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ABSTRACT

In recent assessments, the National Center for Education Statistics (NCES) has permitted schools to exclude some students with disabilities or limited English proficiency because it believed that its assessments would not accurately measure the ability and achievement levels of these students. The exclusion of a portion of students from assessments by the NCES has raised doubts about the validity of its data. This report discusses the data validity concerns related to the current policy and explains how the NCES assesses and surveys students with disabilities and limited English proficiency. Approximately 7% of students with disabilities attend special schools and thus are not assessed by the NCES. However, about 50% of students with disabilities are currently assessed. Alternative ways to collect outcome data on students with disabilities who are currently excluded include making accommodations to the NCES assessment procedure by, for example, providing additional time to complete the test or providing a separate room in which to take the test; conducting portfolio assessments; and collecting background data from the schools about students' achievement and abilities. The 1995 field test of the National Assessment of Educational Progress will examine new procedures for assessing students with disabilities or with limited English proficiency. (Contains 12 references.) (SLD)

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NATIONAL CENTER FOR EDUCATION STATISTICS

Working Paper Series

Assessing Students with Disabilities and Limited English Proficiency

Working Paper No. 95-13 March 1995

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Assessing Students with Disabilities and Limited English Proficiency

Working Paper No. 95-13

March 1995

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March 1995

Foreword

Each year a large number of written documents are generated by NCES staff and individuals commissioned by NCES which provide preliminary analyses of survey results and address technical, methodological, and evaluation issues. Even though they are not formally published, these documents reflect a tremendous amount of unique expertise, knowledge, and experience.

The ***Working Paper Series*** was created in order to preserve the valuable information contained in these documents and to promote the sharing of valuable work experience and knowledge. However, these documents were prepared under different formats and did not undergo vigorous NCES publication review and editing prior to their inclusion in the series. Consequently, we encourage users of the series to consult the individual authors for citations.

To receive information about submitting manuscripts or obtaining copies of the series, please contact Suellen Mauchamer at (202) 219-1828 or U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, 555 New Jersey Ave., N.W., Room 400, Washington, D.C. 20208-5652.

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ASSESSING STUDENTS WITH DISABILITIES AND LIMITED ENGLISH PROFICIENCY

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January 6, 1995

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ACKNOWLEDGEMENTS

This paper was prepared by James Houser in the Data Development Division of the National Center for Education Statistics (NCES) under the general direction of John Ralph, Chief of the Policy and Review Branch. Overall Direction was provided by Jeanne E. Griffith, Associate Commissioner for Data Development.

A number of people throughout NCES provided information or advice regarding the development of this paper. They include Emerson J. Elliott, the Commissioner of Education Statistics and Ron Hall, his Chief of Staff. They also include Peggy Carr, Andy Kolstad, Gary W. Phillips, Laurence Ogle, and Sharif Shakrani from the Education Assessment Division in NCES. Individuals from the Elementary and Secondary Education Statistics Division in NCES who provided input include Jeffrey Owings; Paul D. Planchon; and Peggy Quinn. In the Data Development Division, Dawn Nelson, Eugene Owen, and Lois Peak provided information and advice.

Other individuals within the Department of Education reviewed the paper. They include Judith Leonard from the Office of General Counsel; Lou Danielson from the Office of Special Education and Rehabilitative Services; and Gene Garcia, the Director of the Office of Bilingual Education and Minority Language Affairs.

Outside of NCES, many individuals commented on the paper. The individuals include James D. Ysseldyke and Martha L. Thurlow, respectively the Director and Associate Director of the National Center on Educational Outcomes for Students with Disabilities. In addition, the paper was reviewed by Lizanne Stephano from the University of Illinois at Urban-Champaign and both Randy Bennett and Paul Williams from the Education Testing Service.

Although many individuals contributed toward the development of this paper, the author accepts full responsibility for the accuracy of all information contained in the paper. The author, however, forewarns readers that some of the information in the report may become dated after August 1995. The 1995 field test for the National Assessment of Educational Progress will experiment with providing accommodations to assessments for students with disabilities and limited English proficiency. This experiment will be evaluated by August 1995.

