Dr. Johnson: Welcome to the November conference call. Today's topic is “Access to the General Education Curriculum: Findings from the National Longitudinal Transition Study-2” and I welcome Dr. Lynn Newman to lead us through this presentation and some discussion which follows. Dr. Newman is Senior Education Researcher at SRI International, Center on Education and Human Services. Dr. Newman has more than 25 years of experience in education and social science research in the disability policy and human services field. She is currently co-director of the National Longitudinal Transition Study-2, known to us as NLTS2, funded by the U.S. Department of Education’s Office of Special Education Programs (OSEP). She also serves as an analyst for the Special Education Elementary Longitudinal Study, known as SEELS. Dr. Newman has had leadership roles on multiple large-scale studies and evaluations including the original National Longitudinal Transition Study, the study of school link services for children with disabilities and their families, and the California statewide Healthy Start Comprehensive Integrated School Linked Services initiative evaluation.

Dr. Newman: As David indicated, I am going to be focusing today on what we have been learning from NLTS2 about secondary-school age students with disabilities’ access to the general education experience. I was thinking about how inclusion and access has changed tremendously over time. I remember, when we were designing the original NLTS back in the early 80’s, our focus was simply on where the students received their education. We collected the data on the extent to which students with disabilities had access to general education classes, types of classes students took, the number of classes, and the amount of time they spent in a regular ed class, but we collected almost no information about what was actually going on in those classes. By the time we began designing NLTS2 in 1999-2000, we had moved beyond the focus of where students are educated to an emphasis on how they are educated. Our focus had expanded from the issue of classroom access to the issue of curriculum access. We wanted to know how the experiences of students with disabilities compared to those of their peers in a general education class. Those experiences are the focus of what I am going to be describing today.

I’d like to give you a very quick background on NLTS2. As David said, it’s part of OSEP’s national assessment of special education and it’s an expansion of the original NLTS, a study many of you are aware of. NLTS2 is designed to show how special ed and student life and achievements have changed in the years since NLTS, and I like to describe NLTS2 as NLTS on steroids. We are collecting much more information on every aspect of the student’s life than we did in the original NLTS.

We are focusing on the lives of students with disabilities when they are in secondary school and also after leaving high school as they are entering young adulthood. We are looking at a wide range of experiences during their secondary school years: what’s happening to them within their classes, their services, and what’s happening to them outside of the school day, from their friendships to their employment. And we follow their lives into the first few years after leaving high school, focusing on their experiences and achievements in areas such as postsecondary education, employment, social interaction, and independence, focusing particularly on what contributes to better outcomes.

Students were between 13 and 16 and receiving special education services when they were sampled back in the 2000-01 school year. One aspect of the study that makes it fairly unique is that we are following the experiences of students with all types of disabilities in each of the 12 federally-defined disability categories. We are following these students for nine years, so the eldest will be about 25 when the study is finished.

We have more than 11,000 students from across
the country in the study and it allows us to generalize to all of the students who are receiving special ed, who are between these ages as a group as well as generalize to each of the 12 disability categories. The stars that you see on the data collection timeline are each type of data collection activity that we are doing. We are collecting information from a wide range of perspectives—from parents, teachers, and the youth themselves—and right now, we are in the process of completing year four. We are just finishing collecting the second wave of school data.

The findings that I am going to be presenting today come from the first wave of NLTS2 school data collection, two surveys: one that focused on the students’ overall school program and the other that focused on students’ experiences in their general education academic classes. These were completed in the 2000-01 school year. When we have comparisons from NLTS, that data was abstracted from students’ school records by school personnel in the 1985-87 school years. When we are looking at change over time between NLTS and NLTS2, we are talking about a 15-year period. Today I am going to begin by focusing on the broader context of courses that the students are taking and the settings they are taking them in and then I am going to look at their general education academic classes—describing those classes, looking at their experiences in those classes. Finally, I will be sharing what we have been learning about the relationships between greater participation in general education courses and student outcomes.

