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Title Slide: Introduction to the ELS

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This module introduces users to the Education Longitudinal Study of 2002, or ELS:2002 for short. It provides users with basic information about the study's design, target populations, sample designs, and data collection rounds and topics.

The module also provides a broad overview of the topics for which data are available for analysis to help users answer the fundamental question: "Are ELS:2002 data for me?" The subsequent ELS:2002 training modules contained within this system will discuss some of these topics in greater detail and address questions about how to effectively use the dataset for your analytic purposes.

Throughout this module, underlined blue screen text indicates a link to additional resources.

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ELS:2002 is designed to achieve five broad objectives, which are similar to all of the NCES high school longitudinal studies.

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The first objective is to monitor the critical transitions made by a cohort of 2002 high school sophomores through college into their adult careers, with a special emphasis on college access and choice. Within ELS:2002, "critical transitions" is the key term – and these critical transitions include events such as dropping out of school, attaining different levels of education, gaining employment, and forming a family. A primary focus of ELS:2002 data collection was on measuring and predicting these transitions.

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The second objective of ELS:2002 is to obtain information about factors that influence these transitions, **especially at the secondary level**. Factors of interest include the student's family and peer relationships; the student's educational motivations, experiences, and achievement; the curriculum paths followed by the student, as well as other activities undertaken in or outside of school; the climate for learning within the school; and decision-making processes within the school and other school characteristics. ELS:2002 is unique in examining these factors as other NCES studies at the postsecondary level and beyond focus less on these relationships and other characteristics of the learning or other environments and focus more on the curriculum paths followed, the transitions made, and other "life events."

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The third objective of ELS:2002 is to obtain information about the student and their educational experiences from multiple perspectives, including the students themselves, as well as their parents, teachers, school principals, and school transcripts. In this respect, ELS:2002 is contextual in that, information collected about each student is collected not only from the student but from a parent of the student, two of the student's teachers, and the school principal, where the information collected from the principal is about characteristics of the student's school. Generally, information is obtained from the source that can provide the most accurate information about the student and the student's educational experiences, but in some cases the same information is collected from multiple sources in order to compare the resulting perspectives.

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The fourth objective of ELS:2002 is to measure gains in mathematics achievement from 10th to 12th grade using specially developed cognitive tests. These assessments are an integral part of the ELS:2002 survey design but are also linked to other assessments such as the National Assessment of Educational Progress (or NAEP) and Program for International Student Assessment (or PISA).

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The fifth and final objective of ELS:2002 is to maintain comparability with the National Longitudinal Study of the High School Class of 1972 (or NLS-72), High School and Beyond (or HS&B), and National Education Longitudinal Study of 1988 (or NELS:88) to measure trends in transitions and outcomes over time. This required repetition of questions over rounds of data collections across studies, as well as consistency in timing of follow-up data collections.

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Here, the five NCES high school longitudinal studies can be seen collectively in terms of their research designs, administration years, years in school, and age of the sample members.

The left most green line depicts the first of the NCES studies, the National Longitudinal Study of the High School Class of 1972. The fourth study, the Education Longitudinal Study of 2002, is shown in blue and appears second from the right.

As you can see, these studies have each started in different grades for their initial data collection; NLS-72 started with a cohort of high school seniors; High School and Beyond started with two separate cohorts of high school seniors and sophomores; National Education Longitudinal Study of 1988 started with a cohort of 8th graders; ELS:2002 started with a cohort of high school sophomores; and High School Longitudinal Study of 2009 started with a cohort of 9<sup>th</sup> graders.

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All of these studies have included a subsequent data collection (or follow-up) two years after high school, when most of the sample members are college sophomores. Additionally, all four of these high school longitudinal studies have included transcript data collections, as noted by the symbols, “HST” and “PST” in the figure shown here; where HST indicates high school transcript and PST indicates postsecondary transcript data collection.

The third and final follow-up ELS:2002 data were collected in 2012, when sample members were about 26 years old.

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A major concept in the ELS:2002 survey design is the inclusion of two longitudinal cohorts of students resulting in two nationally representative cohorts: one of 2002 high school sophomores and one of 2004 high school seniors. Both cohorts are longitudinally comparable to sophomore and senior cohorts in NLS-72, HS&B, NELS:88; and the senior cohort can be compared to 12th grade cohorts in previous studies. Additionally, the ELS:2002 design enables students who dropout after their sophomore year to be followed.