ASSESSING STUDENTS WITH DISABILITIES AND LIMITED ENGLISH PROFICIENCY

This paper describes:

1. what data validity concerns are related to the National Center for Education Statistics' (NCES) current policy of excluding some students with disabilities and limited English proficiency;

2. how NCES currently assesses and surveys students with disabilities and limited English proficiency and what related research has taken place;

3. what data validity concerns need to be considered in determining whether to conduct alternative assessments; and

4. what steps NCES is taking to begin modifying how it assesses students with disabilities and limited English proficiency.

1. DATA VALIDITY AND CURRENT POLICY

In recent assessments, such as the 1994 administration of the National Assessment of Education Progress (NAEP), NCES permitted schools to exclude some students with disabilities and limited English proficiency. NCES did so because it believed that its assessments, as designed, would not accurately measure the ability and achievement level of some students with disabilities or limited English proficiency. The exclusion of a portion of students from NCES' assessments raises issues about the validity of its data.

Responsibility of a Statistical Agency in Education

- As the government's education statistical agency, NCES has an obligation to provide information that can be generalized to represent various populations. When the data are not representative, NCES has, first, to acknowledge that fact so data users will be informed, and second, to take steps to remedy the deficiency.

  Section 421 (c)(3) of the Perkins (vocational-technical education) Act requires the Secretary of Education to:

  > ensure that appropriate methodologies are used in assessments of students with limited English proficiency and students with handicaps to ensure valid and reliable comparisons with the general student population and across program areas.

  We interpret this to apply to both vocational and non-vocational students. Still, the Administration's goals for inclusion set the government policy context that NCES must follow.

Implications of Inclusion and Exclusion for a Statistical Agency

- Equity and inclusion traditionally involve equal access to benefits. Participation in NCES' surveys and assessments is not a direct benefit for an individual, rather it is often viewed as a burden. Since NCES' studies sample students and a school official excludes students (if they meet established criteria and are viewed by the school to be incapable of taking the assessment) prior to selecting the final sample, students are not stigmatized before their classmates by being excluded. Neither the excluded students nor their classmates know that any particular student is being purposefully excluded.

- However, the inclusion of a group, such as students with disabilities or limited English proficiency, in NCES' studies could be construed as a benefit to that group if the study accurately measures their educational outcomes. Policymakers often determine resource levels and policies based on national data.

- Since NCES is part of the U.S. Department of Education, the actions it takes to include or exclude students with disabilities and limited English proficiency provide examples for states, school districts, and schools to follow in their own assessments.

- Inclusion raises issues of statistical bias and interpretation.

  - A study that excludes a subpopulation potentially biases the results of the study. Students with relatively severe disabilities or limited English proficiency are probably more likely both to be excluded from NCES' assessments and to have lower assessment scores than students who are neither severely disabled nor severely limited English proficient. As a result, NCES acknowledges in its reports, but not always in a prominent manner, that these students are excluded to inform its data users that its data are not generalizable to the excluded students.

  - A study that measures the outcomes of students using a different method from that used for the general population (e.g., an accommodation of extra time for a student with a learning disability or a Spanish-language translation for a student with limited English proficiency) may not be measuring the same thing as the general assessment. Some of these accommodations have led to overestimates of the ability and achievement levels of students receiving the accommodation.

- Although the guidelines (discussed under "Current Status") for excluding a student from an assessment may not be ideal, altering the guidelines may prove difficult to implement. NCES conducts assessments as part of several of its programs: NAEP; the National Adult Literacy Study; the international studies program; and the longitudinal studies program. A portion of students participating in NAEP take an assessment that is designed to provide long-term national time series data. This

assessment consists of test items that have not been changed in any of the years that are included in the time series. In addition, data from NCES' different longitudinal studies are sometimes compared to one another, thus they provide time series data as well as longitudinal data.[1] If the exclusion criteria were altered, NCES might not be able to make valid comparisons between years for which different criteria were used. Since the population being tested would no longer be identical, changes in the time series data could be either the result of actual changes in performance of students or the result of adding more students with disabilities and limited English proficiency to the sample. If the exclusion criteria are altered for NAEP, it may be necessary to retain the existing exclusion criteria for the long-term time series sample or, at least, to estimate the size of its effect.

- Data on racial and ethnic groups may be biased because some students with disabilities and limited English proficiency are excluded from NCES' surveys and assessments. Minority students are overrepresented among students with disabilities and limited English proficiency. To the extent that minority students are also overrepresented among students who are excluded, the data reported on racial and ethnic groups are biased.

