

**Appendix A**  
**Bibliography for the Beginning**  
**Postsecondary Students Longitudinal Study**

---



## Appendix A Bibliography for the Beginning Postsecondary Students Longitudinal Study

This bibliography is derived from computer searches of online bibliographic databases such as Dissertation Abstracts, ERIC, Psychological Abstracts, Sociological Abstracts, and major papers, as well as the NCES website. Publication numbers are indicated in parentheses. Publications with an “NCES” number may be accessed from the National Center for Education Statistics (NCES) at <http://nces.ed.gov>. Publications with “ED” or “EJ” numbers are indexed in the Educational Resources Information Center (ERIC) at <http://www.askeric.org>.

### 2007

Hudson, L., Kienzl, G., and Diehl, J. (2007). *Students Entering and Leaving Postsecondary Occupational Education: 1995–2001* (NCES 2007-041). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

### 2006

Anderson, G. (2006). Effectiveness of Statewide Articulation Agreements on the Probability of Transfer: A Preliminary Policy Analysis. *The Review of Higher Education*, 29(3): 261-291.

Dowd, A., and Coury, T. (2006). The Effects of Loans on the Persistence and Attainment of Community College Students. *Research in Higher Education*, 47(1): 33-62.

Flowers, L.A. (2006). Effects of Attending a 2-Year Institution on African American Males' Academic and Social Integration in the First Year of College. *Teachers College Record*, 108(2): 267-286. (ERIC EJ733278)

Horn, L. (2006). *Placing College Graduation Rates in Context: How 4-Year College Graduation Rates Vary With Selectivity and the Size of Low-Income Enrollment* (NCES 2007-161). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Horn, L., and Nevill, S. (2006). *Profile of Undergraduates in U.S. Postsecondary Education Institutions: 2003–04: With a Special Analysis of Community College Students* (NCES 2006-184). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Titus, M.A. (2006). No College Student Left Behind: The Influence of Financial Aspects of a State's Higher Education Policy on College Completion. *The Review of Higher Education*, 29(3): 293-317.

Titus, M.A. (2006). Understanding the Influence of the Financial Context of Institutions on Student Persistence at Four-Year Colleges and Universities. *The Journal of Higher Education*, 77(2): 353-375.

Wine, J., Cominole, M., Wheelless, S., Bryant, A., Gilligan, T., Dudley, K., and Franklin, J. (2006). *2004/06 Beginning Postsecondary Students Longitudinal Study (BPS:04/06) Field Test Methodology Report* (NCES 2006-01). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

## 2005

Adelman, C. (2005). *Moving into Town—and Moving On: The Community College in the Lives of Traditional-Age Students*. U.S. Department of Education. Washington, DC: Office of Vocational and Adult Education. [ED496111]

Alfonso, M., Bailey, T.R., and Scott, M. (2005). The Educational Outcomes of Occupational Sub-Baccalaureate Students: Evidence from the 1990s. *Economics of Education Review*, 24(2): 197–212. [EJ697541]

Bailey, T., Jenkins, D., and Leinbach, T. (2005). *What We Know about Community College Low-Income and Minority Student Outcomes: Descriptive Statistics from National Surveys*. New York, NY: Community College Research Center. [ED484354]

Glenn, D. (2005, September 2). Sociologists Debate Degrees, Dropouts, and Faculty Beliefs. *Chronicle of Higher Education*, p. A24–A25.

Horn, L., Cataldi, E.F., and Sikora, A. (2005). *Waiting to Attend College: Undergraduates Who Delay Their Postsecondary Enrollment*. U.S. Department of Education. Washington, DC: National Center for Education Statistics. Postsecondary education descriptive analysis reports, Statistical Analysis Report. [NCES 2005–152]

Leppel, K. (2005). College Persistence and Student Attitudes Toward Financial Success. *College Student Journal*, 39(2): 223–241.

Lohfink, M.M., and Paulsen, M.B. (2005). Comparing the Determinants of Persistence for First-Generation and Continuing-Generation Students. *Journal of College Student Development*, 46(4): 409–428.

Peter, K., and Cataldi, E.F. (2005). *The Road Less Traveled? Students Who Enroll in Multiple Institutions*. U.S. Department of Education. Washington, DC: National Center for Education Statistics. Postsecondary education descriptive analysis reports, Statistical Analysis Report. [NCES 2005–157]

Peter, K., and Horn, L. (2005). *Gender Differences in Participation and Completion of Undergraduate Education and How They Have Changed Over Time*. U.S. Department of Education. Washington, DC: National Center for Education Statistics. Postsecondary education descriptive analysis reports, Statistical Analysis Report. [NCES 2005–169]

Schuetz, P. (2005). UCLA community college review: campus environment: a missing link in studies of community college attrition. *Community College Review*, 32(4): 60–80.

**2004**

- Bauer, C. J. *The nexus between community college choice and student persistence*. (Ph.D. dissertation, University of Missouri, Saint Louis, 2004).
- Borden, V.M.H. (2004). *Accommodating student swirl: when traditional students are no longer the tradition*. *Change*, 36(2): 10–17. [EJ701873]
- Boswell, K. (2004). Bridges or barriers? Public Policy and the community college transfer function. *Change*, 36(6): 22–29. [EJ708608]
- Brothen, T., and Wambach, C.A. (2004). Refocusing Developmental Education. *Journal of Developmental Education*, 28(2): 16–33.
- Duggan, M.B. (2004). E-Mail as Social Capital and Its Impact on First-Year Persistence of 4-Year College Students. *Journal of College Student Retention Research Theory and Practice*, 6(2): 169–189. [EJ683627]
- Ferris, E., Finster, M., McDonald, D. (2004). Academic Fit of Student-Athletes: An Analysis of NCAA Division I-A Graduation Rates. *Research in Higher Education*, 45(6): 555–575.
- Hahs-Vaughn, D. (2004). The Impact of Parents' Education Level on College Students: An Analysis Using the Beginning Postsecondary Students Longitudinal Study 1990-92/94. *Journal of College Student Development*, 45(5): 483-500.
- Horn, L., and Berger, R. (2004). *College Persistence on the Rise? Changes in 5-Year Degree Completion and Postsecondary Persistence Rates Between 1994 and 2000*. U.S. Department of Education. Washington, DC: National Center for Education Statistics. Postsecondary education descriptive analysis reports, Statistical Analysis Report. [NCES 2005–156]
- Kane, M.A., Beals, C., Valeau, E.J., Johnson, M.J. (2004). Fostering Success Among Traditionally Underrepresented Student Groups: Hartnell College's Approach to Implementation of the Math, Engineering, and Science Achievement (MESA) Program. *Community College Journal of Research and Practice*, 28(1): 17–26.
- Kim, M.H. *The determinants of institutional financial aid and its effect on degree completion: the difference between students at public and private four-year institutions*. (Ph.D. dissertation, Columbia University, 2004).
- Long, A.C. *Community college attrition of GED certificate holders and regular high school graduates: A comparative study using national BPS data*. (Ph.D. dissertation, Oregon State University, 2004).
- Pascarella, E.T. (2004). First-Generation College Students: Additional Evidence on College Experiences and Outcomes. *The Journal of Higher Education*, 75(3): 249-284.
- Pascarella, E.T. (2004). The Role of Race in the Development of Plans for a Graduate Degree *The Review of Higher Education*, 27(3): 299-320.

Persell, C.H., and Wenglinsky, H. (2004). For-Profit Post-Secondary Education and Civic Engagement. *Higher Education*, 47(2): 337–360.

Saunders, K.P. *Degree attainment of low-socioeconomic status students: Structural equation modeling test of an elaborated theory of socialization*. (Ph.D. dissertation, Iowa State University, 2004).

Wassmer, R., Moore, C., and Shulock, N. (2004). Effect of Racial/Ethnic Composition on Transfer Rates in Community Colleges: Implications for Policy and Practice. *Research in Higher Education*, 45(6): 651–672.

### 2003

Alfonso, Mariana Bailey, Thomas R, and Marc Scott. 2003. *The Educational Outcomes of Occupational Sub-Baccalaureate Students: Evidence from the 1990s*. (ED00CO0023). Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL, April.

Ashby, C. M. *College Completion: Additional Efforts Could Help Education With Its Completion Goals*. General Accounting Office (GAO-03-568). Washington, DC.

Below, Deborah L. 2003. *The First-to-Second-Year Persistence of Public, Four-Year College Students by Ethnicity*. Ph.D. diss., University of Missouri.

Berkner, L., S. He, and E. F. Cataldi. 2003. Descriptive Summary of 1995-96 Beginning Postsecondary Students: Six Years Later. *Education Statistics Quarterly* 5(1):62–67.

Freeman, Terrence L. 2003. *Theoretical Model for Studying Year-to-Year Persistence of Two-Year College Students by Ethnicity Using the Beginning Postsecondary Students Longitudinal Study, 1996–1998*. Ph.D. diss., University of Missouri.

Hahs, Debbie L. 2003. *The Utilization of Sample Weights in Structural Equation Modeling: An Application Using the Beginning Postsecondary Students Longitudinal Study 1990/92/94*. Ph.D. diss., University of Alabama.

Hoachlander, G., A. C. Sikora, and L. Horn. June 2003. *Community College Students: Goals, Academic Preparation, and Outcomes. Postsecondary Education Descriptive Analysis Reports* (NCES 2003-164). Washington DC: National Center for Education Statistics.

Horn, L., and K. Peter. April 2003. *What Colleges Contribute: Institutional Aid to Full-Time Undergraduates Attending 4-Year Colleges and Universities. Postsecondary Education Descriptive Analysis Reports* (NCES 2003-157). Washington DC: National Center for Education Statistics.

Kim, Dongbin. 2003. *Multilevel Analysis of the Effect of Loans on Degree Attainment: Differences by Race, SES, and College Characteristics*. Ph.D. diss., University of California, Los Angeles.

- O'Toole, D. M., L. S. Stratton, and J. N. Wetzel. 2003. A Longitudinal Analysis of the Frequency of Part-Time Enrollment and the Persistence of Students Who Enroll Part Time *Research in Higher Education* 44(5):519-537.
- Perez, Nora M. 2003. *Factors Associated with the College Success of Hispanic Women: A Mixed Methods Investigation*. Ed.D. diss., Texas A&M University, Corpus Christi.
- Rosenfield, Eleanor D. 2003. *A Demographic Profile of Single-Mother College Students and an Examination of Factors that Influence Their Persistence*. Ed.D. diss., University of Rochester.
- Titus, Marvin A. 2003. *An Examination of the Influence of Institutional Context on Persistence at Four-Year Colleges and Universities: A Multilevel Approach*. Ph.D. diss., University of Maryland, College Park.
- Yang, Po. 2003. *Do Institutional Characteristics Matter in Two- to Four-Year Transfer?* Paper presented at Annual Meeting of the Council for the Study of Community Colleges 45th, Dallas, TX, March 30.

## 2002

- Berkner, Lutz, Shirley He, and Emily Forrest Cataldi. December 2002. *Descriptive Summary of 1995-96 Beginning Postsecondary Students: Six Years Later* (NCES 2003-151). Washington DC: National Center for Education Statistics.
- Blecher, Lee, William B. Michael, and Linda Serra Hagedorn. 2002. *Factors Related to the 'System' Persistence of Students Seeking the Bachelor's Degree at Four-Year Institutions* (ED465345). Paper presented at the Annual Meeting of the North East Association for Institutional Research, New Orleans, LA, April 1-5.
- Bradburn, Ellen. November 2002. *Short-Term Enrollment in Postsecondary Education: Student Background and Institutional Differences in Reasons for Early Departure, 1996-98* (NCES 2003-153). Washington DC: National Center for Education Statistics.
- Choy, Susan P. 2002. *Access & Persistence: Findings from 10 Years of Longitudinal Research on Students*. Washington DC: American Council on Education, Center for Policy Analysis.
- Choy, S. August 2002. *Nontraditional undergraduates: Findings from The Condition of Education, 2002* (NCES 2002-012). Washington DC: National Center for Education Statistics.
- Duggan, Michael B. 2002. *The Effect of Social Capital on the First-Year Persistence of First Generation College Students*. Ph.D. diss., University of Massachusetts.
- Hudson, Lisa, and David Hurst. February 2002. *The Persistence of Employees Who Pursue College Study* (NCES 2002-118). Washington, DC: National Center for Educational Statistics.