The ELS:2002 cohorts are overlapping. The senior cohort is a “freshened” sample. It was formed by adding a small sample of seniors who may have been in the sample schools during 2004 **but were not** sophomores in the sample schools in 2002. This freshening formed a nationally representative sample of 2004 high school seniors in the sampled schools. It is also important to note that both cohorts can be looked at separately. Let’s examine how students are selected into ELS:2002.

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ELS:2002, and all NCES secondary longitudinal studies, use a two-stage sample design. In the first stage, high schools were selected, and then in the second stage, students within those schools were selected.

In ELS:2002, the target population was United States schools with 10th graders. In the first stage of sampling, schools were selected from the frame of the Common Core of Data (or CCD) with a probability of selection proportional to their enrollment size, which is a key aspect of the sample design. Next, schools were stratified by region, urbanicity, and school control. Region is the geographical area of the United States within which the school is physically located. Urbanicity represents the population density of the area in which the school is located: either urban, rural, or suburban within ELS. School control comprises the categories of public, Catholic private schools and other private schools. At this stage, Catholic and other private schools were oversampled to ensure there would be enough schools in the sample to allow researchers to generate unbiased estimates.

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From this stage of sampling, 1,221 eligible schools with a 10<sup>th</sup> grade were selected, and 752 schools responded. 580 of these were public and 172 were private. This final sample of 752 schools represented 27,000 United States schools in 2002.

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In the second stage of sampling, a fixed number of about 24 to 26 students per school were randomly selected from rosters provided by the schools. Students were selected within the school, not by classroom, meaning the ELS:2002 sample is clustered by school. The number of students selected per school was kept at this level to minimize data collection burden on participating schools. The sample design also called for oversampling of Asian/Pacific Islander students. The ELS:2002 sample also included all English Language Learners (or ELLs) and special education students, whose data are available for analysis within the expanded sample.

The result of the sampling process was a sample of **17,591 10th graders** representing **3.4 million students**. This cohort of high school sophomores was then “refreshed” two years later to generate a second cohort of nationally representative high school seniors.

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The second nationally representative longitudinal cohort of seniors was formed by “freshening” -- or adding to the existing sophomore cohort that was just described. The freshening process began by obtaining rosters of seniors from ELS:2002 schools in the fall of 2003. The roster was checked for accuracy and then all base-year sample students were identified. If the student immediately following each sampled base-year student within the race/ethnicity strata on the new list was not on the original list, then that student was selected as a potential addition to the sample. Whenever a potential new sample student was identified, the next student on the list was examined to determine whether that student was on the original list. If this next student was not on the original list, then that student was a potential addition to the sample. This process was continued until reaching a student who was on the original list. Then, this process was repeated with the next base-year sample student on the list.

**The key point to remember is that the two ELS cohorts overlap.** Most of the members of the base year cohort are also members of the senior cohort. Additional information regarding the two ELS cohorts, the degree to which they overlap, and considerations for identifying students in each cohort is provided in the module titled, ‘Considerations for Analysis of ELS:2002 Data.’

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There were four data collection rounds (also referred to as waves or sometimes follow-ups) across ELS:2002, each occurring in spring or summer of the specified year. This means ELS:2002 covers the end of sampled students’ sophomore year, as well as the entire junior and senior years of high school.

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Transcript data were also collected as a part of ELS. It is important to note that the high school transcript data collection started in the fall of 2004, after most sample students had graduated, to ensure schools had ample time to update students' transcripts. High school transcripts were collected from students' base year schools and, if the student had transferred or dropped out as of the first follow-up, from the last school the student attended.

In 2013, postsecondary transcripts were collected and data from this collection will be available via a separate restricted-use file in the spring of 2015.

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As noted earlier, information about the sampled students and their schools are obtained from multiple sources including the students themselves, as well as their parents, teachers, and school principals.

Interview data were collected from the sampled student at four points in time, the base year data collection (or BY) in the spring of 2002; the first follow-up data collection (or F1) in the spring of 2004; the second follow-up (or F2) in the spring of 2006 – when students were approximately 20 years of age and potentially in their second year of college; and lastly in the third follow-up data collection (or F3) in the spring of 2012 – when students were approximately 26 years of age. As such, information collected from the sampled students is nationally representative of the respective ELS:2002 longitudinal cohorts.

In addition to these data collected directly from the sampled students, data collection was attempted for at least one parent per sampled student. Preferably, the parent with the most knowledge about the sampled students' education was asked to complete the interview and provide information such as the climate of safety in the school and expected educational attainment of the student. As such, the sample of parents who provide data in the parent interview is not representative of the ELS:2002 sampled students and is not nationally representative.

