
NATIONAL CENTER FOR EDUCATION STATISTICS

May 2001

**The 1998 High School
Transcript Study
User's Guide
and Technical Report**

NATIONAL CENTER FOR EDUCATION STATISTICS

The 1998 High School Transcript Study User's Guide and Technical Report

Westat

Stephen Roey
Nancy Caldwell
Keith Rust
Eyal Blumstein
Tom Krenzke
Stan Legum
Judy Kuhn
Mark Waksberg

Intelligent Automation, Inc.

Jacqueline Haynes

National Center for Education Statistics

Janis Brown, Project Officer

NATIONAL CENTER FOR EDUCATION STATISTICS

U.S. Department of Education

Rod Paige
Secretary

National Center for Education Statistics

Gary W. Phillips
Acting Commissioner

The National Center for Education Statistics (NCES) is the primary federal entity for collecting, analyzing, and reporting data related to education in the United States and other nations. It fulfills a congressional mandate to collect, collate, analyze, and report full and complete statistics on the condition of education in the United States; conduct and publish reports and specialized analyses of the meaning and significance of such statistics; assist state and local education agencies in improving their statistical systems; and review and report on education activities in foreign countries.

NCES activities are designed to address high priority education data needs; provide consistent, reliable, complete, and accurate indicators of education status and trends; and report timely, useful, and high quality data to the U.S. Department of Education, the Congress, the states, other education policymakers, practitioners, data users, and the general public.

We strive to make our products available in a variety of formats and in language that is appropriate to a variety of audiences. You, as our customer, are the best judge of our success in communicating information effectively. If you have any comments or suggestions about this or any other NCES product or report, we would like to hear from you. Please direct your comments to:

National Center for Education Statistics
Office of Educational Research and Improvement
U.S. Department of Education
1990 K Street, NW
Washington, DC 20006-5651

May 2001

The NCES World Wide Web Home Page address is: <http://nces.ed.gov>
The NCES World Wide Web Electronic Catalog is: <http://nces.ed.gov/pubsearch/index.asp>

Suggested Citation

U.S. Department of Education, National Center for Education Statistics. *The 1998 High School Transcript Study Tabulations: Comparative Data on Credits Earned and Demographics for 1998, 1994, 1990, 1987, and 1982 High School Graduates*, NCES 2001-498, by Stephen Roey, Nancy Caldwell, Keith Rust, Eyal Blumstein, Tom Krenzke, Stan Legum, Judy Kuhn, Mark Waksberg, and Jacqueline Haynes. Project Officer, Janis Brown. Washington, DC: 2001.

For ordering information on this report, write:

U.S. Department of Education
ED Pubs
P.O. Box 1398
Jessup, MD 20794-1398

or call toll free 1-877-4ED-Pubs.

Content Contact:

Janis Brown
(202) 502-7419

ACKNOWLEDGMENTS

The authors appreciate the indepth review of this report by the following adjudication panel members: Patricia Dabbs, Steven Gorman, Andrew Kolstad, and Shi-Chang Wu from the National Center for Education Statistics and Vonda Kiplinger from ESSI.

The authors of this report are indebted to all the schools who participated in the study and thus provided the information that made this report possible. At Westat, in addition to the authors, Carol Hannaford and Robert Perkins contributed to the production of this report.