First, let’s look at the student’s overall school program. We see that there is a heavy emphasis on academic courses—virtually all the students take at least one academic class and a large majority take a language arts class and a math class and many are also taking social studies and science. One out of five takes a foreign language class and on average academic course-taking accounts for about 60% of these students’ courses.

How does this compare with the course-taking of their peers in the general population? The blue top bars are the courses that students with disabilities are taking during one semester and the red bars underneath that is the course-taking by their peers in the general population. We see that academic course-taking mirrors the experience of their peers, where 99-100% of the students take at least one academic course and they have high levels in math, science, and social studies. The only big difference that we see is in foreign language, where students in the general population are about twice as likely as to be taking this type of class as students with disabilities.

How has course-taking for students with disabilities changed in the 15 years between NLTS and NLTS2? Since the vast majority of students in both NLTS and NLTS2 took at least one academic course and most took a language arts course, there really wasn’t much room for change and we see that there isn’t much of a change in those areas, but we do see dramatic increases in the percentage of students taking other types of academic courses. The largest increases are in science with a 21 percentage point increase and foreign language with a gain of 15 percentage points. This increase that you are seeing in academic courses corresponds to a 7 percentage point decline in vocational education course-taking over those 15 years.

In what settings do these students take these courses? The first group of bars are for the courses that are taken in a general education setting; the next group of bars are for those taking courses in special education settings. Most students take courses in both general education and special education settings. Although 27% of the students experienced full inclusion in a general education setting, this is a large change from 15 years ago when only 9% of the students took only general education courses. 88% take at least one general education class and since most students 15 years ago also took at least one general education class, there is not a significant difference over those years. Looking at the special education courses, 70% now take at least one special education course. This is a marked decline from the 90% that took at least one special education course 15 years ago. 69% currently take at least one academic general education class. Some types of academic courses are more likely to be taken in a general education setting than others. For example, students are about equally likely to take English or math in a special education setting, but they are much more likely to take science or social studies or foreign language courses in a general education than in a special education setting. On average, general education courses account for 60% of students’ course load.

Slide looks at differences by disability category and, as with most aspects of the study, there are wide differences by disability category. The percentage of courses taken in a general education setting varies widely by disability category: about three-quarters of the courses that are taken by students with speech impairments are general education classes compared with only about a third of the classes taken by students with mental retardation or autism. General classes account for only about a quarter of the classes of those with multiple disabilities or deafblindness.

Looking at changes over time between NLTS and NLTS2, students are more likely now to be taking their academic classes in general education settings and they are
less likely to be taking them in special education settings. There is a 9 percentage point increase over time in taking at least one general education course and a corresponding 11 percentage point decrease in taking one special education academic course. The converse is true for non-academic courses such as vocational education and life skills. Students are less likely to be taking non-academic classes in a general education setting now, and they are more likely to be taking them in a special education setting.

Now let’s switch our focus from where students are taking these classes to begin looking at what’s happening in those classes. We are going to look at some of the descriptive information about those general education academic classes, their performance level, how many students and teachers were in the class, and characteristics of their teachers and the types of support that both students and teachers receive. First, let’s look at the overall performance level of these classes. The yellow part of these bars are the AP/honors courses, the purple are the courses at grade level, and the green are the below-grade-level courses. We see that for the most part, students with disabilities are not being tracked into the lower performing classes but they are in classes very much like the ones that everyone else is taking. Classes that are at grade level, if students are going to be in a below-grade-level class, then it’s most likely going to be from that, with one quarter of those taking general education math courses and below-grade-level courses.

Looking at disability differences, slide is a little misleading. Students in all disability categories are most likely to be in a grade level course. The range for all students is 70-80% for all disability categories—in that middle purple part of the bar—but when you are looking at the yellow part of the bar, the AP and honors courses, the students with visual impairments are more likely to be in that part of the bar than other groups of students. If you are looking at the green part of the bar, students with traumatic brain injury, mental retardation, and multiple disabilities are more likely than students in other categories to be in below-grade-level courses.

