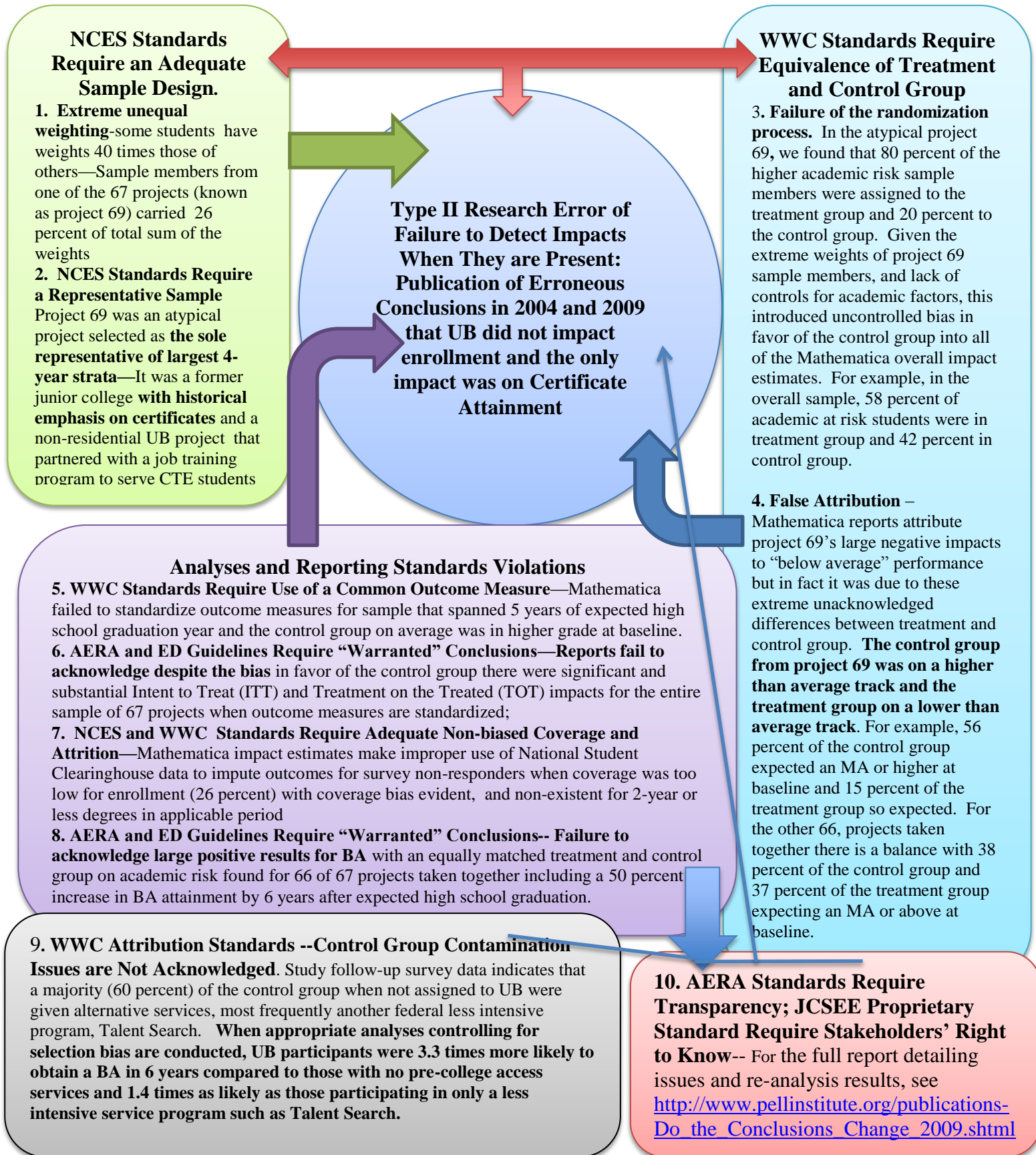
**Joint Committee on Standards for Education Evaluation Standards:** The Joint Committee Standards address ethics of research under the heading of Propriety. Standard P6 noted below discusses the full disclosure of findings

- **P6 Disclosure of Findings** The formal parties to an evaluation should ensure that the full set of evaluation findings along with pertinent limitations are made accessible to the persons affected by the evaluation and any others with expressed legal rights to receive the results

#### American Educational Research Association (AERA) Standards for Reporting on Empirical Social Science Research

- Two overarching principles underlie the development of these reporting standards: the “sufficiency of the warrants” and the “transparency” of the report.