2. CURRENT STATUS

This section describes the current status of both the Office of Educational Research and Improvement's and the Office of Special Education and Rehabilitative Services' survey and research activities related to students with disabilities and students with limited English proficiency.

Status of Statistical Activities

Survey Guidelines

- Because paper and pencil assessments may not accurately reflect the achievement level of some students with disabilities, school administrators exclude some students with disabilities from NCES' assessments. Beginning with the 1990 NAEP, schools were given guidelines stating they may exclude a student with a disability if:

  - "the student is mainstreamed less than 50 percent of the time in academic subjects and is judged incapable of participating meaningfully in the

[1]For example, if data on high school seniors are compared using two different longitudinal studies, the National Longitudinal Study of 1972 (which has data on 1972 high school seniors) and High School and Beyond (which has data on 1982 high school seniors), the data would be considered to be time series data since it would study a population with a similar characteristic (being high school seniors) at two different points in time.

assessment,

OR

- the IEP[2] or equivalent group had determined that the student is incapable of participating meaningfully in the assessment." (ETS and Westat, Inc., 1990, p. II-ll)

o Beginning with the 1990 NAEP, NCES instructed schools to exclude students with limited English proficiency from its assessments only if all the following conditions apply:

- "the student is a native speaker of a language other than English; AND
- the student has been enrolled in an English-speaking school for less than two years (not including bilingual education programs)[3]; AND
- school officials judge the student to be incapable of taking the assessment". (ETS and Westat, Inc., 1990, p. II-ll)

o Schools are instructed to include students with disabilities and limited English proficiency if school staff believe the students are capable of taking the assessment. Schools are also instructed that when there is doubt, students should be included. (ETS and Westat, 1990, p. II-ll)

o Administrations of NAEP prior to 1990 and the National Education Longitudinal Study of 1988 (NELS:88, one of the data sets in NCES' longitudinal studies program) relied on the judgement of school administrators as to whether or not the student could take the test. They provided less rigorous criteria for determining which students with disabilities and limited English proficiency should take the assessment. (Johnson et al., September 1990, p. 96 and NCES, August 1990, p. 7) In the Third International Mathematics and Science Study, the procedures that NCES began using for NAEP in 1990 will be followed for the U.S. The rule for other countries will permit the exclusion of students based on criteria that include disability status and ability to speak the language of the country, but not the exclusion of more than ten percent of a country's student population. (Foy and Schleicher, April 1993, p. 6-3)

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[2]IEP stands for Individualized Education Program; all students receiving special education are required to have these programs.

[3]This provision means that a student can be excluded from the assessment if he or she has taken the subject being tested in English for less than two years.

Background Information

- Students who are excluded from NCES' assessments are also excluded from background questionnaires that are linked to these assessments. One exception to this rule is for Spanish-speaking students with limited English proficiency. NCES provided Spanish-language background questionnaires for students participating in the first- and second- NELS follow ups. (NCES, November 1993, p. 101)

- However, NCES obtains some data on students who are excluded from its surveys and assessments from school officials who complete an abbreviated questionnaire for these students. In addition, they are included in NCES' transcript studies when these studies are conducted in association with NCES' surveys and assessments.

Exclusion Rates

- NCES generally includes only students in its surveys who attend public or private schools.[4] As a result, individuals who are incarcerated, dropouts, and students enrolled in special schools for the disabled are generally excluded from NCES' surveys and assessments. In addition, some students with disabilities or limited English proficiency in regular schools are excluded from NCES' surveys and assessments.

  - Incarcerated students, who account for less than one percent of 17-year-olds, are generally excluded from NCES' studies.

  - Dropouts account for approximately six percent of 17-year olds and are not generally included in NCES' cross-sectional school-based studies.

  - Approximately seven percent of students with disabilities (less than one percent of the general student population) attend special schools and, therefore, are not included in NCES' studies. Even if these special schools were included in the sampling universe for NCES' surveys and assessments, they still might be difficult to include in NCES' studies. NCES studies are generally grade-based and many special schools are not graded. One exception to this rule is the NAEP national trend sample. This sample is age-based and could potentially include special schools for students with disabilities.