Data collection was also attempted for two teachers per sampled student. These teachers were preferably a mathematics teacher and an English/language arts teacher of the sampled student. Teachers were asked mainly about the behavior and performance of the sampled student. As teachers are not chosen at random to provide information on ELS:2002 sampled students, data from teachers are not nationally representative.

Lastly, data were collected from the principal of the school about the school the sampled student attended. It is important to note that no information is collected about the student or the principal as part of this collection. Within ELS:2002, the principal only provides information about characteristics of the school; not about themselves as principal. As such, information collected about the schools from the principals in ELS:2002 is nationally representative of schools with a 10<sup>th</sup> grade.

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Cognitive tests in mathematics and reading were administered to sampled students while enrolled in high school as part of ELS:2002. In the base year of data collection, or in student's sophomore year, both mathematics and reading tests were administered. An additional mathematics achievement test was also administered in the spring of 2004, when students were seniors, as part of the first follow-up data collection.

It is important to note that these tests were administered in the spring of the specified data collection year. So, for the base year, sophomores were assessed in their second semester of 10<sup>th</sup> grade. More information about these cognitive tests will be described in the module titled, "Data Collected Through the ELS:2002".

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ELS:2002 collected a wealth of information across data collection rounds from multiple sources. Each round of data collection covered different topics, depending on the stage in the sample member's education where collection took place. The base year and first follow-up data collections provide analysts with data across nine areas related to secondary education experiences which include: student background, school climate, school structure, student performance, student motivation and engagement, classroom experience, experiences outside the classroom, social capital, and plans and expectations for the future.

ELS:2002 data regarding high school dropouts details students who dropped out between the spring of their sophomore year in 2002 and the spring of their senior year in 2004. Such questions included reasons for dropping out and whether the sample member planned to complete a high school credential.

More detailed information regarding the base year and first follow-up data collections is provided in the module titled, 'Data Collected Through ELS:2002'.

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ELS:2002 second follow-up focuses on the post-high school experience of sampled students. The data collection includes such topics as reasons for college choice, college coursework, academic and social integration, enrollment intensity, means of financing enrollment, college work-study or other employment, and reasons for non-enrollment, if applicable.

More detailed information regarding the second follow-up data collection is provided in the module titled, 'Data Collected Through ELS:2002'.

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There were three main content areas for the third and final follow-up of ELS:2002 data collection: Education, Employment, and Finances and Family. All data were collected from questionnaires filled out by the sample member, or from administrative records. Many of these data are what can be termed “outcome” variables, because they provide information about the outcomes of educational decisions students and families made in the earlier rounds of the study, such as whether a postsecondary credential was earned.

More detailed information regarding the third follow-up data collection is provided in the module titled, ‘Data Collected Through ELS:2002’.

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A considerable amount of information was collected from administrative records in ELS:2002. Specifically, a high school transcript for each sampled student and school catalogs were collected as part of the first follow-up. College entrance exam scores, obtained directly from ACT and College Board, were also collected as part of both the first and second follow-ups.

In addition, as part of the second follow-up, data regarding Advanced Placement (or AP) scores were collected from the Educational Testing Service (or ETS). Information regarding family income, wealth, and student aid were collected from the Central Processing System (or CPS) the Free Application for Federal Student Aid (or FAFSA), and the National Student Loan Data System (or NSLDS). Data regarding GED completion were also collected.

In the third follow-up, these data regarding family income, wealth, student aid, and GED completion were collected again; along with postsecondary transcript data for those students who reported some postsecondary attendance during the third follow-up student interview.

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Additional resources about ELS:2002 can be found by going to the ELS:2002 website, which may be accessed by clicking on the underlined screen text, [ELS:2002 website](#).

NewsFlashes are sent when new ELS data and reports become available. You can receive these NewsFlashes by signing up for the “High School Longitudinal Studies” NewsFlash on the NCES website, which may be accessed by clicking on the underlined screen text, [NewsFlash](#).

Lastly, the ELS Available Data page, shown here, can be accessed to learn more about the ELS data that are available for analysis. This page can be accessed by clicking on the on the underlined screen text, [ELS Available Data page](#).

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This module has provided you with an introduction to ELS:2002 and described the study's target population, sample and study designs, and the data collection topics, rounds, sources, and methods. Additionally, this module has highlighted topics for which data are available for analyses. Important resources that have been provided throughout the module are summarized in this slide along with the module's objectives for your reference.

The subsequent ELS:2002 training modules discuss these topics in greater detail and address questions about how to effectively use the dataset for your analytic purposes.

You may now proceed to the next module in the series, or click the exit button to return to the landing page.