Class size can be an important influence on the effectiveness of instruction and learning. The 24 students in the blue bar are students in general education academic classes and the orange bar with the stripes are special education classes. We see there are 24 students in a general education class on average and 20 students in a special education class on average. Of those 24 students in a general education class, you see at the bottom bar, five of those students are also receiving special education services. There are adults in those classes as well and again the blue bars are general education academic classes. We see that, not surprisingly, almost all of the classes have a general education teacher, but in addition to that teacher, 22% of the general education classes also have a special education teacher present. Special education classes are much more likely to be staffed with other adults as well—for example, more than half have classroom aide(s). So 52% of students in special education classes have classroom aides compared with only 12% of those in general education classes. Although we saw earlier that the overall class size of 24 and 20 students was not that different, the student-to-adult ratio is dramatically different. General education classes have 21 students per adult; special education classes have only 6 students per adult. So adults in general education classes need to focus on about three times as many students as do adults in special education classes.

Looking at those general education teachers, what are their characteristics? We see that they are much less ethnically diverse than their students—90% are white—and 96% have credentials in the subject that they are teaching. Actually this is higher than the average that we had for the schools that these students attend. On average, 88% of the teachers in these schools are credentialed. This suggests that students with disabilities may be placed in classes with more qualified teachers who have more substantial teaching experience. On average, they have taught for 14 years and for 10 of those years they had experience teaching students with disabilities. More than two-thirds of the students have teachers who feel that they are adequately trained to teach students with disabilities.

In addition to the years of experience that these teachers bring, almost all of the teachers receive some type of support for teaching students with disabilities. The most frequent type of support is information about students’ needs and abilities and consultation services, but fewer than 15% of students have teachers whose support included lower class size, aide assistance, or in-service training. We asked teachers if they thought this support was adequate and almost 90% of them thought that it was somewhat or very adequate. Teachers of classes where there is a student with mental retardation or traumatic brain injury are among those who are least likely to think that the supports were adequate.

Not only do the teachers have supports, but students also receive a wide range of supports and accommodations to help them succeed in their general education classes, with 93% receiving some form of support. Extended time is the most frequently cited accommodation—more time to take tests, more time to do assignments. Less common are slower-paced instruction, assignments that are shorter or different from those
in the rest of the class, having tests modified or read, or physical adaptations to the classroom. 

   25 In addition to the accommodations, they also receive other types of supports. Supports tend to cluster into supports from other adults and program types of supports. Three out of five have their progress monitored by a special education teacher and more than a third receive more frequent feedback on their work, while fewer than 20% receive other types of individual help such as teacher’s aides, computers, videos, or interpreters. In addition, almost a quarter of the students receive additional assistance and instruction focusing on learning strategies and study skills.

   We have most of the students with disabilities in general education academic classes that are mostly at grade level. These students have received a wide range of accommodations and supports to help them benefit from instruction. They have fairly experienced teachers who receive some amount of support because these students are in their class.

   26 What are these students’ experiences in these classes and how do their experiences compare with those of the classes as a whole? Let’s begin by looking at the teacher-directed or the teacher-controlled aspects of the class. 27 Teachers were asked to indicate the extent of modifications that they made to the general education curriculum for students with disabilities in their classes. The green section of this pie chart are those who received an unmodified curriculum. We see about a third of these students have full access to the general education curriculum, where they are receiving the general education grade-level curriculum. Looking at the light blue section, we see that more than half of teachers report making some modifications, 11% of students have substantial modifications made to the general education curriculum, and 2% receive the special ed curriculum.

   28 Students are most likely to receive an unmodified curriculum in their general education math class or science class and again the colors are what we had in the pie charts; the dark blue being the substantial modification and the green indicates the curriculum without modification. Looking at students by disability, again the green stripes are the curriculum without modification. 29 The extent of curriculum modification varies by the student’s disability category. Those with speech impairments are the most likely to access an unmodified general education curriculum, followed by those with sensory impairments or orthopedic impairments. Those with mental retardation, traumatic brain injury, and multiple disabilities are among the least likely.

