



> Considerations for Analysis of ELS:2002 Data



# Considerations for Analysis of ELS:2002 Data

 [Download Transcript](#)  [Download Slides](#)  [Download Glossary](#)

> Considerations for Analysis of ELS:2002 Data > Module Objectives

00:00:28

## Module Objectives

- Describe the analytic considerations for using information from ELS:2002 regarding:
  - ELS cohorts
  - ELS Sample migration between rounds
  - Second follow-up statuses
  - Merging linked data files
  - High school transcripts
  - Subsampling populations
  - Item nonresponse

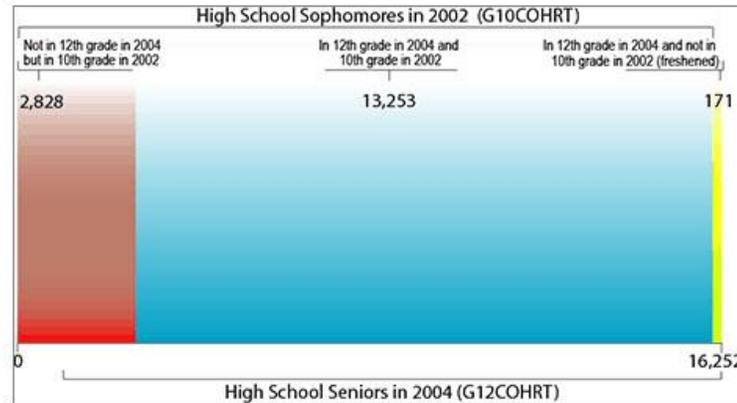
> Considerations for Analysis of ELS:2002 Data > ELS Cohorts

00:02:30

## ELS Cohorts

There are two cohorts in ELS

- Sophomores, or 10<sup>th</sup> graders, in 2002
- Seniors, or 12<sup>th</sup> graders, in 2004



NOTE: Those in 10th grade but not 12th grade in 2004 include those who were base year nonrespondents or ineligible who responded in 2004.

SOURCE: ELS:2002 Base Year to First Follow-up Data File (E4P).

> Considerations for Analysis of ELS:2002 Data > Analysis of ELS Data Using Cohort Flags

00:00:38

## **Analysis of ELS Data Using Cohort Flags**

- Sample member status in each round has implications for weights
- Be sure to read documentation closely on which populations are addressed by each weight

> Considerations for Analysis of ELS:2002 Data > ELS Sample Migration - Transfer and Departure

00:01:17

## ELS Sample Migration - Transfer and Departure

Between base year and first follow-up, some high school students changed schools

	Base Year	First Follow-up
<b>Original school</b>		
Total number of schools	752	757
Total number of students	15,250	12,700
Average number students per school	20.3	16.8
<b>F1 transfer school</b>		
Total number of schools	---	1,200
Total number of students	---	1,620
Average number students per school	---	1.35
<b>Out of school (Departure)</b>		
Total number of students	---	1,300

Source: ELS:2002 Base Year to First Follow-up data file, Public Use (E4P)

> Considerations for Analysis of ELS:2002 Data > ELS Sample Migration - Transfer and Departure (Continued)

00:01:24

## **ELS Sample Migration - Transfer and Departure (Continued)**

- Important things to remember when conducting school level analyses:
  - The school administrator questionnaire was only administered in base year schools
    - Data for transfer students will be missing and designated as such using the -8: "Survey component legitimate skip/NA" reserve code
  - There are no school IDs provided for transfer schools on the first follow-up file
    - There is a school file, called BYF1TSCH, which will facilitate linking to external data sources such as the Common Core of Data (or CCD) and the Private School Universe Survey (or PSS)
      - To fully use these school IDs, a restricted-use license will be required
      - Within the F3 data file some school characteristics variables have been included in both the public- and restricted-use data files

> Considerations for Analysis of ELS:2002 Data > ELS Sample Migration Postsecondary Enrollment

00:00:53

## ELS Sample Migration Postsecondary Enrollment

Between first and second follow-up, many students enrolled in postsecondary education