**Exhibit 2. NCES, WWC, JCSEE, AERA Standards and ED Guidelines, Violations in the Mathematica Upward Bound (UB) Evaluation Reports**



## Standards Violations in the Mathematica UB Reports

The 10 violations identified in Exhibit 2 are discussed briefly in this letter and as noted documented in more detail in Attachments B to D included as separate attached files to this letter.

1. **ED Information Guidelines and NCES Standards Require an Adequate Sample Design —Serious Unequal Weighing.** Mathematica used a seriously flawed sample design to make inferences concerning the national average impact of Upward Bound with only one single project (known as project 69) selected to represent the largest study defined grantee 4-year and above public stratum. This design resulted in extreme unequal weighting in the final student level weighting stage. Some of the sample members from project 69 had weights that were 40 times those of the lowest weighted sample members and together project 69 sample members carried 26 percent of the sum of the weights (see Attachment B, Exhibit B-3).
2. **NCES Standards and ED Guidelines Require a Representative Sample for Estimation of Averages** In addition to the flawed design, the randomly selected project 69, was found to be a “bad draw” and “atypical” for its 4-year stratum. It did not possess the characteristics to be an accurate sole representative of the largest public 4-year BA and above granting stratum. Project 69 was a former junior college that historically awarded a large number of certificates. Its non-residential UB program was atypical for a 4-year UB grantee and partnered with a job training program. Adequate checks were not done to address the eligibility of project 69 to be the sole representative of the largest public BA and above set of UB grantees without introducing representational bias into the impact estimates. This fact combined with the extreme lack of balance in treatment and control group from project 69 (discussed below) led to a biased conclusion that the only positive impact of Upward Bound was on CTE certificates.
3. **WWC Standards Require A Balance Between the Treatment and Control Group At Baseline on Factors Likely to Impact Outcomes. (Non-Equivalence of Treatment and Control Group)** Due to a probable failure in the implementation of correct random assignment procedures in the project 69 site, there were also extreme differences between the heavily weighted treatment and control group in project 69 on academic factors, grade at entry into Upward Bound, and educational expectations. For example, in the highly weighted project 69, 80 percent of the students classified as higher academic risk were in the treatment group and 20 percent in the control group. Mathematica thus had a serious uncontrolled bias in favor of the control group on academic risk factors in all of their published overall impact estimates upon which they based their conclusions. For example, 58 percent of the academically at risk students were in the treatment group and 42 percent were in the control group. This lack of balance is not acknowledged in the Mathematica reports. (See Attachment B, Exhibits B-4 to B-7).