- Hudson, L., and D. Hurst. 2002. The Persistence of Employees Who Pursue Postsecondary Study. *Education Statistics Quarterly* 4(1):33-36.
- King, Jacqueline E. 2002. *Crucial Choices: How Students' Financial Decisions Affect Their Academic Success*. Washington, DC: American Council on Education, Center for Policy Analysis.
- Pearson, A. F. 2002. *Gendered Organizations: Academic and Social Integration of Females in Engineering and Science Programs*. Paper presented at the Southern Sociological Society.
- Sherlin, Joe H., Jr. 2002. *Understanding the System Persistence of First-Generation Students through Path Modeling*. Ph.D. diss., University of Maryland.
- Wei, Christina Chang, and Laura Horn. May 2002. *Persistence and Attainment of Beginning Students with Pell Grants* (NCES 2002-169). Statistical Analysis Report. Washington, DC: National Center for Education Statistics.
- Wei, C. C., and L. Horn. Persistence and Attainment of Beginning Students with Pell Grants. *Education Statistics Quarterly* 4(2):91-96.
- Wine, Jennifer S., Ruth E. Heuer, Michael W. Link, Roy W. Whitmore, and Talbric L. Francis. July 2002. *Beginning Postsecondary Students Longitudinal Study: 1996-2001 (BPS:1996/2001) Methodology Report* (NCES 2002-171). Methodology Report. Washington, DC: National Center for Education Statistics.
- Wine, J. S., R. E. Heuer, S. C. Wheelless, T. L. Francis, J. W. Franklin, and K. M. Dudley. 2002. *Beginning Postsecondary Students Longitudinal Study: 1996-2001 (BPS:1996/2001) methodology report*. *Education Statistics Quarterly* 4(3):147-149.
- 2001**
- Choy, Susan P. December 2001. *Findings from the Condition of Education 2001: Students Whose Parents Did Not Go to College* (NCES 2001-126, ED460660). Washington DC: National Center for Education Statistics, December 2001.
- Bradburn, Ellen M., David G. Hurst, and Samuel Peng. July 2001. *Community College Transfer Rates to 4-Year Institutions Using Alternative Definitions of Transfer* (NCES 2001-197, ED454301). Research and Development Report. Washington DC: National Center for Education Statistics.
- Duggan, Michael. 2001. *Factors Influencing the First-Year Persistence of First Generation College Students* (ED459673). Paper presented at the Annual Meeting of the North East Association for Institutional Research, Cambridge, MA, November 17-21.
- Horn, Laura, and Lawrence K. Kojaku. August 2001. *High School Academic Curriculum and the Persistence Path Through College* (NCES 2001-163, ED456694). Descriptive Analysis Report. Washington DC: National Center for Education Statistics.



- Leppel, Karen, Mary L. Williams, and Charles Waldauer. Winter 2001. The Impact of Parental Occupation and Socioeconomic Status on Choice of College Major. *Journal of Family & Economic Issues* 22(4):373-394.
- Stratton, Leslie S., Dennis M. O'Toole, and James N. Wetzel. 2001. *Factors Affecting Part-Time College Enrollment within the First Year*. AIR 2001 Annual Forum Paper (ED456791). Paper presented at the Annual Meeting of the Association for Institutional Research, Long Beach, CA, June 3–6.
- Teng, Loretta Y., George A. Morgan, and Sharon K. Anderson. Winter 2001. Career Development among Ethnic and Age Groups of Community College Students. *Journal of Career Development* 28(2):115–27.
- Warburton, Edward C., Rosio Bugarin, and Anne-Marie Nuñez. May 2001. *Bridging the Gap: Academic Preparation and Postsecondary Success of First-Generation Students* (NCES 2001-153, ED456168). Descriptive Analysis Report. Washington DC: National Center for Education Statistics.
- Wine, Jennifer S., Ruth E. Heuer, Michael W. Link, Roy W. Whitmore, and Talbric L. Francis. February 2001. *Beginning Postsecondary Students Longitudinal Study:1996-2001 (BPS:1996/2001) Field Test Methodology Report* (NCES 2001-04). Technical Report. Washington DC: National Center for Education Statistics.

## 2000

- Ariguzo, Godwin C. 2000. *An Examination of the Effects of the Federal College Work-Study Program on Minority Students' Persistence, Academic Performance, and Graduation Rates: Based on the NCES 1990/94 Beginning Postsecondary Students Longitudinal Study*. Ph.D. diss., University of Massachusetts.
- Berkner, Lutz, Laura Horn, and Michael Clune. March 2000. *Descriptive Summary of 1995–96 Beginning Postsecondary Students: Three Years Later, With an Essay on Students Who Started at Less-Than-4-Year Institutions* (NCES 2000-154). Washington DC: National Center for Education Statistics.
- Boyles, Laura Wenig. 2000. *Exploration of a Retention Model for Community College Students*. Ph.D. diss., University of North Carolina at Greensboro.
- Byun, Kiyong. 2000. *A Study on the Applicability of Bean and Metzner's Nontraditional Student Attrition Model for Older Students Using Four Different Measures of Persistence*. Ph.D. diss., University of Oregon.
- Chae, Jae-Eun. 2000. *Student Departure from United States Community Colleges: A Competing Risks Survival Analysis*. Ph.D. diss., Harvard University.
- Choy, Susan P. March 2000. *Low-Income Students: Who They Are and How They Pay for Their Education* (NCES 2000-169). Statistical Analysis Report. Washington DC: National Center for Education Statistics.

Huang, Gary, Nebiyu Taddese, and Elizabeth Walter. June 2000. *Entry and Persistence of Women and Minorities in College Science and Engineering Education* (NCES 2000-161). Research and Development Report. Washington, DC: National Center for Educational Statistics.

Hurst, David, Ed., and Becky Smerdon, Ed. June 2000. *Postsecondary Students with Disabilities: Enrollment, Services, and Persistence* (NCES 2000-092, ED444329). Stats in Brief. Washington, DC: National Center for Educational Statistics.

Ishitani, Terry Takatsugu. 2000. *An Application of Event History Modeling to Assessing Student Dropout Behavior: A National Data Approach*. Ph.D. diss., University of Iowa.

Levesque, Karen, Doug Lauen, Peter Teitelbaum, Martha Alt, and Sally Librera. January 2000. *Vocational Education in the United States: Toward the Year 2000* (NCES 2000-029). Statistical Analysis Report. Washington DC: National Center for Education Statistics.

National Center for Educational Statistics (NCES). June 2000. *Learning Opportunities: Student Satisfaction with Instruction* (NCES 2000-062). Extracted from the *Condition of Education 2000*. Indicator 51. Washington, DC: National Center for Educational Statistics.

NCES. Junes 2000. *Postsecondary Persistence and Progress: Persistence Toward a Bachelor's Degree*. (NCES 2000-062. Extracted from the *Condition of Education 2000*). Indicator 35. Washington, DC: National Center for Educational Statistics.

Wine, Jennifer S., Roy W. Whitmore, Ruth E. Heuer, Melissa Biber, and Daniel J. Pratt. March 2000. *Beginning Postsecondary Students Longitudinal Study First Follow-up 1996-98 (BPS:96/98) Methodology Report* (NCES 2000-157). Technical Report. Washington DC: National Center for Education Statistics.

### 1999

Choy, Susan P. March 1999. *College Access and Affordability* (NCES 1999-108). Washington, DC: National Center for Education Statistics.

Contento, Jann Michael. 1999. *Impacts of Financial Aid on Persistence: A Longitudinal Analysis of Beginning Undergraduate Students*. Ph.D. diss., Arizona State University.

Horn, Laura J. May 1999. *Students with Disabilities in Postsecondary Education: A Profile of Preparation, Participation, and Outcomes* (NCES 1999-187). Statistical Analysis Report. Washington, DC: National Center for Education Statistics.

Kaufman, Phillip, and Xianglei Chen. June 1999. *Projected Postsecondary Outcomes of 1992 High School Graduates* (NCES 1999-15). Working Paper. Washington, DC: National Center for Education Statistics.

LeBard, Christine. 1999. *The Relationship between American Community Colleges' Curricular and Extracurricular Programs and Students' Perceptions of Their Leadership Abilities* (ED429625). 1999. Washington, DC: National Center for Education Statistics.

Salvucci, Sameena, Stephen Wenck, and James Tyson. August 1999. *Development of a Prototype System for Accessing Linked NCES Data* (NCES 98-15). Working Paper. Washington, DC: National Center for Education Statistics.

Shafer, Linda L. 1999. *Data Sources on Lifelong Learning* (ED431892). Working Paper. Washington, DC: National Center for Education Statistics.

### 1998

Choy, Susan P., and Cecilia Ottinger. November 1998. *Choosing a Postsecondary Institution* (NCES 98-080). Statistical Analysis Report. Washington, DC: National Center for Education Statistics.

Cuccaro-Alamin, Stephanie, and Susan P. Choy. January 1998. *Postsecondary Financing Strategies: How Undergraduates Combine Work, Borrowing, and Attendance* (NCES 98-088). Statistical Analysis Report. Washington, DC: National Center for Education Statistics.

Horn, Laura J. December 1998. *Stopouts or Stayouts? Undergraduates Who Leave College in Their First Year* (NCES-1999-087, ED425683). Statistical Analysis Report. Washington, DC: National Center for Education Statistics.

Horn, Laura J. May 1998. *Profile of Undergraduates in U.S. Postsecondary Education Institutions: 1995–96, With an Essay on Undergraduates Who Work* (NCES 98-084). Statistical Analysis Report. Washington, DC: National Center for Education Statistics.

Kojaku, Lawrence K., and Anne-Marie Nunez. December 1998. *Descriptive Summary of 1995-96 Beginning Postsecondary Students, with Profiles of Students Entering 2- and 4-Year Institutions. National Postsecondary Student Aid Study: 1995-96* (NCES 1999-030, ED425684). Statistical Analysis Report. Washington, DC: National Center for Education Statistics.

Nunez, Anne-Marie. 1998. *First-Generation Students: A Longitudinal Analysis of Educational and Early Labor Market Outcomes* (ED427599). Paper presented at the Annual Meeting of the Association for the Study of Higher Education, Miami, FL, November 5–8.

Nunez, Anne-Marie and Stephanie Cuccaro-Alamin. June 1998. *First-Generation Students: Undergraduates Whose Parents Never Enrolled in Postsecondary Education* (NCES-98-082, ED420235). Statistical Analysis Report. Washington, DC: National Center for Education Statistics.

Perna, Laura W. 1998. The Contribution of Financial Aid to Undergraduate Persistence (EJ584135). *Journal of Student Financial Aid* 28(3):25–40.

Perna, Laura W. 1998. Does Financial Aid Help Students To Attend Higher Priced Colleges (EJ567587). *Journal of Student Financial Aid* 28(1):19–38.

Pratt, Daniel J., Jennifer S. Wine, Ruth E. Heuer, Roy W. Whitmore, Janice E. Kelly, John M. Doherty, Joe B. Simpson, and Norma Marti. August 1998. *Beginning Postsecondary Students Longitudinal Study First Follow-up (BPS:96/98) Field Test Methodology Report* (NCES 98-11, ED434132). Working Paper. Washington, DC: U.S. Department of Education, Department of Educational Research and Improvement, National Center for Education.

Smith, Thomas M., Beth Aronstamm Young, Yupin Bae, Susan P. Choy, and Nabeel Alsalam. January 1998. *Employment and Postsecondary Persistence and Attainment* (NCES 98-008, ED419473). Extracted from *The Condition of Education, 1997* (ED404766). Indicator of the Month. Washington, DC: National Center for Education Statistics.

NCES. January 1998. *Subbaccalaureate Persistence and Attainment* (NCES-98-001, ED411918). Extracted from *The Condition of Education, 1997* (ED410681). Indicator of the Month. Washington, DC: National Center for Education Statistics.

Teng, Loretta Ya-Wen. 1998. *The Institutional Experience and Career Development of Community College Students (Minority Students, Employment)*. Ph.D. diss., Colorado State University.

### 1997

Arnold, Carolyn L. January 1997. *Using National Data Sets to Create Comparable National Statistics for the Student Characteristics and Outcomes in Community Colleges* (ED421197). Washington, DC: National Center for Education Statistics.

Choy, Susan P., and Sonya Geis. January 1997. *Early Labor Force Experiences and Debt Burden* (NCES-97-286, ED411746). Statistical Analysis Report. Washington, DC: National Center for Education Statistics.

Hurtado, Sylvia, Karen Kurotsuchi Inkelas, Charlotte Briggs, and Byung-Shik Rhee. 1997. Differences in College Access in Choice among Racial/Ethnic Groups: Identifying Continuing Barriers (EJ539550). *Research in Higher Education* 38(1):43-75.

McCormick, Alexander C. June 1997. *Transfer Behavior among Beginning Postsecondary Students: 1989-94* (NCES-97-266, ED408929). Statistical Analysis Report. Washington, DC: National Center for Education Statistics.

Nettles, Michael T., and Laura W. Perna. January 1997. *The African American Education Data Book. Volume I: Higher and Adult Education* (ED406871). Fairfax, VA: College Fund/UNCF.