	Second Follow-up
<b>4-year institutions</b>	
Total number of institutions	1,400
Total number of students	6,900
Average number students per institution	5.5
<b>2-year institutions</b>	
Total number of institutions	1,100
Total number of students	5,900
Average number students per institution	5.4
<b>Less than 2-year institutions</b>	
Total number of students	220
Still in high school	100
Did not attend postsecondary education	3,900

Note: Some students attended more than one institution.  
 Source: ELS:2002 Base Year to Second Follow-up data file, Public Use (E6P)

> Considerations for Analysis of ELS:2002 Data > ELS Sample Migration Multi-level Modeling

00:00:55

## ELS Sample Migration Multi-level Modeling



- Multi-level modeling/hierarchical linear modeling (HLM) may not be possible
  - Sample of 2002 high school sophomores available for modeling can only include those who remained in base year schools from base year to first follow-up
  - Not enough sample members in each postsecondary institution to analyze student experience nested within institution using HLM

> Considerations for Analysis of ELS:2002 Data > Second Follow-up Data Analysis

00:02:01

## Second Follow-up Data Analysis

Code	Frequency	Percent	Response type
1	7754	47.9	Standard enrollee
2	821	5.1	Delayer (delayed entry/enrolled in 2006)
3	1523	9.4	Leaver (immediate entry/not enrolled in 2006)
4	436	2.7	Delayer-Leaver (delayed entry/not enrolled in 2006)
5	3505	12.7	Non-enrollee (never enrolled by 2006)
6	108	0.7	High school student in 2006
{-4}	1691	10.3	Nonrespondent
{-8}	359	2.2	Survey component legitimate skip/Out of scope

> Considerations for Analysis of ELS:2002 Data > Second Follow-up Data Analysis (Continued)

00:00:54

## Second Follow-up Data Analysis (Continued)

Data collected by respondent type

Second Follow-up Variable	Standard	Delayer	Leaver	Delayer-Leaver	Non-enrollee	High School
Number of colleges applied to	x	x	x	x	x	
Ever attended a postsecondary institution?	x	x	x	x	x	
Sector of first postsecondary institution	x	x	x	x		
Enrollment intensity at first institution	x	x	x	x		
Major in college	x	x				
Highest level expects to complete	x	x	x	x	x	x
Ever held a job since leaving high school	x	x	x	x	x	
First occupation after high school		x		x	x	
First job wage rate		x		x	x	
Current occupation (2006)			x	x	x	x
Total 2005 job earnings	x	x	x	x	x	
Held job between high school and college		x		x		
Type of employer - first job		x		x	x	
Hours per week on current job			x	x	x	x
Held internship/co-op job while enrolled	x	x	x	x		
Whether has biological children	x	x	x	x	x	x

\*Applies only to first postsecondary institution attended

> Considerations for Analysis of ELS:2002 Data > Second Follow-up Data Analysis (Continued)

00:02:04

## Second Follow-up Data Analysis (Continued)

Code	Frequency	Percent	Level of Institution
1	6493	40.1	Four or more years
2	3692	22.8	At least two, but less than four years
3	313	1.9	Less than two years
{-3}	3613	22.3	Item legitimate skip (NA)
{-4}	1691	10.4	Survey nonresponse
{-8}	359	2.2	Survey component legitimate skip/Out of scope
{-9}	36	.2	Missing

> Considerations for Analysis of ELS:2002 Data > Second Follow-up Data Analysis (Continued)

00:03:10

## Second Follow-up Data Analysis (Continued)

Code	Frequency	Percent	Level of Institution
1	7754	47.9	Standard enrollee
2	821	5.1	Delayer (delayed entry/enrolled in 2006)
3	1523	9.4	Leaver (immediate entry/not enrolled in 2006)
4	436	2.7	Delayer-Leaver (delayed entry/not enrolled in 2006)
5	3505	12.7	Non-enrollee (never enrolled by 2006)
6	108	0.7	High school student in 2006
{-4}	1691	10.3	Nonrespondent
{-8}	359	2.2	Survey component legitimate skip/Out of scope