4. **WWC Standards Require that the Observed Impact be Attributable to the Intervention.** The Mathematica reports state that project 69 had “below average impacts” (negative impacts) and imply that this was because of “below average” project performance in this site. However, PPSS found in the QA review that in fact the so called “below average impacts” were due to the above noted severe lack of balance between the treatment and control group in project 69 and the failure of the random assignment implementation in this case to produce a balanced treatment and control group. As noted above, in the project 69 site there was observed an extreme lack of “balance at baseline” between the treatment and control group. The control group on average resembled applicants for an Upward Bound Math Science (UBMS) program being initiated at a nearby site, and not the typical applicants to the project 69 UB program with its CTE focus and partnership with a job training program. The control group was on average in a higher grade at baseline than the treatment group, and 56 percent reported expecting to obtain an MA or higher at baseline. Among the treatment group 15 percent expected an MA or higher at baseline and on average the treatment group resembled the less academically proficient students interested in CTE certificates and regularly served by the Project 69 UB grantee. Among the 66 other projects taken together 38 percent of the control group and 37 percent of the treatment group reported expecting an MA or higher at baseline. (See Attachment B, Exhibits B-4 to B-7)
5. **WWC Standards Require Use of a Common Outcome Measure for Impact Estimation. Lack of Precision and Standardized Common Outcome Measures.** In violation of the standard that common outcomes measures must be used, Mathematica used postsecondary outcome measures that were not standardized to expected high school graduation year. The sample spanned 5 years of expected high school graduation year cohorts. Hence the sample members had differences of up to 5 years in opportunity to enroll and complete postsecondary. This lack of precision also impacted the ability of the other variables used as controls in the regression models to function properly. (See Attachment B, Exhibits B-8 to B-10)
6. **AERA and ED Guidelines Require “Warranted” Conclusions.** The Mathematica reports fails to acknowledge and report statistically significant and substantial positive impacts estimates when standardization of outcome measures was implemented both with and without the bias introducing project 69 on postsecondary entrance, and application and award of financial aid. These documented results were tabulated by PPSS technical monitors and conveyed to Mathematica in Spring of 2008, nine months before the Mathematica final report was published in early 2009. (See Attachment B, Exhibits B-8 to B-10)
7. **NCES Coverage Standards Require that the Data Sources Used Have Adequate and Non-Biased Coverage.** Mathematica made improper use of the National Student Clearinghouse data files for imputing enrollment and degree attainment for non-responders to the fifth follow up survey. In the most applicable period, NSC enrollment



coverage was estimated to be 26 percent and NSC had not yet even begun to collect degree or other credential information. Use of NSC data can only cautiously be used for BA receipt which would have occurred later after they had begun to collect degree information. There is also evidence of biased coverage in the NSC data due to the fact that Project 69 did not begin submitting enrollment data until after the most applicable period. **The Mathematica reports fail to acknowledge significant large positive impacts on award of any postsecondary credential based on survey data adjusted for non-response.** The improper NSC use led Mathematica to ignore their own positive impact estimates based on survey data adjusted for non-response that showed large significant impacts for award of any postsecondary credential by the end of the study period including a significant Intent To Treat (ITT) estimate of 13 percentage differences and a Treatment on the Treated (TOT) impact of 16 percentage difference (Seftor et.al. 2009, appendix tables C-7 and C14). Ignoring these positive and substantively meaningful impacts, in their highly publicized conclusions about Upward Bound, Mathematica reported finding no significant differences for award of any postsecondary degree—a key finding from the study. (See Attachment B, Exhibit B-11).

8. **AERA and ED Guidelines Require “Warranted” Conclusions-- Failure to acknowledge large positive results for BA for evenly matched treatment and control group.** Mathematica reported no impact on BA attainment, a major goal of the Upward Bound program. However, Mathematica failed to report the significant and substantial positive impacts (including a 50 percent TOT increase in BA attainment) that are observed for 66 of the 67 sampled projects. These 66 projects were found when taken together to have an equally balanced treatment and control group on academic risk factors and did not suffer from the serious representational issues of project 69 that were introduced into the overall sample given its extreme weights. (See Attachment B, Exhibit B-12)
9. **WWC Attribution Standards Specify that the Impact must be Attributable to the Intervention. --Control Group Contamination Issues are Not Acknowledged.** Mathematica fails to acknowledge the significance of the fact that a majority (60 percent) of the control group reported participation in an alternative supplemental pre-college service by the end of high school. Most frequently the alternative service into which those not selected for UB were placed was another less intensive pre-college federal TRIO program, Talent Search. Mathematica also fails to acknowledge that 26 percent of those randomly assigned to the treatment group were reported to have dropped off the so called “waiting list” due to student mobility by the time of random assignment to fill project openings. These cases were kept in the ITT treatment group in analyses although most did not enter UB nor have a realistic opportunity to do so.