Riccobono, John A., Roy W. Whitmore, Timothy J. Gabel, Mark A. Traccarella, Daniel J. Pratt, and Lutz K. Berkner. October 1997. *National Postsecondary Student Aid Study, 1995-96 (NPSAS:96) Methodology Report* (NCES 98-073). Technical Report. Washington, DC: National Center for Education Statistics.

### 1996

- Berkner, Lutz K., Stephanie Cuccaro-Alamin, and Alexander C. McCormick. May 1996. *Descriptive Summary of 1989-90 Beginning Postsecondary Students: 5 Years Later, with an Essay on Postsecondary Persistence and Attainment* (NCES-96-155, ED396597). Statistical Analysis Report. Washington, DC: National Center for Education Statistics.
- Choy, Susan P., and Mark D. Premo. April 1996. *How Low Income Undergraduates Financed Postsecondary Education: 1992-93* (NCES-96-161, ED394473). Statistical Analysis Report. Washington, DC: National Center for Education Statistics.
- Horn, Laura J. December 1996. *Nontraditional Undergraduates: Trends in Enrollment from 1986 to 1992 and Persistence and Attainment among 1989-90 Beginning Postsecondary Students* (NCES-97-578, ED402857). Statistical Analysis Report. Washington, DC: National Center for Education Statistics.
- Perna, Laura W. 1996. *The Contribution of Financial Aid to the Price of Four-Year Institution Attended by 1989/90 Freshmen* (ED402820). Paper presented at the Annual Meeting of the Association for the Study of Higher Education, Memphis, TN, October 31–November 3.
- Pratt, Daniel J., Roy W. Whitmore, Jennifer Wine, Daniel J. Pratt, Kurt J. Veith, Marisa Mitchell, Geoffrey D. Borman, and Larry G. Bobbitt. May 1996. *Beginning Postsecondary Students Longitudinal Study Second Follow-up (BPS: 90/94) Final Technical Report* (NCES-96-153). Washington, DC: National Center for Education Statistics.

### 1995

- Choy, Susan P. and Mark K. Premo. April 1995. *Profile of Older Undergraduates: 1989-90* (NCES-95-167, ED382122). Statistical Analysis Report. Washington, DC: National Center for Education Statistics.
- Davis, Celestine, Ed. January 1995. *Programs and Plans of the National Center for Education Statistics. 1995 Edition* (NCES-95-133, ED379357). Washington, DC: National Center for Education Statistics.
- Horn, Laura J. June 1995. *Minority Undergraduate Participation in Postsecondary Education* (NCES-95-166, ED383276). Statistical Analysis Report. Washington, DC: National Center for Education Statistics.
- McCormick, Alexander and Sonya Geis. July 1995. *Profile of Part-Time Undergraduates in Postsecondary Education: 1989–90* (NCES 95-173). Washington, DC: National Center for Education Statistics.
- McGrew, Kevin. August 1995. *Disability Summary Analyses of Select National Data Collection Programs. Technical Report 11* (ED396477). Washington, DC: Special Education Programs ED/OSERS.

Perna, Laura Walter. 1997. *The Contribution of Financial Aid to Undergraduate Persistence* (ED415818). Paper presented at Annual Meeting of the Association for the Study of Higher Education, Albuquerque, NM, November 6–9.

#### 1994

Burkheimer, G. J., Jr. June 1994. *Beginning Postsecondary Students Longitudinal Study First Follow-up (BPS:90/92): Final Public Technical Report* (NCES-94-369). Washington, DC: National Center for Education Statistics.

Fitzgerald, Robert, et al. July 1994. *Descriptive Summary of 1989-90 Beginning Postsecondary Students: Two Years Later* (NCES-94-386, ED372691). Statistical Analysis Report. Washington, DC: National Center for Education Statistics.

NCES. November 1993. *Persistence and Attainment in Postsecondary Education for Beginning AY 1989-90 Students as of Spring 1992. Beginning Postsecondary Students Longitudinal Study 1992 Follow-up (BPS: 90/92)* (NCES-94-477). E.D. TABS. Washington, DC: National Center for Education Statistics.

Pratt, Daniel J. October 1994. *Beginning Postsecondary Students Longitudinal Study. Second Follow-up Field Test Methodology Report; BPS:90/94* (NCES-94-370). Technical Report. Washington, DC: National Center for Education Statistics.

#### 1993

Bobbitt, Larry G., and C. Dennis Carroll. 1993. *Coding Major Fields of Study* (ED363665). Washington, DC: National Center for Education Statistics.

#### 1992

Burkheimer, G. J., Jr. August 1992. *Beginning Postsecondary Students Longitudinal Study Field Test Methodology Report: BPS 90/92* (NCES 92160). Washington, DC: National Center for Education Statistics.

#### 1991

Nelson, Dawn D., Ed. October 1991. *Programs and Plans of the National Center for Education Statistics, 1991 Edition* (NCES-91-694, ED339739). Washington, DC: National Center for Education Statistics.

# **Appendix B**

## **Technical Review Panel**

---





**Technical Review Panel**

Clifford Adelman  
Senior Associate  
The Institute for Higher Education Policy  
1320 19th Street, NW-Suite 400  
Washington, DC 20036  
Voice: (202)861-8223  
E-mail: cadelman@ihep.org

Frank Balz  
Vice President for Research & Policy Analysis  
National Association of Independent Colleges &  
Universities  
1025 Connecticut Avenue, NW  
Suite 700  
Washington, DC 20036  
Voice: (202)785-8866  
E-mail: frank@naicu.edu

Eric Bettinger  
Assistant Professor  
Case Western Reserve University  
Weatherhead School of Management, Department of  
Economics  
10900 Euclid Avenue  
Cleveland, OH 44106  
Voice: (216)368-2184  
E-mail: Eric.Bettinger@case.edu

John Braxton  
Professor of Higher Education  
Vanderbilt University  
Department of Leadership, Policy & Organizations  
230 Appleton Place - 205C Payne Hall  
Nashville, TN 37235  
Voice: (615)322-8021  
E-mail: john.braxton@vanderbilt.edu

Kevin Carey  
Research and Policy Manager  
Education Sector  
1201 Connecticut Avenue NW, Suite 850  
Washington, DC 20036  
Voice: (202)552-2840  
E-mail: kcarey@educationsector.org

Anthony Carnevale  
Georgetown University  
37th and O Streets, NW  
Washington, DC 20057  
Voice: (202)687-0880  
E-mail: apc39@georgetown.edu

Stephen DesJardins  
Associate Professor, School of Education  
University of Michigan  
610 East University  
2108-D School of Education Building, 1259  
Ann Arbor, MI 48109  
Voice: (734)647-1984  
E-mail: sdesj@umich.edu

Tammy Halligan  
Senior Compliance Specialist  
Career College Association  
10 G Street, NE  
Suite 750  
Washington, DC 20002-4213  
Voice: (202)336-6839  
E-mail: tammyh@career.org

Jacqueline King  
Director, Center for Policy Analysis  
American Council on Education  
One Dupont Circle, NW  
Suite 800  
Washington, DC 20036  
Voice: (202)939-9559  
E-mail: jacqueline\_king@ace.nche.edu

Alexander McCormick  
Senior Scholar  
The Carnegie Foundation  
51 Vista Lane  
Stanford, CA 94305  
Voice: (650)566-5149  
E-mail: mccormick@carnegiefoundation.org

Catherine Millett  
Research Scientist  
Educational Testing Service  
Policy Evaluation & Research Center  
Rosedale Road, Mailstop 01-R  
Princeton, NJ 08542  
Voice: (609)734-5866  
E-mail: cmillett@ets.org

Laura Perna  
Associate Professor  
University of Pennsylvania, Graduate School of  
Education  
3700 Walnut  
Room 424  
Philadelphia, PA 19104-6216  
Voice: (215)746-2522  
E-mail: lperna@gse.upenn.edu

Kent Phillippe  
Senior Research Associate  
American Association of Community Colleges  
One Dupont Circle, NW  
Suite 410  
Washington, DC 20036  
Voice: (202)728-0200  
E-mail: kphillippe@aacc.nche.edu

Matthew Reed  
Policy Analyst  
The Institute for College Access and Success  
1411 K Street, NW, Suite 1400  
Washington, DC 20005  
Voice: (202)747-1959  
E-mail: MReed@ticas.us

Pat Smith  
Senior Research and Policy Analyst  
American Association of State Colleges and  
Universities (AASCU)  
1307 New York Avenue NW  
Fifth Floor  
Washington, DC 20005  
Voice: (202)293-7070  
E-mail: smithp@aacu.org

Dawn Terkla  
Executive Director  
Tufts University  
Institutional Research  
28 Sawyer Avenue  
Medford, MA 02155  
Voice: (617)627-3274  
E-mail: dawn.terkla@tufts.edu

Vincent Tinto  
Distinguished Professor  
Syracuse University  
School of Education  
350 Huntington Hall  
Syracuse, NY 13244-2340  
Voice: (315)443-4763  
E-mail: vtinto@syr.edu

Marvin Titus  
Assistant Professor  
North Carolina State University  
Adult and Community College Education  
300M Poe Hall, Box 7801  
Raleigh, NC 27695  
Voice: (919)515-6290  
E-mail: marvin\_titus@ncsu.edu

### **U.S. Department of Education and Other Federal Panelists**

Nabeel Alsalam  
Congressional Budget Office  
Ford House Office Building  
Room 423A  
Washington, DC 20515  
Voice: (202)225-2639  
E-mail: nabeel@cbo.gov

David Bergeron  
Chief, Budget and Policy Development  
U.S. Dept of Education, Office of Postsecondary  
Education, Office of Postsecondary Education  
(OPE)  
1990 K St, NW  
Room 8022  
Washington, DC 20006-8540  
Voice: (202)502-7815  
E-mail: david.bergeron@ed.gov

Dennis Carroll  
Associate Commissioner, Postsecondary Studies  
Division  
U.S. Department of Education, NCES  
1990 K Street, NW  
Room 8107  
Washington, DC 20006-5652  
Voice: (202)502-7323  
E-mail: dennis.carroll@ed.gov

Daniel Goldenberg  
 U.S. Department of Education, Office of the Deputy  
 Secretary  
 400 Maryland Avenue  
 Room 5W308  
 Washington, DC 20202  
 Voice: (202)401-3562  
 E-mail: daniel.goldenberg@ed.gov

James Griffith  
 Postsecondary Longitudinal and Sample Survey  
 Studies-Postsecondary Studies Division  
 U.S. Department of Education, NCES  
 1990 K Street, NW  
 Room 8103  
 Washington, DC 20006  
 Voice: (202)502-7387  
 E-mail: James.Griffith@ed.gov

Lisa Hudson  
 U.S. Department of Education, NCES  
 1990 K Street, NW  
 Suite 900  
 Washington, DC 20006  
 Voice: (202)502-7358  
 E-mail: lisa.hudson@ed.gov

Tracy Hunt-White  
 Statistician  
 U.S. Department of Education, NCES  
 1990 K St., NW  
 Room 8121  
 Washington, DC 20006  
 Voice: (202)502-7438  
 E-mail: tracy.hunt-white@ed.gov

Paula Knepper  
 Senior Technical Advisor, Postsecondary Studies  
 Division  
 U.S. Department of Education, NCES  
 1990 K Street NW  
 Room 8104  
 Washington, DC 20006-5652  
 Voice: (202)502-7367  
 E-mail: paula.knepper@ed.gov

Roslyn Korb  
 Program Director  
 Postsecondary Coop System Analysis &  
 Dissemination - PSD  
 U.S. Department of Education, NCES  
 1990 K Street, NW  
 Room 8132  
 Washington, DC 20006-5652  
 Voice: (202)502-7378  
 E-mail: roslyn.korb@ed.gov

Nancy Leach  
 Program Director, Human Resources Statistics  
 National Science Foundation  
 4201 Wilson Boulevard, Suite 965  
 Division of Science Resources Statistics  
 Arlington, VA 22230  
 Voice: (703)292-7768  
 E-mail: nleach@nsf.gov

Laura LoGerfo  
 HSLS:09 Project Officer  
 U.S. Department of Education, NCES  
 1990 K Street NW  
 Room 9022  
 Washington, DC 20006  
 Voice: (202)502-7402  
 E-mail: Laura.LoGerfo@ed.gov

Rochelle Martinez  
 Office of Management and Budget  
 725 17th Street NW, Room 10202 NEOB  
 Washington, DC 20503  
 Voice: (202)395-3147  
 E-mail: Rochelle\_W.\_Martinez@omb.eop.gov

Edith McArthur  
 Demographer  
 U.S. Department of Education, NCES  
 1990 K Street, NW  
 Room 9115  
 Washington, DC 20006-5652  
 Voice: (202)502-7393  
 E-mail: edith.mcarthur@ed.gov

Elise Miller  
IPEDS Program Director  
US Department of Education, National Center for  
Education Statistics  
1990 K Street, NW  
Room 8113A  
Washington, DC 20006  
Voice: (202)502-7318  
E-mail: Elise.Miller@ed.gov