> Considerations for Analysis of ELS:2002 Data > Merging Linked Data Files

00:02:21

## Merging Linked Data Files

- Some files may need to be merged for your analysis
- Use the Linking IDs provided on each file to link related files

### Student Level File-BYF3STU *(one record per Stu\_ID)*

STU\_ID  
 F1RACE – race/ethnicity  
 BYINCOME – family income  
 BYS34 – Hours/wk homework  
 BY55 – Plans to take SAT/ACT

### Analysis File

STU\_ID  
 F1RACE  
 BYINCOME  
 BYS34  
 BY55

### MATH\_ABOVE\_9

### Course Level Files *(with multiple records per Stu\_ID)*

#### HSTRNSTU

STU\_ID  
 F1CCSSC – CSSC course code  
 F1CYEAR – course year  
 F1CSCRED – course credits (std)  
 F1CGRADE – course grade (std)

#### ALG\_CRS\_DSET

STU\_ID  
 (MATHLVL) many to choose from

### Student Level File

ALG\_STU\_DSET  
 STU\_ID  
 MATH\_ABOVE\_ALGII

> Considerations for Analysis of ELS:2002 Data > ELS:2002 High School Transcript Data Collection

00:01:30

## ELS:2002 High School Transcript Data Collection

- Provides course level information obtained from sample students' transcripts
- Transcript data are only provided on the ELS:2002 restricted-use data file
- The transcripts are coded, course-by-course, into a separate set of records for each student that are linked to the main student level file by student ID
- In order to use this course level data, it is necessary to extract it from the HSTRNSCH link file and merge it to the student-level data file
- High school transcript data were collected from a majority of the ELS sample
  - 96% of base year schools and 80% of transfer schools provided transcript data
  - Transcript data are provided for 91% of the entire student sample
  - Transcripts were collected for both dropouts and early graduates
- [CSSC codes](#) were used to classify courses

> Considerations for Analysis of ELS:2002 Data > Classification of Secondary School Courses (CSSC) Codes

00:02:01

## **Classification of Secondary School Courses (CSSC) Codes**

- The CSSC course classification system is maintained by NCES
- Each CSSC code is 6 digits
  - The first 2 digits are the “main category”
  - The next 2 digits are the “subcategory”
  - The last 2 digits are the “course”
- For purposes of analyzing course-taking patterns, these CSSC codes must be grouped into higher level course classification structures or taxonomies

> Considerations for Analysis of ELS:2002 Data > CSSC Course Codes and Courses (Continued)

## CSSC Course Codes and Courses (Continued)

```

PROC FORMAT;
VALUE mathlvl$
0 = 0 'NO MATH'
270113 = 1 'MATH TUTORING'
270105, 270601, 270602, 270603, 270604 = 3 'BASIC MATH'
270100, 270101, 270102, 270103, 270106,
270107, 541001, 541009, 562700, 562701,
562709 = 4 'GENERAL MATH'
010151, 070171, 070172, 170651, 270108,
270109, 270110, 270111, 270114, 270300,
320108, 541101, 541109, 541201, 541209,
562711, 562719, 562721, 562729 = 5 'APPLIED MATH'
270104, 270401, 270402, 270403 = 6 'PRE ALGEBRA'
270404, 270421, 270427, 270428, 270441 = 7 'ALGEBRA I'
270406, 270407, 270408, 270409, 270422,
270425, 270426, 270429 = 8 'GEOMETRY'
270405 = 9 'ALGEBRA II'
270410, 270417 = 10 'ALG III/LINEAR ALG'
270411, 270413, 270414, 270430 = 11 'TRIGONOMETRY'
270412, 270415 = 12 'ANALYTIC GEOMETRY'
270112, 270200, 270400, 270423, 270424,
270436, 270437, 279900 = 13 'OTHER ADV MATH'
270431, 270432, 270433 = 14 'IB MATH'
270500, 270511, 270521, 270531 = 15 'STATISTICS'
270532 = 16 'AP STATISTICS'
270416 = 17 'ANALYSIS/PRE-CALC'
270418, 270419 = 18 'CALCULUS'
270420, 270434, 270435 = 19 'AP CALCULUS'
other = 2; 'UNDEFINED MATH'
RUN;
    
```