THE 1998 HIGH SCHOOL TRANSCRIPT STUDY USER'S GUIDE

TABLE OF CONTENTS

<u>Chapter</u>		<u>Page</u>
1	INTRODUCTION TO THE HIGH SCHOOL TRANSCRIPT STUDY	1-1
2	BACKGROUND: SAMPLE DESIGN	2-1
	2.1 1998 NAEP Sample Design	2-1
	2.2 Selection of NAEP Primary Sampling Units	2-2
	2.3 Selection of NAEP Schools.....	2-3
	2.4 Assignment of Sessions to Schools for NAEP	2-6
	2.5 Sampling Students.....	2-8
	2.6 Students not Included in the Assessment	2-12
3	SELECTION OF PRIMARY SAMPLING UNITS, SCHOOLS, AND STUDENTS FOR THE 1998 HIGH SCHOOL TRANSCRIPT STUDY	3-1
	3.1 PSU Sample.....	3-1
	3.2 School Sample.....	3-2
	3.3 Student Sample.....	3-3
4	DATA COLLECTION PROCEDURES	4-1
	4.1 Training NAEP Field Supervisors as Data Collectors	4-1
	4.2 Contacts with States, Districts, and Schools	4-2
	4.3 Obtaining Course Catalogs, Sample Transcripts, and Other School-Level Information	4-8
	4.3.1 Catalogs	4-11
	4.3.2 Sample Transcripts	4-12
	4.3.3 School Information Form (SIF)	4-12
	4.3.4 School Questionnaire.....	4-12
	4.4 Identifying the Sample Students and Obtaining Transcripts	4-13
	4.4.1 Schools with NAEP Materials	4-13
	4.4.2 Schools without NAEP Materials	4-20
	4.5 SD/LEP Questionnaire	4-21
	4.6 Sending Data to Westat	4-23
	4.7 Receipt and Review of Data from Data Collectors	4-24

TABLE OF CONTENTS (continued)

<u>Chapter</u>		<u>Page</u>
5	DATA PROCESSING PROCEDURES.....	5-1
	5.1 Establishing Student ID Control Lists.....	5-2
	5.1.1 Student Sampling Information System.....	5-2
	5.1.2 School Information Form	5-2
	5.1.3 Transcript Request Form	5-4
	5.2 CADE System for Entering Transcript Data.....	5-4
	5.2.1 Verification of Transcript Data.....	5-5
	5.3 CACE System for Coding and Editing Course Catalogs	5-6
	5.3.1 General Procedures for Coding Course Catalogs	5-7
	5.3.2 Entering Course Titles	5-7
	5.3.3 Classification of Secondary School Courses	5-10
	5.4 Matching Transcript Titles to Catalog Titles	5-13
	5.5 Standardizing Credits and Grades	5-15
	5.6 Quality Control Checks.....	5-18
	5.6.1 Quality Control for Transcript Data Entry.....	5-19
	5.6.2 Quality Control for Catalog Data Entry.....	5-20
	5.6.3 Quality Control for Catalog Coding	5-20
	5.7 Scanning and Preparing the SD/LEP Questionnaires.....	5-23
	5.8 Scanning and Preparing the School Questionnaires.....	5-25
	5.9 Personnel Selection, Training, and Supervision.....	5-26
	5.9.1 Training Data Entry Staff	5-26
	5.9.2 Training Catalog Coders.....	5-26
6	WEIGHTING AND ESTIMATION OF SAMPLING VARIANCE.....	6-1
	6.1 The HSTS Sample Weights: An Introduction	6-2
	6.2 The HSTS-NAEP Linked Weights: An Introduction.....	6-3
	6.3 Computation of the Base Weights.....	6-4
	6.3.1 Computation of Base Weights: HSTS Weights.....	6-5
	6.3.2 Conditional Student Base Weights for the HSTS.....	6-7
	6.3.3 Computation of Base Weights: NAEP-HSTS Linked Weights.....	6-7

TABLE OF CONTENTS (continued)