Kristin Perry  
Statistician  
U.S. Department of Education, NCES  
1990 K Street, NW  
Room 8113A  
Washington, DC 20006  
Voice: (202)502-7428  
E-mail: kristin.perry@ed.gov

Marilyn Seastrom  
Chief Statistician and Program Director  
U.S. Department of Education, NCES  
1990 K Street, NW  
Room 9051  
Washington, DC 20006  
Voice: (202)502-7303  
E-mail: marilyn.seastrom@ed.gov

David Smole  
Specialist in Education Policy  
Congressional Research Service  
101 Independence Ave., SE  
Washington, DC 20540-7440  
Voice: (202)707-0624  
E-mail: dsmole@crs.loc.gov

Tom Weko  
Senior Research Scientist  
US Dept of Education, NCES  
1990 K St. NW  
Washington, DC 20006  
Voice: (202)502-7643  
E-mail: tom.weko@ed.gov

John Wirt  
Statistician  
Annual Reports Program-ECICSD  
U.S. Department of Education, NCES  
1990 K Street, NW  
Room 9028  
Washington, DC 20006  
Voice: (202)502-7478  
E-mail: john.wirt@ed.gov

Linda Zimbler  
Project Officer, NSOPF:2004  
U.S. Department of Education, NCES  
1990 K Street NW  
Room 8123  
Washington, DC 20006-5652  
Voice: (202)502-7481  
E-mail: linda.zimbler@ed.gov

### **Subcontractors**

#### **MPR Associates, Inc.**

Lutz Berkner  
Senior Research Associate  
MPR Associates  
2150 Shattuck Avenue, Suite 800  
Berkeley, CA 94704  
Voice: (510)849-4942  
E-mail: lberkner@mprinc.com

Ellen Bradburn  
Senior Research Associate  
MPR Associates  
2150 Shattuck Avenue, Suite 800  
Berkeley, CA 94704  
Voice: (510)849-4942  
E-mail: ebradburn@mprinc.com

Christina Chang Wei  
Research Associate  
MPR Associates  
2150 Shattuck Avenue  
Berkeley, CA 94704  
Voice: (510)849-4942  
E-mail: cwei@mprinc.com

Susan Choy  
Vice President  
MPR Associates, Inc.  
2150 Shattuck Avenue, Suite 800  
Berkeley, CA 94704  
Voice: (510)849-4942  
E-mail: schoy@mprinc.com

**RTI International**

Melissa Cominole  
Research Education Analyst  
Education Studies Division  
RTI International  
P.O. Box 12194  
3040 Cornwallis Road  
Research Triangle Park, NC 27709  
Voice: (919)990-8456  
E-mail: mcominole@rti.org

Jeffrey Franklin  
Data Collection Task Leader  
RTI International  
P.O. Box 12194  
3040 Cornwallis Road  
Research Triangle Park, NC 27709  
Voice: (919)485-2614  
E-mail: jwf@rti.org

Jordan Hudson  
Education Analyst  
Education Studies Division  
RTI International  
P.O. Box 12194  
3040 Cornwallis Road  
Research Triangle Park, NC 27709  
Voice: (919)316-3416  
E-mail: jhudson@rti.org

Tiffany Mattox  
Survey Manager  
Education Studies Division  
RTI International  
P.O. Box 12194  
3040 Cornwallis Road  
Research Triangle Park, NC 27709  
Voice: (919)485-7791  
E-mail: tmattox@rti.org

John Riccobono  
Vice President  
Education Studies Division  
RTI International  
P.O. Box 12194  
3040 Cornwallis Road  
Research Triangle Park, NC 27709  
Voice: (919)541-7006  
E-mail: jar@rti.org

Jennifer Wine  
Director, Longitudinal Studies Program  
Education Studies Division  
RTI International  
P.O. Box 12194  
3040 Cornwallis Road  
Research Triangle Park, NC 27709  
Voice: (919)541-6870  
E-mail: jennifer@rti.org



# **Appendix C**

## **Confidentiality**

---





**CONFIDENTIALITY AGREEMENT**  
**2004 National Study of Faculty and Students**  
**(RTI Under Contract No. ED-02-CO-0011)**

Safeguards for Individuals Against Invasion of Privacy: In accordance with the Privacy Act of 1974 (5 United States Code 552a), the Education Sciences Reform Act of 2002 (Public Law 107-279), the Federal Statistical Confidentiality Order of 1997, the E-Government Act of 2002 (Public Law 107-347), the Computer Security Act of 1987, the National Center for Education Statistics' (NCES') Restricted Use Data Procedures Manual, and NCES' Standards and Policies, RTI International (RTI) and all its subcontractors are required to comply with the applicable provisions of the legislation, regulations, and guidelines and to undertake all necessary safeguards for individuals against invasions of privacy.

To provide this assurance and these safeguards in performance of work on this project, all staff, consultants, and agents of RTI, and its subcontractors who have any access to study data, shall be bound by the following assurance.

Assurance of Confidentiality

1. In accordance with all applicable legislation, regulations, and guidelines, RTI assures all respondents that the confidentiality of their responses to all information requests will be maintained by RTI and NCES, and that no information obtained in the course of this activity may be disclosed in a manner in which the individual is identifiable, unless the individual has consented to such disclosure, to anyone other than authorized staff, consultants, agents, or representatives of RTI, its subcontractors, and NCES.
2. The following safeguards will be implemented to assure that confidentiality is protected by all employees, consultants, agents, and representatives of RTI and all subcontractors and that physical security of the records is provided:
  - a. All staff with access to data will take an oath of nondisclosure and sign an affidavit to that effect.
  - b. At each site where these items are processed or maintained, all confidential records that will permit identification of individuals shall be kept in a safe, locked room when not in use or personally attended by project staff.
  - c. When confidential records are not locked, admittance to the room or area in which they reside shall be restricted to staff sworn to confidentiality on this project.
  - d. All electronic data shall be maintained in secure and protected data files, and personally identifying information shall be maintained on separate files from statistical data collected under this contract.
  - e. All data files on network or multiuser systems shall be under strict control of a database manager with access restricted to project staff sworn to confidentiality, and then only on a need-to-know basis.
  - f. All data files on single-user computers shall be password protected and all such machines will be locked and maintained in a locked room when not attended by project staff sworn to confidentiality.
  - g. External electronically stored data files (e.g., tapes on diskettes) shall be maintained in a locked storage device in a locked room when not attended by project staff sworn to confidentiality.
  - h. Any data released to the general public shall be appropriately masked or perturbed such that linkages to individually identifying information are not possible and individual identification cannot be disclosed.
  - i. Data or copies of data may not leave the authorized site for any reason.
3. Staff, consultants, agents, or RTI and all its subcontractors will take all necessary steps to ensure that the letter and intent of all applicable legislation, regulations, and guidelines are enforced at all times through appropriate qualifications standards for all personnel working on this project and through adequate training and periodic follow-up procedures.

By my signature affixed below, I hereby swear and affirm that I have carefully read this statement and fully understand the statement as well as legislative and regulatory assurances that pertain to the confidential nature of all records to be handled in regard to this project, and will adhere to all safeguards that have been developed to provide such confidentiality. As an employee, consultant, agent, or representative of RTI or one of its subcontractors, consultants, agents, or representatives, I understand that I am prohibited by law from disclosing any such confidential information to anyone other than staff, consultant, agents, or representatives of RTI, its subcontractors, or agents, and NCES. I understand that any willful and knowing individual disclosure or allowance of disclosure in violation of the applicable legislation, regulations, and guidelines is punishable by law and would subject the violator to possible fine or imprisonment.

- - //

Employee ID Number)

(Signature) (RTI)  
(Date)

- - //

(Supervisor's Signature)

(RTI Employee ID Number)

(Date)

# AFFIDAVIT OF NONDISCLOSURE

## 2004 National Study of Faculty and Students (RTI Under Contract No. E02-CO-0011)

\_\_\_\_\_  
(Name)

\_\_\_\_\_  
(Job Title)

\_\_\_\_\_  
(Date of Assignment to NSoFaS:04 Project)

**RTI International**

\_\_\_\_\_  
(Organization, State, or Local Agency or Instrumentality)

**P.O. Box 12194, Research Triangle Park, NC 27709**

\_\_\_\_\_  
(Address)

I, \_\_\_\_\_, do solemnly swear (or affirm) that when given access to any 2004 National Study of Faculty and Students project-related data bases or files containing individually identifiable information, I will not:

- (i) use or reveal any individually identifiable information furnished, acquired, retrieved or assembled by me or others, under the provisions of Section 183 of the Education Sciences Reform Act of 2002 (PL 107-279) and Title V, subtitle A of the E-Government Act of 2002 (PL 107-347) for any purpose other than statistical purposes specified in the NCES survey, project or contract;
- (ii) make any disclosure or publication whereby a sample unit or survey respondent could be identified or the data furnished by or related to any particular person under this section could be identified; or
- (iii) permit anyone other than the individuals authorized by the Commissioner of the National Center for Education Statistics to examine the individual reports.

\_\_\_\_\_  
(Signature)

(The penalty for unlawful disclosure is a fine of not more than \$250,000 [under 18 U.S.C. 3571] or imprisonment for not more than 5 years [under 18 U.S.C. 3559], or both. The word "swear" should be stricken out wherever it appears when a person elects to affirm the affidavit rather than to swear to it.)

\_\_\_\_\_  
State of \_\_\_\_\_

\_\_\_\_\_  
County of \_\_\_\_\_

Subscribed and sworn/affirmed before me, \_\_\_\_\_ a Notary Public in and for  
\_\_\_\_\_ County, State of \_\_\_\_\_, on this date, \_\_\_\_\_.

\_\_\_\_\_  
Notary Public

My commission expires: \_\_\_\_\_

# **Appendix D**

## **Introductory Letters to Students and Parents**

---



## **D.1 BPS:04/09 Information Brochure**

### **2004/09 Beginning Postsecondary Students (BPS:04/09)**

What has happened in your life in the past few years? Have you earned a college degree, begun a career, or enrolled in graduate school? The Beginning Postsecondary Studies (BPS) Longitudinal Study wants to know!

#### **Why was I chosen to participate?**

You were selected to participate in BPS because you first enrolled in postsecondary education during the 2002–03 academic year. Study participants were interviewed for the first time in 2003. Now, we are contacting you for the third and final time, to find out about your experiences in education and employment during the past few years.

#### **What is BPS about?**

We are interviewing more than 1,100 people like you, selected from approximately 173 institutions, to find out about their experiences during the 6 years since they first enrolled in postsecondary education. We need your help and comments to collect information about your:

- Experience in the workforce
- Experience in, or plans for, graduate education
- Earnings and ability to repay student loans
- Family status
- Participation in civic activities

#### **Who is conducting the study?**

BPS is sponsored by the National Center for Education Statistics (NCES) in the U.S. Department of Education's Institute of Education Sciences. The study is being conducted under contract by RTI International (RTI), a nonprofit research organization located in North Carolina. BPS is authorized by the Education Sciences Reform Act of 2002 (Public Law 107-279).

#### **When will the study be conducted?**

Beginning in March of 2008, students who began their postsecondary education during the 2002–03 academic year will be contacted to complete the BPS web-based interview. Students who do not complete the self-administered web-based interview within 3 weeks will be contacted by a professionally trained telephone interviewer and asked to complete the interview over the telephone.

#### **What have we learned from BPS?**

The last BPS study, which involved students who first enrolled in postsecondary education (including community colleges, 4-year colleges, universities, and vocational schools) during the 2002–03 academic year, showed that:

- 83% of beginning students (who were recent high school graduates) enrolled full-time in postsecondary institutions with plans for a bachelor's degree, were still enrolled at a postsecondary institution 3 years later.
- 62% of beginning students, who first enrolled at a public 2-year institution and then transferred to another institution, had not yet attained a degree and were still enrolled at some postsecondary institution 3 years later.
- 50% of beginning independent students who first enrolled at 4-year institutions had not attained a degree and were no longer enrolled 3 years later.

- Among students who were recent high school graduates first enrolled at public 2-year institutions with associate's degree plans, 23% attained an associate's degree from that institution, 31% were still enrolled there without a degree, 24% had transferred elsewhere without a degree, and 21% had not attained a degree and were not enrolled there or anywhere else 3 years later.

### **Why should I participate?**

Congress and other policymakers use data from BPS when they consider how new legislation will affect postsecondary students. Information from the survey helps them answer questions such as:

- What percentage of beginning students complete their degree programs?
- Do students who receive financial aid complete their programs in the same length of time as those who do not receive financial aid?
- Why do students leave school?
- Is increased financial aid associated with completion?
- How long does it take students to complete various types of degree programs?

Although participation in the study is voluntary, there is no substitute for *your* responses.