> Considerations for Analysis of ELS:2002 Data > Course Taxonomies Used in NCES Reports

00:01:30

## Course Taxonomies Used in NCES Reports

- Secondary School Taxonomy (SST)
  - Used in the career technical education reports produced by NCES and in the Condition of Education
  - Divides the entire school curriculum of courses into four broad areas
    - Academic
    - Vocational
    - Enrichment/other
    - Special education
  - SST is a mutually exclusive and strictly hierarchical taxonomy
- High School Transcript Study (HSTS) Taxonomy
  - Used in reports generated from the high school transcripts collected by NAEP
  - Contains three broad areas
    - Academic
    - Vocational
    - Personal use/other
  - Read the technical documentation closely to understand how taxonomies were created
    - Within the SST and HSTS taxonomies computer-related courses, special education, and some vocational courses are in particular treated differently
    - While the SST is strictly hierarchical, some courses appear in two areas in the HSTS

> Considerations for Analysis of ELS:2002 Data > Course Taxonomies Used in NCES Reports

00:01:20

## Course Taxonomies Used in NCES Reports

- F1RMAPIP (Burkam and Lee)
  - Measures “how far” a student has progressed in each of the four traditional academic areas of mathematics, science, English, and foreign languages
  - The mathematics pipeline has seven hierarchical levels
- MATHLVLS
  - 18 mathematics course areas
  - Detailed on Slide 14

> Considerations for Analysis of ELS:2002 Data > Course Taxonomies Used in NCES Reports

00:01:15

## Course Taxonomies Used in NCES Reports

- Specialized taxonomies
  - Curriculum concentration taxonomy
    - Academic concentrators: students with at least four credits in English, three credits in math, and three credits in science
    - Occupational concentrators: students with at least three credits in occupational specific vocational, and those students who satisfy both requirements
  - Science, Technology, Engineering, and Mathematics (or STEM) courses
  - Core versus non-core courses
    - Core courses are those that typically satisfy requirements for a diploma (e.g., math, English, social studies, and science), whereas non-core courses do not
  - Explore the detailed documentation available with each of these taxonomies before using them within analyses

> Considerations for Analysis of ELS:2002 Data > Transcript Composites

00:02:03

## Transcript Composites

- Available transcript composites include:
  - F1RTR09 through F2RTR12 - Number of courses taken in grades 9, 10, 11, and 12 respectively
  - F1RENG\_C - Units in English (SST)
  - F1RSCPIP - Science course taking pipeline (highest science course taken)
  - F1RGP - Overall standardized GPA from transcript
  - F1RHTUN - Total Carnegie Units of courses taken
  - F1RAP\*\* - Total credits of AP/IB courses by course area (e.g., French literature, biology, calculus)
  - TXAP\*\* - AP exam scores by course area
  - TXSAT/TXACT scores - overall and by subject area

> Considerations for Analysis of ELS:2002 Data > Analyzing Subpopulations

00:01:09

## Analyzing Subpopulations

- Many analyses focus on specific subpopulations
- Do not delete cases from the dataset or use standard subsetting commands (e.g., if)
- Instead, use your software's [subpopulation command](#)

> Considerations for Analysis of ELS:2002 Data > Summary

00:00:25

## Summary

This module has described the analytic considerations for using information from ELS:2002 regarding:

- ELS cohort flags
- ELS Sample migration between rounds
- Second follow-up statuses
- Merging linked data files
- High school transcripts
- Subsampling populations

> Considerations for Analysis of ELS:2002 Data > Resources

00:00:19

## Resources

- [Cohort Flags](#)
- [Second Follow-Up Data File User's Manual](#)
- [CSSC Codes](#)
- [Subpopulation Command Resource Document](#)