   30 Teachers’ disciplinary practice is another teacher-directed aspect of the class. Teachers were asked if students with disabilities in the class need to be disciplined and to what extent this discipline is similar to what’s done with other students. Are discipline practices largely the same for the students with disabilities and for other students? 84% of the students receive the same discipline as the other students in their classroom—this tends to be true for students in most disability categories; three quarters or more students in most disability categories receive the same type of discipline as others in their class. Those with autism or multiple disabilities are the least likely to receive the same type of discipline followed by those with mental retardation or emotional disabilities.

   Now let’s look at some aspects of classroom instruction. 31 Teachers were asked to report the frequency with which they used various instructional activities. There are two bars for each activity: the top bar is always the frequency with which the student uses this activity—the student with disabilities about whom they are reporting in their class. The second bar is the frequency with which they use the activity with the class as a whole. The yellow part of the bar is indicating that the activity rarely or never took place, the purple represents sometimes, and the green part is often. So we are looking at the instructional groupings that the teachers employ: class instruction, small group instruction, and individual instruction.

   As we saw earlier, the general education classes have a much higher student-teacher ratio than the special education classes. The one way to lower that ratio for some aspects is to employ small group or individualized instruction. Clearly, in general education academic classes at the secondary level, the most frequently used is whole-class instruction. For the most part, the experiences of students with disabilities related to instructional groupings are really similar to that of other students in the class: they are as likely to have whole-group instruction. They have the same rates of small-group instruction and they are as likely to get individual instruction from their teacher. In the amount of individual instruction from an adult other than teachers, the students with disabilities differ from their peers in that students with disabilities are more likely to receive this type of instruction than their peers.

   Slide 32 looks at the materials that the teachers use with these students. Students with disabilities and students in the class as a whole are very similar in their frequency of using each type of instructional material: textbooks, material workbooks, supplemental material, lab equipment, worksheets, and workbooks. Slide 33 looks at computer use and again there is no difference in the frequency of using computers for drills, for word processing, for spreadsheets, or for the Internet between students
with disabilities and the class as a whole. We have learned from a different survey we had done that more than half of these students attend schools that have a computer in every academic class yet computers are really not used very frequently for any purpose in these classes.

Looking at instructional activities outside of the classroom, there is no difference in the frequency of instructional activities outside the classroom—such as trips to the library or computer lab, field trips, or community-based experiences—between students with disabilities and their classes as a whole. Clearly, at the secondary level, these rarely occur for all students with or without disabilities in general education classes.

We saw that there are some modifications to the curriculum, but overall, the teacher-directed aspects of the class are largely the same for students with disabilities and students in the general education academic class as a whole, and this is true for students in all disability categories. Students shouldn't be considered passive recipients of education, but instead are active participants in the learning process. How does their participation compare with that of their peers in their classrooms? Looking at their participation, students with disabilities’ participation differs markedly from the level of participation of other students in their class. They consistently do not participate at the same rate as their peers. Their classroom peers are almost twice as likely as they are to respond orally to questions often; 36% are responding often to questions compared with 67% of their peers responding that frequently. Looking at the other end of the spectrum, 20% of students with disabilities rarely or never respond to questions compared with only 1% of their peers. Half of the students with disabilities rarely or never present to the class compared with about a third of their peers. They are less likely to work independently or with a peer. This is true for students in all disability categories. They are significantly less likely to participate in class than their peers, although the gap between their participation in the class is the largest for students with mental retardation.

Slide 37 looks at this participation in a slightly different way. Instead of comparing their behavior to that of their peers, it looks at students with disabilities’ participation in group discussions across class settings, including general education academic classes, vocational education classes, and special education classes. The top three bars are all students with disabilities. We see that students with disabilities in general education academic classes are much less likely to participate in group discussions than those in vocational education classes and special education classes: 45% participate infrequently compared with about 60% in the other two types of classes; 22% rarely or never participate in group discussions compared to 9% and 8% of special education students in vocational education or special education classes.