### **Will my answers be kept confidential?**

Interview responses, combined with student record information, may be used only for statistical purposes and may not be disclosed, or used, in personally identifiable form for any other purpose, unless otherwise compelled by law.

The following procedures have been implemented to ensure the confidentiality of your responses:

- Your answers are secured behind firewalls and are encrypted during Internet transmission using Secure Socket Layer (SSL) protocol. All data entry modules are password protected and require the user to log in before accessing confidential data.
- Project staff may be severely fined or imprisoned for disclosure of individual responses.
- Confidentiality procedures are reviewed and approved by RTI's Institutional Review Board (Committee for Protection of Human Subjects).

### **How do I participate?**

You may complete the BPS interview in one of two ways:

1. Log in to the study website at <https://surveys.nces.ed.gov/bps> then simply select the login link and enter your Study ID and password when prompted. If you need assistance, call the BPS Help Desk at 1-800-334-2321, or contact us via e-mail at [bps@rti.org](mailto:bps@rti.org).
2. Complete the interview by telephone. If you prefer to complete the BPS interview by telephone with a professionally trained interviewer from RTI, you may call the BPS Help Desk at 1-800-334-2321.

### **How long will it take?**

On average, the interview lasts about 25 minutes. Web interview time will vary depending on your Internet connection speed.

### **Are there any benefits or risks to my participation?**

Your participation in BPS will help ensure the success of the study and help policymakers and educators better understand the costs and benefits of postsecondary education. There are no other known benefits to

your participation. The risk of participation in this study relates to data security and is minimal, given the strict confidentiality and security procedures in place.

**How can I get a copy of the results?**

Publications from previous studies are available free of charge on the NCES website at <http://www.nces.ed.gov/pubsearch/>. Results from the current study are scheduled to be released in 2009 and will be posted on the NCES site as soon as they are available.

**Where can I get more information about BPS?**

For more information on participating, visit the study's website at <http://surveys.nces.ed.gov/bps>.

To make an appointment to complete the interview by telephone, or for assistance in completing the web interview, call 1-800-334-2321.

You may also contact us by

E-mail: [bps@rti.org](mailto:bps@rti.org)

Fax: 919-541-7014

TDD: 1-877-212-7230

If you have questions or concerns, you may contact the following:

BPS Project Director (RTI)

Dr. Jennifer Wine

1-877-225-8470 (toll-free)

[jennifer@rti.org](mailto:jennifer@rti.org)

BPS Project Officer (NCES)

Dr. Tracey Hunt-White

1-202- 502-7438

[Tracy.Hunt-White@ed.gov](mailto:Tracy.Hunt-White@ed.gov)

If you have questions about your rights as a study participant, please call RTI's Institutional Review Board at 1-866-214-2043 (toll-free) or send an e-mail message to [orpe@rti.org](mailto:orpe@rti.org) regarding IRB number 11899.

[NCES logo]

National Center for Education Statistics

Institute of Education Sciences

U.S. Department of Education

## D.2 Initial Contact Letter to Parents

Date

«Cpfname» «Cpmname» «Cplname»  
«CAddr1»  
«CAddr2»  
«CCity», «CState» «CZip» «CZip4»

Study ID: «caseid»  
«panelinfo»

Dear «Cpfname» «Cplname»:

Students who first began their postsecondary education in the 2002–03 school year were selected to participate in the Beginning Postsecondary Students Longitudinal Study (BPS) sponsored by the U.S. Department of Education. This study collects information, over time, on students' postsecondary experiences, work while enrolled, persistence in school, degree completion, and employment following enrollment. The enclosed pamphlet describes BPS in more detail and presents selected findings from prior BPS studies.

«sPfname» «sPlname» has been randomly selected to participate in the next round of BPS. We need your help to update our records for «pronoun2». «text1». ***Please take a few minutes to update the enclosed Address Update Information sheet and return it in the enclosed postage paid envelope.***

We will be re-contacting «sPfname» and other study participants beginning in early spring 2006 to ask questions about their recent education and employment experiences. Your help in updating our records will ensure the success of the study. Only a limited number of people were selected for the study. Therefore, each person selected represents many others, and it is extremely important that we be able to contact them. If «sPfname» completes the interview on the Web by the date provided «pronoun2», «pronoun1» will **receive \$«IncAmt»** as a token of our appreciation.

NCES has contracted with RTI International to conduct this cycle of the BPS data collection. Please be assured that both NCES and RTI follow strict confidentiality procedures to protect the privacy of study participants and the confidentiality of the information collected. If you have any questions about the study, please call the RTI study director, Dr. Jennifer Wine, toll-free at 1-877-225-8470.

We sincerely appreciate your assistance and thank you in advance for helping us conduct this important study.

Sincerely,



Mark Schneider  
Commissioner  
National Center for Education Statistics  
Enclosures

Go to: <a href="http://surveys.nces.ed.gov/bps">http://surveys.nces.ed.gov/bps</a> Your study ID: «caseid»
---



The National Center for Education Statistics (NCES) of the U.S. Department of Education is authorized by federal law (Public Law 107-279) to conduct the Beginning Postsecondary Students Longitudinal Study. NCES will authorize only a limited number of researchers to have access to information which could be used to identify individuals. They may use the data for statistical purposes only and are subject to fines and imprisonment for misuse.

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number of this information collection is 1850-0631, and it is completely voluntary. The time required to complete this information collection is estimated to average 25 minutes per response, including the time to review instructions, search existing data resources, gather the data needed, and complete and review the information collection. If you have any comments concerning the accuracy of the time estimate or suggestions for improving the interview, please write to: U.S. Department of Education, Washington, DC 20006. If you have comments or concerns regarding the status of your individual interview, write directly to: Tracy Hunt-White, National Center for Education Statistics, 1990 K Street, NW, Washington, DC 20006.

### D.3 Initial Contact Letter to Prior BPS Respondents

Date

«fname» «mname» «lname» «suffix»

«addr1»

«addr2»

«city», «state» «zip»

Study ID: «caseid»  
«panelinfo»

Dear «fname» «lname»:

In 2005, you participated in the Beginning Postsecondary Students Longitudinal Study (BPS) for the U.S. Department of Education that focused on your early experiences as a postsecondary student and how you paid for your school expenses that year. We are now seeking your help with a follow-up interview with you and students like you who began their education in the 2002–03 academic year. We would like to know what you have been doing since 2005, in terms of your education and your work experience. This study collects information, over time, on students' postsecondary experiences, work while enrolled, persistence in school, degree completion, and employment following enrollment.

The interview will take about 25 minutes to complete on the Web whenever it is convenient for you. When data collection begins in March, you will receive a letter that will provide specific information on how to participate. If you complete the interview on the Web by the date indicated on the letter, you will receive \$«IncAmt» as a token of our appreciation.

Your participation, while voluntary, is critical to the study's success. By law, we are required to protect your privacy. Your responses will be secured behind firewalls and will be encrypted during Internet transmission. Your responses may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose, except as required by law.

Enclosed you will find a brochure with a brief description of BPS, findings from prior BPS studies, and confidentiality procedures. If your contact information has changed, you may provide your new address and telephone number on the enclosed address update sheet and return it to us in the business reply envelope provided. To find out more about this BPS interview and to update your contact information online, visit the study's website at <https://surveys.nces.ed.gov/bps/>.

The BPS study is being conducted for the U. S. Department of Education's National Center for Education Statistics by RTI International. If you have any questions about the study, please call the RTI study director, Dr. Jennifer Wine, toll-free at 1-877-225-8470.

We thank you in advance for your participation in this important study. Your cooperation is greatly appreciated.

Sincerely,



Mark S. Schneider  
Commissioner  
National Center for Education Statistics  
Enclosures

Go to: <a href="http://surveys.nces.ed.gov/bps">http://surveys.nces.ed.gov/bps</a> Your study ID: «caseid»
---

The National Center for Education Statistics (NCES) of the U.S. Department of Education is authorized by federal law (Public Law 107-279) to conduct the Beginning Postsecondary Students Longitudinal Study. NCES will authorize only a limited number of researchers to have access to information which could be used to identify individuals. They may use the data for statistical purposes only and are subject to fines and imprisonment for misuse.

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number of this information collection is 1850-0631, and it is completely voluntary. The time required to complete this information collection is estimated to average 25 minutes per response, including the time to review instructions, search existing data resources, gather the data needed, and complete and review the information collection. If you have any comments concerning the accuracy of the time estimate or suggestions for improving the interview, please write to: U.S. Department of Education, Washington, DC 20006. If you have comments or concerns regarding the status of your individual interview, write directly to: Tracy Hunt-White, National Center for Education Statistics, 1990 K Street, NW, Washington, DC 20006.

## D.4 Initial Contact Letter to Prior BPS Nonrespondents

Date

«fname» «mname» «lname» «suffix»  
«addr1»  
«addr2»  
«city», «state» «zip»

Study ID: «caseid»  
«panelinfo»

Dear «fname» «lname»:

You have been randomly selected to take part in the 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS) sponsored by the U.S. Department of Education. This study collects information from you and students like you who began their postsecondary education in the 2002–03 academic year, such as postsecondary experiences, work while enrolled, persistence in school, degree completion, and employment following enrollment.

The interview will take about 25 minutes to complete on the Web whenever it is convenient for you. When data collection begins in March, you will receive a letter that will provide specific information on how to participate. If you complete the interview on the Web by the date indicated on the letter, you will receive \$ «IncAmt» as a token of our appreciation.

Your participation, while voluntary, is critical to the study's success. By law, we are required to protect your privacy. Your responses will be secured behind firewalls and will be encrypted during Internet transmission. Your responses may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose, except as required by law.

Enclosed you will find a brochure with a brief description of BPS, findings from prior BPS studies, and confidentiality procedures. If your contact information has changed, you may provide your new address and telephone number on the enclosed address update sheet and return it to us in the business reply envelope provided. To find out more about this BPS interview and to update your contact information online, visit the study's website at <https://surveys.nces.ed.gov/bps/>.

The BPS study is being conducted for the U. S. Department of Education's National Center for Education Statistics by RTI International. If you have any questions about the study, please call the RTI study director, Dr. Jennifer Wine, toll-free at 1-877-225-8470.

We thank you in advance for your participation in this important study. Your cooperation is greatly appreciated.

Sincerely,



Mark S. Schneider  
Commissioner  
National Center for Education Statistics  
Enclosures

Go to: <a href="http://surveys.nces.ed.gov/bps">http://surveys.nces.ed.gov/bps</a> Your study ID: «caseid»
---

The National Center for Education Statistics (NCES) of the U.S. Department of Education is authorized by federal law (Public Law 107-279) to conduct the Beginning Postsecondary Students Longitudinal Study. NCES will authorize only a limited number of researchers to have access to information which could be used to identify individuals. They may use the data for statistical purposes only and are subject to fines and imprisonment for misuse.

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number of this information collection is 1850-0631, and it is completely voluntary. The time required to complete this information collection is estimated to average 25 minutes per response, including the time to review instructions, search existing data resources, gather the data needed, and complete and review the information collection. If you have any comments concerning the accuracy of the time estimate or suggestions for improving the interview, please write to: U.S. Department of Education, Washington, DC 20006. If you have comments or concerns regarding the status of your individual interview, write directly to: Tracy Hunt-White, National Center for Education Statistics, 1990 K Street, NW, Washington, DC 20006.

**D.5 Address Update Sheet**

**Beginning Postsecondary Students Longitudinal Study  
Address Update Information**

Study ID: «caseid»

1. Please review your current address displayed on the left side of the address box below. Check here if all information pre-printed in this section is **correct**.....

If your address is not correct or is not current, **please update** it in the space provided on the right side of the box. To update your locating information online, visit our secure website at [//surveys.nces.ed.gov/bps](http://surveys.nces.ed.gov/bps) and refer to your Study ID **«caseid»**.

«fname» «mname» «lname» «suffix»	Name: _____
«addr1»	Address: _____
«addr2»	_____
«city», «state» «zip»«zip4»	Home phone: ( ) _____
«sarea1» «sphone1»	Work phone: ( ) _____
«panelinfo»	Cell phone: ( ) _____

2. We will send an e-mail to let you know that data collection has begun. Please provide an e-mail address that we can use to contact you.

Primary e-mail address: \_\_\_\_\_

Alternative e-mail address: \_\_\_\_\_

3. Would you like us to send you a text message on your cell phone when data collection is about to begin? Please check one..... Yes  No

If yes, what cell number should we use? \_\_\_\_\_

**Thank you for your assistance.  
Please return this page in the enclosed postage paid envelope.**

**D.6 Data Collection Announcement (No Prepaid Incentive)**

«fname» «mname» «lname» «suffix»  
«addr1»  
«addr2»  
«city», «state» «zip»

Study ID: «caseid»  
«panelinfo»

Dear «fname» «lname»:

Interviews for the next Beginning Postsecondary Students Longitudinal Study (BPS) are now being conducted. The interview will take about 25 minutes to complete on the Web whenever it is convenient for you. If you complete your BPS interview by «date», **you will receive a check for \$«IncAmt» as a token of our appreciation.**

You may access the web interview by logging on to our secure website at <https://surveys.nces.ed.gov/bps/> using the Study ID provided below.