<u>Chapter</u>		<u>Page</u>
6.4	Weighting Adjustments for School Nonresponse	6-10
6.4.1	Approach to School Nonresponse Weighting Adjustments	6-12
6.4.2	Selection of School Nonresponse Cells	6-13
6.4.3	The School Nonresponse Cells: Results of the CHAID Analysis.....	6-14
6.4.4	HSTS School Nonresponse Adjustments	6-16
6.4.5	School Nonresponse Adjustment for the NAEP-HSTS Linked Weights.....	6-17
6.5	Student Weight Adjustments.....	6-19
6.5.1	Student Nonresponse Adjustment: HSTS Weights	6-20
6.5.2	CHAID Analysis to Choose Student Nonresponse Cells	6-21
6.5.3	Computation of Student Nonresponse Adjustments: HSTS Weights	6-22
6.5.4	Student Nonresponse Adjustments: Linked Weights	6-23
6.5.5	Trimming the Nonresponse Adjusted Student Weights	6-26
6.5.6	Trimming the Linked Base Weights.....	6-29
6.5.7	Reporting Population Factors: Linked Weights.....	6-30
6.5.8	Poststratified Student Weights: HSTS Weights.....	6-31
6.5.9	Poststratified Student Weights: Linked Weights	6-33
6.5.10	Final Sampling Weights	6-35
6.6	Variance Estimation	6-38
6.6.1	Computation of Replicate Base Weights	6-40
6.6.2	Degrees of Freedom of the Variance Estimate	6-44
7	1998 HIGH SCHOOL TRANSCRIPT STUDY DATA FILES.....	7-1
7.1	Master CSSC File.....	7-3
7.2	Course Offerings File	7-3
7.3	School File.....	7-4
7.4	Student File	7-4
7.5	Linked Weights File	7-6
7.6	SD/LEP Questionnaire File	7-6
7.7	Test and Honors File	7-7
7.8	Transcript File	7-7
7.9	NAEP Data Files	7-8
8	REFERENCES.....	8-1

TABLE OF CONTENTS (continued)

List of Appendices

<u>Appendix</u>		<u>Page</u>
A	1998 Grade 12 School Questionnaire.....	A-1
B	School Information Form, 1998 High School Transcript Study	B-1
C	1998 SD/LEP Questionnaire	C-1
D	1998 High School Transcript Study Codebook for Linked Weights File	D-1
E	1998 High School Transcript Study Codebook for SD/LEP Questionnaire	E-1
F	1998 High School Transcript Study Codebook for Test and Honors File.....	F-1
G	1998 High School Transcript Study Codebook for Transcript File.....	G-1
H	1998 High School Transcript Study Codebook for School File	H-1
I	1998 High School Transcript Study Codebook for Student File.....	I-1
J	1998 High School Transcript Study Codebook for Course Offerings File	J-1
K	1998 High School Transcript Study Codebook for NAEP Writing Data.....	K-1
L	1998 High School Transcript Study Codebook for NAEP Civics Data	L-1
M	1998 High School Transcript Study Codebook for NAEP Reading Data.....	M-1
N	1998 High School Transcript Study NAEP 50-minute Writing Data Codebook	N-1
O	High School Transcript Study Codebook for Master CSSC File	O-1

TABLE OF CONTENTS (continued)

List of Tables

<u>Table</u>		<u>Page</u>
1-1	High school transcript studies	1-1
1-2	Sample sizes for the high school transcript studies	1-13
2-1	NAEP geographic regions used for stratification	2-2
2-2	Noncertainty PSU strata	2-4
2-3	Allocation of sessions.....	2-7
2-4	Allocation of sessions to schools.....	2-7
3-1	Response rates of eligible schools by linking category, unweighted	3-6
3-2	Percent of sampled students who were graduates and for whom completed transcripts were received	3-6
3-3	Response rates of graduates, unweighted.....	3-7
3-4	Response rates for NAEP, transcript study, and linked schools, weighted	3-8
5-1	Numeric grade conversion.....	5-15
6-1	Counts of NAEP and HSTS sampled schools	6-6
6-2	Total students in HSTS study in HSTS cooperating schools	6-7
6-3	Session allocation weights.....	6-9
6-4	Writing sample allocation factors.....	6-9
6-5	Assessed and excluded students with usable transcripts and graduated in linked schools	6-10
6-6	Response rates for public and nonpublic schools, unweighted	6-15
6-7	School nonresponse adjustment factors for the HSTS weights	6-16
6-8	Session nonresponse adjustment factors for the linked weights.....	6-19
6-9	Counts and percents of graduating seniors known and imputed	6-21

TABLE OF CONTENTS (continued)

List of Tables (continued)