These findings have raised questions for us about whether the differences in behavior that we were seeing in special education students across class settings are related to differences in the students who take the class or to the influences of the class settings on their behavior. To explore this issue, I included in the analysis a subset of students and that’s what the bottom three bars are. These are the students who have at least one of each of these types of classes. Here we are looking at the same students’ behavior in each of these different types of classes and we see that their findings are very similar to what we found for all these students with disabilities. They are much less likely to participate in their general education academic classes then they are in their vocational education class or in their special education class. The difference in behavior cannot be attributed to differences in students. Instead, it appears to be related to some aspect of the class settings, the class size, the comfort with the teacher and other students in the class, or the teacher’s expectations for behavior.

Looking at teacher’s perceptions, how did their general education teachers feel about their placing the students in their class? When we asked teachers about their expectations, almost all the students with disabilities are expected to keep up with other students in the class—97% are expected to keep up. Almost three-quarters, 71%, do keep up, but it is worrisome that more than a quarter of the students with disabilities in general education classes are not meeting the performance expectations of their teachers.

Slide 42 looks at differences by disability category with the top bar being those expected to keep up with other students and the yellow bar being those who the teacher rates as actually keeping up. Students in most disability categories have teachers who expect them to keep up with other students. There is a wide range by disability category in students rated as keeping up with
their classes: students with mental retardation, emotional disturbances, and other health impairments have the largest gaps between being expected to keep up and actually keeping up with other students in their class.

Moving beyond focusing on students’ experiences within the general education classroom, let’s look at how spending more time in these types of classes relates to student outcomes. We examined students’ performance in several domains including engagement in school, which is things like the number of days absent; academic performance such as grade performance on standardized tests; and areas of social adjustment such as frequency of seeing friends and belonging to groups. When we examined students’ performance, because so many of the factors are interrelated, we used a multivariate analysis approach. For example, we know that enrollment in general education academic classes is compounded by many other factors such as students’ disability and functioning. We saw earlier that students in some disability categories such as mental retardation or autism are much less likely to be taking these types of classes. Students’ outcomes also are related to differences in students’ disability and functioning. To try to disentangle these relationships, so we could identify their independent relationship to spending more time in a general education academic class with outcomes, we used a multivariate approach to hold constant the differences between students. We statistically held constant all of the factors that are in this table including aspects of the students’ disability and functioning, aspects of individual and household characteristics, parent involvement, parent expectations, and other aspects of their school program and performance.

Looking at the relationship of spending more time in general education classes with these outcomes, results are mixed. We found that independent of other factors included in the model, the degree to which students with disabilities take classes in a general education classroom is both positively and negatively related to their performance. On the negative side, students with disabilities who take more of these classes also tend to receive lower grades. These lower grades are not surprising in light of the fact that more than a quarter of these students—as we saw earlier—are not meeting their teacher’s expectations. This link with lower grades is concerning. In the original NLTS, students who received lower grades, particularly failing grades, were not accumulating sufficient credits to graduate, which led to many eventually dropping out. However, taking more courses in general education classrooms is also associated with positive outcomes. The other part of the chart, having reading and math abilities closer to grade level, lower likelihood of being subject to disciplinary actions at school, and higher likelihood of participation in school and community groups.

We do see many benefits associated with taking more general education academic classes and many of these benefits have been associated in the original NLTS with a lower likelihood of dropping out of the school. The bottom line is that it is too early to tell the true impact on these students’ lives of taking more general education academic courses—you are going to need to stay tuned to follow these students’ lives into young adulthood and look at their actual school-leaving status and other secondary achievements.

I would like to just go to the very last slide. This is the NLTS2 Web site, www.nlts2.org, and this Web site has a wealth of information—it includes all of our reports, much fuller information about the types of topics I have been sharing today. In addition, we have the data from each of those stars on that chart that I shared initially. Each of the different instruments that we collect we actually have the data that you can search by topic up on the Web site. If you remember nothing else from this presentation, the important thing to remember is this Web site address. I think we are now ready for questions.

Dr. Johnson: Do we have questions for Lynn?

Ms. Sweeney: I am Sweeney from the Massachusetts Department of Education. My question has to do with the teachers that you survey, the general education teachers. How many of them did you survey and how did you select them and what type of vehicle did you use to survey them?