**Study ID** = «caseid»

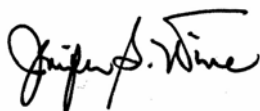
**Password** = «password»

Enclosed you will find a pamphlet with a brief description of BPS, findings from prior BPS studies, and our confidentiality procedures. Your participation, while voluntary, is critical to the study's success. By law, we are required to protect your privacy. Your responses will be secured behind firewalls and will be encrypted during Internet transmission. Your responses may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose, except as required by law. If you have questions or problems completing your interview online, simply call the **BPS Help Desk at 1-800-334-2321**.

If you have any questions or concerns about the study itself, please contact the BPS Project Director, Dr. Jennifer Wine, toll free at 1-877-225-8470 (e-mail: [jennifer@rti.org](mailto:jennifer@rti.org)), or the NCES Project Officer, Dr. Tracy Hunt-White, at 202-502-7438 (e-mail: [tracy.hunt-white@ed.gov](mailto:tracy.hunt-white@ed.gov)).

Thank you in advance for making BPS a success.

Sincerely,

A handwritten signature in black ink that reads "Jennifer Wine". The signature is written in a cursive style with a large initial "J" and a long, sweeping underline.

Jennifer Wine, Ph.D.  
Project Director

## D.7 Data Collection Announcement (with Prepaid Incentive)

«fname» «mname» «lname» «suffix»  
«addr1»  
«addr2»  
«city», «state» «zip»

Study ID: «caseid»  
«panelinfo»

Dear «fname» «lname»:

Interviews for the next Beginning Postsecondary Students Longitudinal Study (BPS) are now being conducted. The interview will take about 25 minutes to complete on the Web whenever it is convenient for you. Please find enclosed \$5 (check/cash) as a token of our appreciation for completing the BPS interview. If you complete your BPS interview by «date», **we will also send you a check for an additional \$«IncAmt».**

You may access the web interview by logging on to our secure website at <https://surveys.nces.ed.gov/bps/> using the Study ID provided below.

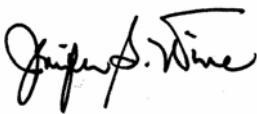
**Study ID** = «caseid»  
**Password** = «password»

Enclosed you will find a pamphlet with a brief description of BPS, findings from prior BPS studies, and our confidentiality procedures. Your participation, while voluntary, is critical to the study's success. By law, we are required to protect your privacy. Your responses will be secured behind firewalls and will be encrypted during Internet transmission. Your responses may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose, except as required by law. If you have questions or problems completing your interview online, simply call the **BPS Help Desk at 1-800-334-2321.**

If you have any questions or concerns about the study itself, please contact the BPS Project Director, Dr. Jennifer Wine, toll free at 1-877-225-8470 (e-mail: [jennifer@rti.org](mailto:jennifer@rti.org)), or the NCES Project Officer, Dr. Tracy Hunt-White, at 202-502-7438 (e-mail: [tracy.hunt-white@ed.gov](mailto:tracy.hunt-white@ed.gov)).

Thank you in advance for making BPS a success.

Sincerely,



Jennifer Wine, Ph.D.  
Project Director



**Appendix E**  
**Sample Design for the**  
**NPSAS:04 Full-Scale Study**

---



## Appendix E

### Sample Design for the NPSAS:04 Full-scale Study

#### E.1. Respondents Universe

##### E.1.1 Institution Universe

The institutions eligible for NPSAS:04 were required during the 2003–04 academic year to

- offer an educational program designed for persons who have completed secondary education;
- offer at least one academic, occupational, or vocational program of study lasting at least 3 months or 300 clock hours;
- offer courses that are open to more than the employees or members of the company or group (e.g., union) that administers the institution;
- be eligible to participate in Title IV programs;
- be located in the 50 states, the District of Columbia, or Puerto Rico; and
- be other than a U.S. Service Academy.

Institutions providing only avocational, recreational, or remedial courses or only in-house courses for their own employees were excluded. U.S. Service Academies were excluded because of their unique funding/tuition base.

Consistency of this definition of the institution universe relative to previous NPSAS studies is discussed in section B.1.a.

##### E.1.2 Student Universe

The eligible students to be listed by the sample institutions for selection of the student sample for NPSAS:04 are those who attended a NPSAS-eligible institution at any time from July 1, 2003 through April 30, 2004 and who were:

- enrolled in *either* (a) an academic program; (b) at least one course for credit that could be applied toward fulfilling the requirements for an academic degree; *or* (c) an occupational or vocational program that required at least 3 months or 300 clock hours of instruction to receive a degree, certificate, or other formal award; and
- not currently enrolled in high school; and
- not enrolled *solely* in a GED or other high school completion program.

Students concurrently enrolled in high school or who were enrolled only in a GED or other high school completion program were not eligible. Students taking only courses for remedial or avocational purposes and not receiving credit, those only auditing courses, and those taking courses only for leisure, rather than as part of an academic, occupational, or vocational program or course of instruction, were not eligible.

## E.2. Statistical Methodology

### E.2.1 Institution Sample

The institutional sampling frame for NPSAS:04 was constructed from the 2001 Integrated Postsecondary Education Data System (IPEDS) Institutional Characteristics (IC) file, the 2001 IPEDS Completions file, and the 2001 IPEDS Fall Enrollment file. The sample for NPSAS:04 was selected prior to selection of the field test institutions. Then, the sample of field test institutions was selected purposively from the complement of the full-scale sample institutions. This ensured that no institutions were in both the field test and full-scale samples without affecting the representativeness of the full-scale sample.

Records on the IPEDS IC file that did not represent NPSAS-eligible institutions were deleted. Hence, records that represented central offices, U.S. service academies, or institutions located outside the United States and Puerto Rico were deleted. The IPEDS files were then “cleaned” to resolve the following types of problems:

- missing or zero enrollment or completions data, because these data are needed to compute measures of size for sample selection; and
- unusually large or small enrollment, especially if imputed, because, if incorrect, these data would result in inappropriate probabilities of selection and sample allocation.

Table E-1 presents the allocation of the NPSAS:04 institutional sample to the nine institutional sampling strata. The number of sample institutions is 1,500, accounting for historical rates of participation in CADE, institution eligibility rates, and rates with which sample institutions provide student lists for sample selection. Table E-1 shows the resulting institutional sample sizes, which was 1,370 institutions providing lists for sample selection and 1,285 institutions providing CADE data.

We selected a direct, unclustered sample of institutions, like the sample selected for NPSAS:2000 and NPSAS:96, rather than a clustered sample like those used for previous NPSAS studies. A subset of approximately 1,000 institutions selected for NPSAS was also in the 2004 National Study of Postsecondary Faculty (NSOPF:04) sample. In addition, to allow analysis of the effects of state tuition and student aid policies in individual states, representative samples of institutions were selected from three strata—public 2-year institutions; public 4-year institutions; and private not-for-profit 4-year institutions—in each of the following 12 states: CA, CT, DE, GA, IL, IN, MN, NE, NY, OR, TN, and TX.

The NPSAS:04 student sampling design was based on fixed stratum sampling rates, not fixed stratum sample sizes, as discussed below. The student sampling rates were designed to produce about 80,925 student web/CATI respondents, distributed by institutional and student sampling strata as shown in table E-2: about 22,091 first-time beginner (FTB) students; about 45,401 other undergraduate students; and about 13,433 graduate and first-professional students.

There were two student sampling strata for undergraduates (FTB and other undergraduates), three student sampling strata for graduate students (master’s, doctoral, and other graduate students), and one stratum for first-professional students. Differential sampling rates were used for the three types of graduate students to get adequate representation of students pursuing doctoral degrees and to limit the sample size for “other” graduate students, who are of limited inferential interest.

**Table E-1. NPSAS:04 institution sample sizes and yield**

Institutional sector	Institutions				
	Frame	Sample	Eligible	List respondents	CADE respondents
Total	6,674	1,500	1,483	1,370	1,285
Public less-than-2-year	321	50	48	41	37
Public 2-year	1,225	322	319	303	288
Public 4-year nondoctorate granting	358	150	150	143	136
Public 4-year doctorate granting	276	251	251	238	226
Private not-for-profit 2-year or less	379	60	55	52	48
Private not-for-profit, 4-year nondoctorate granting	1,076	252	249	212	195
Private not-for-profit 4-year doctorate granting	537	165	165	155	147
Private for-profit less-than-2-year	1,390	150	146	131	118
Private for-profit 2-year or more	1,112	100	100	95	90

NOTE: Institution counts based on the Fall 2000 IPEDS data collection. Institution eligibility rate: 98.9 percent. Institution list response rate: 92.4 percent. 1,000 of the 1,500 institutions also are in the NSOPF:2004 sample.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study, "Field Test Methodology Report" (NPSAS:04).

The NPSAS:04 web and CATI data collection procedures were expected to produce about a 70 percent student response rate based on historical experience. Given prior NPSAS experience regarding institutional CADE response rates and sample student eligibility rates, the student sample sizes planned to support the desired student web/CATI yield are shown in table E-2. We selected approximately 121,684 sample students for NPSAS:04, including 36,228 FTBs; 67,596 other undergraduate students; and 17,860 graduate and first-professional students.

The numbers of FTB students shown in table E-2 include both "true" FTBs who began their postsecondary education for the first time during the NPSAS field test year and effective FTBs who had not completed a postsecondary class prior to the NPSAS field test year. Unfortunately, postsecondary institutions cannot readily identify their FTB students. Therefore, the NPSAS sampling rates for students identified as FTBs and other undergraduate students by the sample institutions were adjusted to yield the sample sizes shown in table E-2 after accounting for expected false positive and false negative rates. The false-positive and false-negative FTB rates experienced in NPSAS:96 were used to set appropriate sampling rates for the NPSAS:04 field test.<sup>1</sup>

<sup>1</sup> The NPSAS:96 false-positive rate was 27.6 percent for students identified as potential FTBs by the sample institutions, and the false-negative rate was 9.1 percent for those identified as other undergraduate students.



**Table E-2. NPSAS:04 student sample sizes and yield**

Institutional sector	Web/CATI respondents				Eligible students				Sample student			
	Total	BPS	Other UG	G1P	Total	BPS	Other UG	G1P	Total	BPS	Other UG	G1P
Total	80,925	22,091	45,401	13,433	114,738	33,033	63,845	17,860	121,684	36,228	67,596	17,860
Public less-than-2-year	1,442	650	792	#	2,218	1,000	1,218	#	2,773	1,250	1,523	#
Public 2-year	14,410	7,096	7,314	#	22,169	10,917	11,252	#	24,632	12,130	12,502	#
Public 4-year nondoctorate granting	11,152	2,157	7,645	1,350	15,022	2,915	10,331	1,776	15,719	3,068	10,875	1,776
Public 4-year doctorate granting	23,545	2,882	14,730	5,933	31,607	3,895	19,905	7,807	32,092	3,974	20,311	7,807
Private not-for-profit 2-year or less	2,147	1,265	882	#	3,303	1,946	1,357	#	3,476	2,048	1,428	#
Private not-for-profit 4-year nondoctorate granting	8,898	1,646	6,206	1,046	12,005	2,224	8,386	1,395	12,563	2,341	8,827	1,395
Private not-for-profit 4-year doctorate granting	9,945	1,042	4,601	4,302	13,362	1,408	6,218	5,736	13,518	1,437	6,345	5,736
Private for-profit less-than-2-year	5,459	3,840	1,619	#	9,098	6,400	2,698	#	10,703	7,529	3,174	#
Private for-profit 2-year or more	3,927	1,513	1,612	802	5,954	2,328	2,480	1,146	6,208	2,451	2,611	1,146

# Rounds to zero.

NOTE: Student eligibility rate: 94.3 percent. Student response rate: 70.5 percent. BPS = Confirmed first-time beginners (design will account for false positive and false negative FTB rates to yield these sample sizes)

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study, "Field Test Methodology Report" (NPSAS:04).





To develop the mathematical foundation for the institutional and student sampling design, we use the following notation to represent the institutional and student/faculty sampling strata:

$r = 1, 2, \dots, 58$  indexes the institutional strata, and

$s = 1, 2, \dots, 11$  indexes the student/faculty strata.

Note that the NSOPF sample of institutions was a subset of the NPSAS institutions, so the institution strata were expanded to accommodate the selection of certain types of institutions for NSOPF. The strata also accounted for selection of institutions in the 12 states where there were representative samples. The institution measure of size (described below) accounted for student as well as for faculty counts and sampling rates.