To address these issues, in addition to replicating the Mathematica ITT and TOT impact analyses with outcome measures standardized to expected high school graduation year, the PPSS set of re-analyses also included using two stage instrumental variable regressions modeling selection effects to estimate the impact of participation in various

levels of services. These impact estimates indicated that participants in UB/UBMS<sup>2</sup> demonstrated significant and substantive positive impacts relative to those sample members participating only in an alternative typically less intensive program, such as Talent Search, and also relative to those not participating in any pre-college supplemental high school program. **For example, when appropriate analyses controlling for selection bias are conducted, UB participants were 3.3 times more likely to obtain a BA in 6 years compared to those with no pre-college access services and 1.4 times as likely as those participating in only a less intensive service program such as Talent Search.** None of these impacts are reported in the Mathematica reports. This lack of acknowledgement of control group contamination issues has led researchers such as Haskins and Rouse (2013), and also political budget offices, to mistakenly assume that the Mathematica (albeit erroneous) reports of “no impact” are indications that “all college access programs” are ineffective. In fact the UB evaluation was most definitely not a comparison of supplemental college access services vs. no services, as overall 76 percent of the total sample (treatment and control) reported participation in some form of supplemental pre-college services by the end of high school. (See Attachment B, Exhibits B-13 to B-15).

10. **The Mathematica UB reports lack transparency and violate the “stakeholders right to know” and the “sufficiency of the warrants” basic standards for evaluation research.** The Joint Committee for Standards for Educational Evaluation (JCSEE) Proprietary Standards specify that stakeholders must be fully informed concerning data that affects them and the AERA Standards stress the necessity of the “sufficiency of the warrants” and the “transparency of the report.” The major study sampling and non-sampling error issues and positive impacts found by the PPSS monitoring staff in their QA re-analyses, are nowhere mentioned or acknowledged by the Mathematica reports. In fact the 2009 final report is written in such a manner as to give the impression that these issues are not of major concern.

### **Detailed Reports Documenting Standards Violations and Re-Analysis Results**

Since the above referenced WWC Practice Guide was published in September of 2009, detail on the major issues with the Mathematica reports and results of standards based re-analyses have been presented in several documents publically available at the addresses noted below. In late 2009, Dr. Cahalan received permission from her supervisors to publish her results outside of the Department of Education and COE published her paper in October of 2009. In 2012, COE submitted a formal *Request for Correction* to the Department of Education, the contents of which are also available on the COE website.<sup>3</sup> The 2012 *Request for Correction* was accompanied by a *Statement of Concern* signed by leading researchers

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<sup>2</sup> Upward Bound Math Science (UBMS) was a new initiative at the time of the start of the UB evaluation. Survey results indicated that about 12 to 14 percent of the control sample participated in Upward Bound Math Science a form of Upward Bound.

<sup>3</sup> The only response COE obtained from the 2012 Request for Correction was a letter from the OPEPD Assistant Secretary, indicating that ED would not re-consider the decision made by the departing Bush Administration in January 2009 to publish the report.

who had reviewed the correction request and found it cause for serious concern. The signers to the UB Evaluation *Statement of Concern* included the presidents at the time of the American Education Research Association (AERA), and the American Evaluation Association. We note that among the signers of the Statement of Concern is William Tierney, whom we have cc'd in this letter. Professor Tierney was the Chair Person of the panel for the Practice Guide in which the WWC UB ratings are presented.

- *Addressing Study Error in the Random Assignment National Evaluation of Upward Bound: Do the Conclusions Change?* By Margaret Cahalan a COE report published in 2009 and available at [http://www.pellinstitute.org/publications-Do\\_the\\_Conclusions\\_Change\\_2009.shtml](http://www.pellinstitute.org/publications-Do_the_Conclusions_Change_2009.shtml).
- *The Council for Opportunity in Education (COE) Request for Correction submitted in 2012* is available at [http://www.coenet.us/files/pubs\\_reports-COE\\_Request\\_for\\_Correction\\_011712.pdf](http://www.coenet.us/files/pubs_reports-COE_Request_for_Correction_011712.pdf).
- *Expert Statement of Concern with Regard to the Mathematica National Evaluation of Upward Bound* can be found at [http://www.coenet.us/files/ED-Statement\\_of\\_Concern\\_011712.pdf](http://www.coenet.us/files/ED-Statement_of_Concern_011712.pdf).
- Attachment D (included as an attachment to this letter) - *Flawed Reports from the National Evaluation of Upward Bound Masked Significant and Substantial Positive Impacts: The Technical Monitors' Perspective* by Cahalan and Goodwin, Forthcoming April, 2014