<u>Table</u>		<u>Page</u>
6-10	Student nonresponse adjustment cells and factors for HSTS weights.....	6-23
6-11	Distribution of student nonresponse adjustments by assessment	6-25
6-12	Reporting populations	6-30
6-13	Reporting factors for assessed and excluded students, reading assessment	6-30
6-14	Student poststratification cells and control totals	6-32
6-15	HSTS poststratification factors	6-32
6-16	Poststratification factors for the linked weights	6-34
6-17	Distributions of the final HSTS and linked weights.....	6-36
6-18	Analysis capabilities for WesVar, SUDAAN, and Stata	6-41
7-1	Naming conventions.....	7-10
7-2	Comparison of records and nonzero weights in the Linked Weights File.....	7-10

List of Figures

<u>Figure</u>		
5-1	Student information processing and ID reconciliation.....	5-3
5-2	Data entry and coding process.....	5-11
5-3	Quality control processes for catalog coding	5-21

TABLE OF CONTENTS (continued)

List of Exhibits

<u>Exhibit</u>		<u>Page</u>
3-1	NAEP administration schedule	3-4
4-1	Superintendent’s letter from Project Officer	4-3
4-2	Summary of school transcript activities	4-4
4-3	Informational letter to principals from Project Officer	4-5
4-4	Disclosure notice	4-7
4-5	Course catalog checklist.....	4-9
4-6	Transcript format checklist.....	4-10
4-7	Transcript request form – Version 1.....	4-14
4-8	Documentation of missing transcripts.....	4-17
4-9	Shipping transmittal form.....	4-19
4-10	Transcript request form – Version 2.....	4-22
5-1	Abbreviations for data entry.....	5-6
5-2	Values for flags	5-12
5-3	Carnegie Unit Report.....	5-16
5-4	Standardization of grades	5-17

FOREWORD

The 1998 High School Transcript Study (HSTS) was conducted by Westat for the U.S. Department of Education's National Center for Education Statistics. This study provides the Department of Education and other educational policymakers with information regarding current course offerings and students' course-taking patterns in the Nation's secondary schools. Since similar studies were conducted of course-taking patterns of 1982, 1987, 1990, and 1994 graduates, one research objective was to study changes in these patterns. Another research objective was to compare course-taking patterns to study results on the 1998 National Assessment of Educational Progress (NAEP). NAEP is a federally funded, ongoing, periodic assessment of educational achievement in the various subject areas and disciplines taught in the nation's schools. Since 1969, NAEP has gathered nationwide information about the levels of educational achievement of elementary and secondary school students.

The 1998 High School Transcript Study is documented in two reports:

- The 1998 High School Transcript Study User's Guide and Technical Report – The User's Guide documents the procedures used to collect and summarize the data. It also provides information needed to use all publicly released data files produced by the study. In previous years, the information contained in this technical report was divided into two documents: The Data File User's Manual and the Technical Manual.
- The 1998 High School Transcript Study Tabulations – The Tabulations Report provides copious tables summarizing the course-taking patterns of 1998 high school graduates and comparing them to those of their counterparts in 1982, 1987, 1990, and 1994. To accommodate the 1998 data, it was necessary to drop one year's data from some of the tables. Details on the changes in design and format from the 1994 Tabulations are described in the Tabulations Report. The report also provides tables describing the relationship of the course-taking patterns of 1998 graduates to their proficiencies in reading, writing, and civics as measured by the 1998 National Assessment of Educational Progress.

It is expected that there will be a diverse audience interested in the methodology and the results of this study. Some readers will be interested in an in-depth discussion of certain subjects, while others may only wish to gain a basic understanding of the procedures and findings. For that reason, the first chapter presents an introduction to the study, in a question and answer format. The reader who wishes to learn more about a subject is referred to the area in this report or the Tabulations Report where a more in-depth presentation is offered.

The questions have been grouped into three categories, although there is some overlap in some of the areas. The three major areas are: What is the High School Transcript Study? How is the High School Transcript Study related to the National Assessment of Educational Progress? How can the data from the High School Transcript Study be used?