We further define the following notation:

$j = 1, 2, \dots, J(r)$  indexes the institutions that belong to institutional stratum “r,”

$M_{rs}(j)$  = number of students and faculty during the NPSAS year who belong to person stratum “s” at the j-th institution in stratum “r” based on the latest IPEDS data, and

$m_{rs}$  = number of students and faculty to be selected from student stratum “s” within the r-th institutional stratum, per table V.2 for students, referred to henceforth as person stratum “rs.”

The overall population sampling rate for student stratum “rs” is then given by

$$f_{rs} = m_{rs} / M_{rs}(+, +) ,$$

where

$$M_{rs}(+) = \sum_{j=1}^{J(r)} M_{rs}(j) .$$

The person sampling rates,  $f_{rs}$ , were computed based on the final sample allocation and IPEDS data regarding the population sizes.

The composite measure of size for the j-th institution in stratum “r” will then be defined as

$$S_r(j) = \sum_{s=1}^{11} f_{rs} M_{rs}(j) ,$$

which is the number of persons that would be selected from the j-th institution if all institutions on the frame were to be sampled.

An independent sample of institutions was selected for each institutional stratum using Chromy’s sequential, pmr sampling algorithm to select institutions with probabilities proportional to their measures of size.<sup>2</sup> However, rather than allow multiple selections of sample institutions, we selected with certainty those institutions with expected frequencies of selection greater than unity (1.00), and we selected the remainder of the institutional sample from the

<sup>2</sup> Chromy, J.R. (1979). “Sequential Sample Selection Methods.” *Proceedings of the American Statistical Association Section on Survey Research Methods*, pp. 401–406.

remaining institutions in each stratum. This process made it unnecessary to select multiple second-stage samples of persons by precluding institutions with multiple selections at the first stage of sampling. Therefore, the expected frequency of selection for the  $j$ -th institution in institutional stratum “ $r$ ” is given by

$$S_r (+) = \sum_{j=1}^{J(r)} S_r (j),$$

where

$$\pi_r (j) = \begin{cases} \frac{n_r S_r (j)}{S_r (+)}, & \text{for non-certainty selections;} \\ 1, & \text{for certainty selections;} \end{cases}$$

and  $n_r$  is the number of non-certainty selections from stratum “ $r$ .”

Within each of the “ $r$ ” institutional strata, we stratified implicitly by sorting the stratum “ $r$ ” sampling frame in a serpentine manner (see Williams and Chromy, 1980<sup>3</sup>) by the following variables:

- HBCU (historically black colleges and universities);
- OBE Region (from the IPEDS IC file) with Alaska and Hawaii moved to Region 9 with Puerto Rico;
- state; and
- the institution measure of size.

The objectives of this additional, implicit stratification are to ensure some HBCUs, to ensure proportionate representation of all geographic regions and states, and to ensure representation of both large and small institutions.

## E.2.2 Student Sample

Many aspects of the procedures for obtaining and sampling from student lists were described for the field test, including

- obtaining as many lists as possible in machine-readable form, including e-mails, uploads to the project website, and diskettes or CD-ROMs;
- processing lists on a flow basis as they are received;
- unduplicating samples selected when an institution provides only a hard-copy list for each term of enrollment;
- ensuring that each sample institution receives a sufficient sample allocation that 30 respondents can be expected;

<sup>3</sup>Williams, R.L. and J.R. Chromy (1980). “SAS Sample Selection MACROS.” Proceedings of the *Fifth Annual SAS Users Group International Conference*, pp. 392–396.

- implementing quality assurance checks against the latest IPEDS data; and
- compiling a master sample file on a flow basis as sample students are selected, including student and institution sampling weight factors.

The procedures proposed for the field test were refined based on the results of the field test and implemented for the full-scale survey.

Student samples were selected as stratified, systematic random samples for both hard-copy and electronic lists primarily because of its ease of implementation with hard-copy lists. The student sampling rates were fixed for each sample institution, rather than the student sample sizes:

- to facilitate selecting the samples on a flow basis as the student lists were received from sample institutions;
- to facilitate unduplicating the samples selected when an institution provided only hard-copy lists by term; and
- because sampling at a fixed rate based on the overall stratum sampling rate and the institution probabilities of selection results in approximately equal overall probabilities of selection within student strata.

Recall that the overall population sampling rate for student stratum “rs” is given by

$$f_{rs} = m_{rs} / M_{rs}(+) ,$$

where

$$M_{rs}(+) = \sum_{j=1}^{J(r)} M_{rs}(j) .$$

For the unconditional probability of selection to be a constant for all eligible students in stratum “rs,” the overall probability of selection should be the overall student sampling fraction,  $f_{rs}$ ; i.e., we must ensure that

$$\frac{m_{rs}(j)}{M_{rs}(j)} \pi_r(j) = f_{rs} ,$$

or equivalently,

$$m_{rs}(j) = f_{rs} \frac{M_{rs}(j)}{\pi_r(j)} .$$

Thus, the conditional sampling rate for stratum “rs,” given selection of the j-th institution, becomes

$$f_{rs|j} = f_{rs} / \pi_r(j) .$$

However, in this case, the desired overall student sample size,  $m_s$ , is achieved only *in expectation* over all possible samples.

Achieving the desired sample sizes with equal probabilities within strata in the particular sample selected and simultaneously adjusting for institutional nonresponse and ineligibility requires that

$$\sum_{j \in R} m_{rs}(j) = m_{rs} ,$$

where “R” denotes the set of eligible, responding institutions. If we let the conditional student sampling rate for stratum “rs” in the j-th institution be

$$\hat{f}_{rs|j} = \hat{f}_{rs} / \pi_r(j) ,$$

we then require

$$\sum_{i \in R} \hat{f}_{rs} \frac{M_{rs}(j)}{\pi_r(j)} = m_{rs} ,$$

or equivalently,

$$\hat{f}_{rs} = m_{rs} / \hat{M}_{rs} ,$$

where

$$\hat{M}_{rs} = \frac{\sum_{j \in R} M_{rs}(j)}{\pi_r(j)} .$$

Since it was necessary to set the student sampling rates before we had complete information on eligibility and response status,  $\hat{M}_{rs}$  was calculated as follows:

$$\hat{M}_{rs} = \sum_{j \in S} \frac{M_{rs}(j)}{\pi_r(j)} * [ E_r R_r E_{rs} ] ,$$

where “S” denotes the set of all sample institutions,

$E_r$  = the institutional eligibility factor for institutional stratum “r,”

$R_r$  = the institutional response factor for institutional stratum “r,”

$E_{rs}$  = the student eligibility factor for student stratum “rs.”

NPSAS is a multivariate survey with a  $p$ -dimensional parameter space,  $\theta = \{ \theta_j \}, j = 1, \dots, p$ , for which it is desired to estimate  $\theta$  with  $\hat{\theta}$  while minimizing cost (sample size) subject to a series of precision requirements. Consequently, optimal sampling rates can be obtained by solving the following nonlinear optimization problem:

$$\text{Minimize: } C = C_0 + \sum_{i=1}^I \left( C_{1i} n_{1i} + \sum_{f=1}^F C_{2if} n_{2if} \right)$$

$$\text{Subject to: } \begin{cases} V(\hat{\theta}_j) \leq v_j, \forall j \\ 2 \leq n_{1i} \leq N_{1i}, i \in [1, I] \\ 2 \leq n_{2if} \leq N_{2if}, f \in [1, F] \end{cases}$$

Where,

- $C_0$  = fixed cost not affected by changes in the numbers of institutions or students selected;
- $C_{1i}$  = variable cost per institution, depending on the number of participating institutions in the  $i^{\text{th}}$  institutional stratum;
- $n_{1i}$  = number of participating institutions in the  $i^{\text{th}}$  stratum;
- $C_{2if}$  = variable cost per student, depending on the number of participating students in the  $f^{\text{th}}$  student stratum within the  $i^{\text{th}}$  institutional stratum; and
- $n_{2if}$  = number of participating students in the  $f^{\text{th}}$  student stratum within the  $i^{\text{th}}$  institutional stratum.

In the above, variance constraints  $V(\hat{\theta}_j) \leq v_j$  correspond to precision requirements that have been specified by NCES for key survey estimates. Using data from the NPSAS:2000 and NPSAS:96 (and NSOPF:99 for faculty constraints), all of the required variance components and their associated precision constraints have been developed. Subsequently, the resulting nonlinear optimization problem to determine the most effective sample allocation was solved using Chromy's algorithm<sup>4</sup> to obtain feasible solutions to the above problem.

The large sample sizes proposed for NPSAS:04 were required to achieve the many objectives of the study, including estimates for three domains—public 2-year, public 4-year, and private not-for-profit 4-year institutions—in each of 12 states. A baseline cohort of FTBs must be selected for the BPS studies. Moreover, many NPSAS:04 statistical analyses focus on relatively rare domains, thereby requiring large overall sample sizes and disparate sampling rates. Discussions with NCES have been used to identify the domains of interest and the study will be designed to ensure adequate sample sizes for those domains.

---

<sup>4</sup>Chromy, J.R. (1987). "Design Optimization with Multiple Objectives." *Proceedings of the American Statistical Association*, Section on Survey Research Methods.



**Appendix F**  
**Sample Designs for the BPS:04/06**  
**and BPS:04/09 Full-Scale Studies**

---





## Appendix F

### Sample Designs for the BPS:04/06 and BPS:04/09 Full-Scale Studies

The sample design for the base-year study (NPSAS:04), in which the BPS:04/06 and BPS:04/09 cohort was identified, was described in appendix E. This appendix provides a description of the sample design for the second follow-up of the BPS:04 cohort (BPS:04/09). The students in the BPS:04/09 will be those who were determined to be BPS-eligible after the BPS:04/06 data collection. For this reason, the BPS:04/06 sample design and results are discussed first, followed by the BPS:04/09 sample design.

#### F.1 BPS:04/06 Student Sample

Students eligible for the BPS:04/06 full-scale study were those both eligible to participate in NPSAS:04 and identified as FTB students at NPSAS sample institutions in the 2003–04 academic year. Consistent with previous NPSAS studies, the students eligible for the NPSAS:04 full-scale study were those enrolled in eligible institutions who satisfied all the following eligibility requirements:

- were enrolled in *either* (1) an academic program; (2) at least one course for credit that could be applied toward fulfilling the requirements for an academic degree; or (3) an occupational or vocational program that required at least 3 months or 300 clock hours of instruction to receive a degree, certificate, or other formal award; and
- were not concurrently or solely enrolled in high school, or in a General Educational Development (GED) or other high school completion program.

NPSAS-eligible students who enrolled in a postsecondary institution during the “NPSAS year” (July 1, 2003–June 30, 2004) for the first time after completing high school were considered *pure* FTBs and were eligible for BPS:04/06. Those NPSAS-eligible students who had enrolled for at least one course after completing high school but had never completed a postsecondary course before the 2003–04 academic year were considered *effective* FTBs and were also eligible for the BPS:04/06 full-scale study. In the full-scale BPS data collection, we sampled from both (1) NPSAS:04 respondents who were identified as (pure or effective) FTBs and (2) NPSAS:04 nonrespondents who were *potential* (pure or effective) FTBs.

The BPS:04/06 student sample consisted of four groups according to their base-year response status:

1. NPSAS:04 study respondents who completed the student interview and were determined to be FTBs;
2. NPSAS:04 study respondents who completed the student interview but were initially determined to be non-FTB other undergraduates, and who were potential FTBs based on data from other sources;

3. a subsample of potential FTBs<sup>5</sup> who were NPSAS:04 study respondents but student interview nonrespondents; and
4. a subsample of potential FTBs who were NPSAS:04 study nonrespondents.

Multiple data sources were used to provide information regarding a student's FTB status during the NPSAS year, including the NPSAS:04 student interview, records from the student's base-year institution via CADE, and federal financial aid sources. The data elements that were examined to estimate a student's likelihood of being an FTB and to construct the frame for the BPS:04/06 sample included the following:

- indicator of FTB status from the institution enrollment lists used for NPSAS:04 student sampling;
- indicator of FTB status from the Central Processing System (CPS);
- indicator of FTB status from student-level data obtained from institutional records via CADE;
- student reports (obtained during the NPSAS:04 interview) indicating that they were FTBs during the 2003–04 academic year;
- year of high school graduation;
- receipt of Stafford loan (date loan was first received and number of years loan was received);
- receipt of Pell grant (date grant was first received and number of years grant was received); and
- undergraduate class level.

Using the above indicators, a set of decision rules was developed to identify which cases would be included or excluded from the follow-up sample, and which among those included would require additional eligibility screening.