### **Negative Consequences of Erroneous Mathematica Reports and WWC Ratings for Services for Low-Income and First Generation College Students**

These issues are not simply academic disputes with little consequences but are related to the basic judgments concerning the value of the work of the UB professional practitioners, and the grantee postsecondary institutions in seeking to foster the legislatively mandated goals of the program. As you may be aware, the results of this study have formed the basis for significant ED budget and other policy justifications for more than a decade. Based solely on the Mathematica UB study results, the Office of Management and Budget (OMB) rated the program as “ineffective.” Then, justified by this rating and citing the 2004 Mathematica UB report findings, the Bush administration budget requests in FY2005 and FY2006 called for zero funding for all of the federal pre-college programs--Upward Bound, Upward Bound Math Science, Talent Search and GEAR UP. In November of 2011, the study report findings were reflected in the testimony to Congress of former Institute for Education Sciences (IES) Director, Grover T Whitehurst, asserting that federal programs such as Upward Bound had not been shown to be effective. More recently, in May of 2013, it has formed the justification for the mistaken assertion by a Brookings Policy Brief (Haskins and Rouse, 2013) that in general the federal college access programs “show no major effects on college enrollment or completion” and recommending that programs not able to demonstrate an effect should be defunded. These well-known authors state that their conclusions are based on the Mathematica Upward Bound study. They identify the Mathematica UB study as being the only evaluation of federal college access

programs to be given the highest study methods rating by the What Works Clearinghouse (WWC).<sup>4</sup>

We repeat our concern that is a very serious matter for the WWC to give a rating of “meets evidence standards without reservations” and to have this rating of the study be reported to Congress, the TRIO office, and academic and citizen stakeholders throughout the nation when there is clearly documented information that the Mathematica “no impact” conclusions concerning the Upward Bound program have been found to be erroneous. At this time we are respectfully writing to you to request your assistance in helping to address and publically correct this situation. This is not a new issue, but it is one that is long overdue for correction. Therefore we respectfully request that the What Works Clearinghouse (WWC) act in a timely manner to:

1. Publically rescind the WWC rating of the 2004 and 2009 UB reports as “Meets evidence standards without reservation” and correct the Practice Guide in which the UB reports were reviewed;
2. Consider the conflict of interest issues that the case of the Upward Bound evaluation raises concerning the behavior of the contractor for the study.

We call upon the persons responsible for this WWC rating to correct this endorsement of the 2004 and 2009 erroneous conclusions about UB program in a timely and public manner, before they can do more harm to the reputation of the WWC, the field of evaluation research, and most importantly to the availability of services for low-income and first generation students served by the TRIO and GEAR UP pre-college programs. We would be happy to meet with you at your earliest convenience should you wish to discuss any of the information concerning this matter.

Sincerely,

*Margaret Cahalan and David Goodwin*

Dr. Margaret Cahalan, Final ED-PPSS COTR for the Mathematica National Evaluation of Upward Bound, Retired SPCC Team Leader, PPSS, OPEPD, US Department of Education, Current: Vice President for Research and Director Pell Institute for the Study of Opportunity in Higher Education, Council for Opportunity in Education (COE), Principal Investigator I-3 grant Using Data to Inform College Access Programming

Dr. David Goodwin, First ED-PPSS COTR for the Mathematica National Evaluation of Upward Bound; Retired Division Director, Policy Analysis Services (PAS), PPSS, OPEPD, U.S. Department of Education; Current: Independent Consultant, Gates Foundation.

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<sup>4</sup> More recently, Mathematica President and CEO, Dr. Paul Decker, in his Nov 19, 2013 Presidential Address to the Association for Public Policy Analysis and Management (APPAM) presented Mathematica’s erroneous impact estimate graphs as representing “the average impact of Upward Bound”. These were based on data taken from the flawed 2009 Mathematica report (Seftor, et. al 2009) and were used to reaffirm publically that the UB evaluation study detected no impacts on major legislative goals. He characterized the response of what he called the “Youth Advocacy Community” to the Mathematica study as constituting “misdemeanors” and “felonies.”