Dr. Newman: This is a study that focuses on students, not on teachers. So what we did is we selected our students randomly from districts who gave us their rosters and they represented all of the students in the country. Then for each of those students, we got the names of the schools they attended from interviews with their parents or from their districts. We went to those schools and we asked the schools to identify teachers to complete two surveys. One was the school program survey—we said, please ask somebody who is knowledgeable about the students’ school program overall, and that was usually a special education teacher or staff member, to complete that one—and in the general education academic class we asked, does the student take this type of class. If they do, please give the survey questionnaire to the teacher who teaches their general education class that they have on Monday morning, the first general education class that they take on Monday morning because we wanted it to be random. And we had, I think, a high 60% response rate in those. I don’t remember the exact number of how many teachers we had, but it was
these students’ teachers, not a sample of teachers.

**Ms. Jorgensen:** I am from Kansas University, Jean Jorgensen. I want to know, when you were identifying students based on their labels or their type of disability, did you run into many different definitions of a disability? For example, was the child with attention deficit disorder labeled Other Health Impairments or were they labeled with LD?

**Dr. Newman:** We used the definitions that the schools provided and if it was not very clear, we would go back to the district, not the schools, and we asked them to use the categories that they had used when they responded to any request from the Federal government. We had a lot of up and back with the different districts and ADD is generally in the Other Health Impairments category, although when we asked parents about what’s wrong and what other issues do your children face, we know that many students have ADD in many of the other categories as well. In addition, we have students who are categorized by the label that the district gave us, but we then asked schools and asked the parents other information about these students’ functioning and ability. We have a wealth of other information beyond the label, but when we describe in our reports and describe in our presentations, we use the labels that the districts gave us originally.

**Ms. Jorgensen:** I have another question, why was the gifted student not included in that?

**Dr. Johnson:** That’s a political question.

**Dr. Newman:** You would need to ask OSEP that one.

**Ms. Stremal:** This is Kath Stremal from Intack at the Kansas office. Although deafblindness is a category included in the first in the ten disability groups, when the data was analyzed on slides 29, 30, and 42, it was left off. Was it incorporated into other categories?

**Dr. Newman:** No, we have defined this as a category on its own, but if there are fewer than 35 respondents we do not report the numbers and so that must be the case for these students. That would be information from a general education academic course and we probably didn’t have enough to be able to report those numbers, but they are a stand-alone category and they have their own category in most of our reports.

**Dr. Johnson:** Well, I wish to thank you, Lynn. You know, SRI International and NCSET have really a partnership here too, where you will find that our website under Publications is a series that we have jointly put out. We have been trying to work with this study to get information out in terms of using what are called NLTS2 Data Briefs. We have six briefs that are on the NCSET Web site that you can download and use them to any end you wish, and you will see more of these develop as this study progresses.

I also wanted to acknowledge that the next NCSET national teleconference will be December 1, 2004 at 1 p.m. Central Standard Time. The topic will be Interagency Transition Team Development and Bob Stodden at the University of Hawaii, one of our NCSET partners, will lead that discussion for us. So look forward to some very quick information on that, it will be out to you.

I also draw your attention to the National Leadership Summit which will be June 14-15 in Washington, DC. We are trying to finalize some of the aspects of this to get the registration materials out as soon as humanly possible, so you can start to think about from the states’ perspective, the team that you may choose to bring in to Washington, DC for that event. So any other questions for Dr. Newman, otherwise we will close this.

**Ms. Bryant:** I am Cynthia Bryant from Arizona Department of Education, Exceptional Student Services. I have a question. It begins on slide 11, about course-taking of students with disabilities. I was rather impressed with the percentages of students taking regular courses.

**Dr. Newman:** These are students taking these academic courses, these are not necessarily in general education setting, these are in any setting.

**Ms. Bryant:** Now since we don’t know whether they were in special education settings or in regular education settings, I guess my question won’t apply. Okay.

**Dr. Johnson:** Okay, are there more questions? All right, Lynn, thank you very much.

**Dr. Newman:** Thank you all.

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