The NPSAS:04 sample yielded the numbers of students below who either indicated that they were FTBs during the interview and had other institutional records or federal financial aid sources that supported this, or were identified as potential FTBs based on institutional records or federal financial aid sources:

- 24,994 students responding to the student interview indicated that they were FTBs during the 2003–04 academic year. Based on a review of the FTB status indicators above, 21,170 of these were identified for inclusion in the follow-up sample. Of the 21,170 included in the follow-up sample, 19,798 had other data that strongly supported their FTB status, and 1,372 of these students had some indications that they were not FTBs; these potential “false positives” were rescreened during the BPS:04/06 interview to confirm their status. The remaining 3,824 of the original

---

<sup>5</sup> A “potential FTB” is one who is expected to have been a first-time beginning student during the “NPSAS year” (July 1, 2003–June 30, 2004) but was not confirmed as such during the student interview. Students were identified as potential FTBs by their sample institution. Other data sources (CPS, CADE) also provide an indication of FTB status for the time period of interest.

24,994 were identified for exclusion from the follow-up when multiple data sources confirmed that they could not have been FTBs during the NPSAS year.

- 1,423 students were not originally classified as FTBs, but were potential FTBs based on either CPS data or because they had a high school graduation date in 2003 or 2004; these potential “false negatives” were also screened during the BPS:04/06 interview to verify their status.
- 8,863 students did not respond to the student interview but were classified as NPSAS:04 study respondents and were potential FTBs based on CADE or CPS data, more positive than negative indicators among the other variables, and any Stafford loans or Pell grants that began after 2003.
- 719 NPSAS:04 sample members were potential FTBs based on information from CADE or CPS, but did not respond to the student interview and did not have sufficient data to be classified as study respondents.

Table F-1 summarizes the distribution of the BPS:04/06 sample.

**Table F-1. Distribution of BPS:04/06 full-scale sample, by base-year response status**

Base-year response status	Number of cases
<b>Group 1</b>	
Base-year study respondent student interview respondents who were classified as FTBs <sup>1</sup>	24,994
Total to be included in sample	21,170
No additional screening required	19,798
Additional screening required	1,372
<b>Group 2</b>	
Base-year study respondent student interview respondents who were classified as <i>Other Undergraduate</i> (potential false negatives)	28,605
Likely FTB	1,423
<b>Group 3</b>	
Potential FTB: Base-year study respondent student interview nonrespondents	10,172
Likely FTB	8,863
Subsample	460
<b>Group 4</b>	
Potential FTB: Base-year study nonrespondents	3,887
Likely FTB	719
Subsample	40
<b>Final sample</b>	<b>23,093</b>

<sup>1</sup> Due to evidence indicating they were not eligible for inclusion in the cohort of FTBs, 3,824 base-year study respondents were removed from the follow-up sample.

NOTE: FTB = first-time beginner.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

As noted earlier, 9,582 NPSAS:04 student interview nonrespondents were classified as potential FTBs. Of these, 8,863 were NPSAS:04 study respondents who did not respond to the student interview, and 719 were NPSAS:04 study nonrespondents. NPSAS:04 student interview nonrespondents who were potential FTBs were subsampled for follow-up to improve the nonresponse bias reduction achieved through the nonresponse adjustments incorporated into the NPSAS:04 statistical analysis weights. For these students, sampling types were developed from the following characteristics:

- likelihood of being an FTB (medium, high); and
- tracing outcome (located, not located).<sup>6</sup>

Two factors, stratification by tracing outcome and the likelihood of being an FTB, were used to oversample the students most likely to be located and eligible for the study. The frame was also sorted by institutional sector to ensure representativeness of the sample.

A stratified sample of 500 was selected with probabilities proportional to their NPSAS:04 sampling weights. Table F-2 summarizes the BPS:04/06 counts of students eligible for the sample and the sample sizes, including the allocation of the subsample of 500 cases to the two groups of NPSAS:04 student interview nonrespondents. Given that the NPSAS:04 sampling weights were available for all student interview nonrespondents, they served as the basis for computing the BPS:04/06 analysis weights. Therefore, selection of the NPSAS:04 student interview nonrespondents with probabilities proportional to these weights was used to reduce the overall unequal weighting effects for the sample.

The BPS:04/06 sample consisted of 23,093 students. At the conclusion of the BPS:04/06 data collection, 17,707 students were initially determined to be eligible respondents, 4,548 were nonrespondents, and 838 were ineligible. Logistic models were developed to predict which of the nonrespondents were eligible. As a result of this step, 4,482 nonrespondents were classified as eligible. Additional cases were determined to be ineligible after comparing the BPS:04/06 sample members with the National Student Clearinghouse data, resulting in 18,644 eligible sample members.

Table F-3 shows the numbers of students determined to be eligible for BPS:04/06 through screening, modeling, and the comparison to the National Student Clearinghouse data, and also the number of respondents to the BPS:04/06 interview by type of institution.

All of the 18,644 students who were determined to be eligible for BPS:04/06 were retained on the analytic data file for BPS:04/06. Almost all of these students had some data from the NPSAS:04 interview or other data sources; BPS:04/06 interview data was imputed for the nonrespondents using a weighted hot deck imputation procedure.

Weights were constructed for use in analyzing the BPS:04/06 data. Starting with the NPSAS:04 weight, an adjustment was applied for subsampling the NPSAS interview nonrespondents. These weights were trimmed and smoothed, and calibrated to the total numbers

---

<sup>6</sup> The results from the advance tracing for BPS:04/06 were used to determine whether a student had been located. The National Change of Address file (NCOA) was used to obtain updated addresses for the student, then Telematch was used to obtain an updated telephone number. The student was classified as “located” if Telematch either returned a new telephone number or confirmed the current telephone number.

of students by institution type who were enrolled in the Fall of 2003, and those who were enrolled full time; the calibration totals were obtained from IPEDS.

**Table F-2. BPS:04/06 sample allocation for NPSAS:04 student interview, by type of student: 2006**

Type of student	Students eligible for sample	Sample size
Total	32,175	23,093
NPSAS:04 student interview respondents classified as FTBs during interview	21,170	21,170
Likely to be FTBs	19,798	19,798
Potential to be FTBs	1,372	1,372
NPSAS:04 student interview respondents who were potentially FTBs but were not classified as FTBs during interview	1,423	1,423
NPSAS:04 student interview nonrespondents	9,582	500
Study respondents who were student interview nonrespondents	8,863	460
Located, likely to be FTBs	3,591	275
Located, potential to be FTBs	552	30
Not located	4,720	155
Study nonrespondents	719	40
Located, likely to be FTBs	88	12
Located, potential to be FTBs	246	12
Not located	385	16

NOTE: The likelihood of being an FTB was determined from student financial aid data and institutional record (CADE) data and based on the number and type of indicators suggesting a student was an FTB. The location information was based on whether the advance tracing information from the 2004/06 Beginning Postsecondary Students Longitudinal Study (BPS:04/06) either confirmed the existing telephone number or yielded a new telephone number. Eligibility rates were assumed to be lower for NPSAS:04 study nonrespondents since less information was available for these students. FTB = first-time beginner.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2003–04 National Postsecondary Student Aid Study (NPSAS:04) and 2004/06 Beginning Postsecondary Students Longitudinal Study (BPS:04/06).

**Table F-3. BPS:04/06 eligible students and interview respondents, by institution type: 2006**

Type of institution	Eligible Students	
	Total	Number of respondents
Total	18,644	14,901
Public, less-than-2-year	547	424
Public, 2-year	6,346	4,834
Public, 4-year non-doctorate-granting	1,628	1,348
Public, 4-year doctorate-granting	3,153	2,724
Private not-for-profit less-than-4-year	533	403
Private not-for-profit 4-year non-doctorate-granting	2,130	1,867
Private, not-for-profit, 4-year doctorate-granting	1,688	1,481
Private for-profit, less-than-2-year	1,461	1,004
Private for-profit 2-year-or-more	1,158	816

## F.2 BPS:04/09 Student Sample

The BPS:04/09 sample will consist of all of the 18,644 student who were determined to be eligible during BPS:04/06. Table F-4 shows the sample distribution by prior response status (i.e., whether the student responded to the NPSAS:04 CATI interview and the BPS:04/06 interview. This table also shows that BPS:04/09 will have an expected 15,740 respondents. The estimated response rate for the BPS:04/09 full-scale study was estimated using the response rates obtained in the BPS:96/01 field test and full-scale studies.

Consistent with the BPS:04/06 data collection, all of the sample members (regardless of response status) will be included on the BPS:04/09 data file. Imputation methods, such as weighted hot deck, will be used to fill in missing item data for interview respondents as well as nonrespondents.

**Table F4. BPS:04/09 Full-scale study sample size and expected number of respondents, by response status to NPSAS:04 and BPS:04/06**

NPSAS:04 Study Respondent	NPSAS:04 CATI Respondent	BPS:04/06 Respondent	Number of Cases	Expected Response Rate (percent)	Expected Number of Respondents
Yes	Yes	Yes	14,751	89	13,128
Yes	Yes	No	3,510	66	2,317
Yes	No	Yes	138	83	115
Yes	No	No	218	75	164
No	No	Yes	12	80	10
No	No	No	15	50	8
Totals			18,644	84%	15,740

# **Appendix G**

## **Linkages to Extant Data Sources**

---





As part of the BPS:04/09 study, data from several extant databases will be collected for inclusion on the final study electronic codebook (ECB), to the extent allowed by the vendor, and as derived variables on the Data Analysis System (DAS). Both direct-pull and derived variables will be documented thoroughly for both the ECB and DAS.

### **G.1 File Merge with Department of Education Central Processing System**

RTI routinely performs file merges with data stored in the Department of Education's (ED's) Central Processing System (CPS) database which contains federal student aid application information. The merge with CPS can occur at any time for any number of cases, provided that the case has an apparently valid Social Security number (SSN) associated with it. RTI sends a file to CPS and receives in return a large data file containing all students who applied for federal aid. There are existing programs and procedures in place to prepare and submit files according to rigorous CPS standards. Similarly, programs and procedures have already been developed to receive and process data obtained from CPS. CPS has recently migrated to an Internet website for file matching, and RTI has been successful sending and receiving files using the new application.

RTI will electronically upload a file on the FAFSA secure website for matching which contains SSN and the first two letters of the sample member's last name (but no other information). Access to the site for the upload is restricted to authorized users who are registered and provide identification/authentication information (SSN, date of birth, and personal identification number) to the FAFSA data site. The file is retrieved by the Central Processing System or CPS (the FAFSA contractor data system) for linkage. The linked file, containing student aid applications for matched records, is then made available to us only through a secure connection (EdConnect) which requires username and password. All CPS files will be processed, edited, and documented for inclusion on the analytic data files.

The CPS data obtained for the BPS:04/09 data collection will cover academic years beginning with 2007–08. All CPS files will be processed, edited, and documented for inclusion in the ECB.

### **G.2 File Merge with National Student Loan Data System Disbursement**

RTI also conducts file merges with the National Student Loan Data System (NSLDS) to collect federal loan and Pell grant data. The resulting files contain cumulative amounts for each student's entire postsecondary education enrollment. The National Center for Education Statistics (NCES) has set up a secure data transfer system that uses its NCES member site and Secure Sockets Layer (SSL) technology. The system requires that both parties to the transfer be registered users of the NCES Members Site and that their Members Site privileges be set to allow use of the secure data transfer service. These privileges are set up and carefully controlled by ED's Institute of Education Sciences (IES) NCES Chief Technology Officer (CTO). This service has been designed by ED/NCES specifically for the secure transfer of electronic files containing personally identifying information (i.e., data protected under the Privacy Act or otherwise posing risk of disclosure) and can be used for NCES-to-Contractor; Contractor-to-Subcontractor; Subcontractor-to-Contractor; and Contractor-to-Other-Agency data transfers. The party uploading the information onto the secure server at NCES is responsible for deleting the file(s) after the successful transfer has been confirmed. Data transfers using this system include notification to ED/IES, the NCES CTO, and the NCES Deputy Commissioner as well as the ED/NCES project officer. The notification includes the names and affiliations of the parties in

the data exchange/transfer and the nature and approximate size of the data to be transferred. RTI has programs to create the files for the merge and also programs to read the data received. All matching processes are initiated by RTI staff providing a file with one record per sample member.

### **G.3 File Merge with the National Student Clearinghouse**

RTI plans to use the National Student Clearinghouse to obtain the *Student Tracker* data on institutions attended, enrollment dates, and degree completions for the BPS:04/09 sample. RTI has already set up an account with the Clearinghouse to facilitate the exchange of files securely over encrypted FTPS connections. The file containing sensitive student identifiers (name, date of birth, and SSN) will be encrypted using WinZip 10 then submitted to the Clearinghouse using its secure FTP site. All files received by the Clearinghouse will be securely stored using FIPS 140-2 validated AES encryption, the U.S. federal encryption standard. Matched files, containing data on enrollment dates, institution names, and degrees completed, will be returned to RTI using the same secure FTP site.