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[4]Most public and private schools are included in the universe of schools from which NCES draws its samples. Schools designed to meet the needs of specific populations, such as special schools for individuals with disabilities, are sometimes not included in the universe. (NCES, March 1990, p. 20)

- Among eighth-grade students in 1992, nine percent had an Individualized Education Program (IEP), approximately one-half of whom were excluded. As a result, five percent of all eighth-grade students in regular schools were excluded because of disabling conditions.

- Approximately three percent of all eighth-grade students in schools in 1992 had limited English proficiency, of which approximately two-thirds were excluded. As a result, two percent of all eighth-grade students were excluded because of language barriers. (Spencer, 1994, p. 16)

- If 17-year-olds are excluded at the same rate as eighth grade students are because of the severity of their disability or limited English proficiency, then approximately 15 percent of all 17-year-olds are systematically excluded from NCES' assessments.

Status of Research Activities

- Only limited research has taken place on how to assess students with disabilities and limited English proficiency. To date, no experiments using different approaches to assessing students with disabilities have been conducted.

- The National Academy of Education (NAE) has produced two papers commissioned by NCES, *Issues in the Development of Spanish-Language Versions of the National Assessment of Educational Progress* and *A Study of Eligibility Exclusions and Sampling: 1992 Trial State Assessment*. The first paper addresses the feasibility of conducting NAEP in Spanish. This paper concludes that 1) NCES should conduct a pilot study to examine the technical implications of a Spanish-language assessment and 2) NCES should try to design NAEP so that it will capture a broader range of students than it currently does. The paper on eligibility exclusions addresses the exclusion of numerous types of students from the 1992 NAEP Trial State Assessment. This paper concludes that:

  - Private school students should be included in NAEP

  - NCES needs to examine if it is cost effective to shift resources away from having a large sample size (to reduce sampling error) and towards including students who are relatively expensive to assess, such as students with disabilities and limited English proficiency (to reduce sampling bias).

  - NCES should either include dropouts in NAEP or indicate in its publications what proportion of students are dropouts.

- The National Center on Education Outcomes (NCEO), which is supported by the Office of Special Education and Rehabilitative Services, has produced a literature review on assessing students with disabilities that includes the results of a survey of state assessment practices regarding students with disabilities, *Testing Accommodations for Students with Disabilities: A Review of the Literature.*

- NCEO held a small working conference on how to assess students with disabilities in March 1994. The conference included experts on assessment and research of students with disabilities. Staff from NCES and the Office of Special Education and Rehabilitative Services were included in the conference. An overview of the discussions from the conference are published in Making Decisions About the Inclusion of Students with Disabilities in Large Scale Assessments. The recommendations made in the publication include that 1) NCES should try to develop more objective criteria for schools to use when making decisions about inclusion and exclusion and 2) NCES should conduct various research activities to investigate the data validity issues related to including students with disabilities and limited English proficiency in NCES' assessments.

- NCES convened a conference on assessing students with limited English proficiency in December 1994. The conference included experts in assessment and research of students with limited English proficiency. The group cautioned about assessing students with limited English proficiency in their native language since these students are frequently not literate in their native language. In addition, the group expressed concern that translations need to be conducted carefully since 1) the difficulty of vocabulary varies from one language to another and 2) some languages, such as Spanish, have numerous dialects.

- The Office of Educational Research and Improvement funds the Center for Cultural Literacy and Second Language Learning at the University of California at Santa Cruz. This Center plans to conduct research on using portfolio assessments to assess the literacy of students with limited English proficiency.

- NCES has budgeted to conduct a study designed to study potential bias on math and science items related to language ability as part of its activities in NAEP. The study will also address how the accuracy of these assessments might be improved. Although this study is not directly related to the main thrust of this paper -- how we might collect outcome information on more students with disabilities and limited English proficiency -- it may help us improve the quality of assessment data on students with limited English proficiency.

3. DATA VALIDITY AND ALTERNATIVE ASSESSMENTS

This section describes the relationship between data validity and:

- providing accommodations to NCES' assessments,
- conducting portfolio assessments,
- assigning test scores to students based on background characteristics and teacher observations, and
- translating NCES' assessments into languages other than English.

Students with Disabilities

- Many students with disabilities who are currently excluded from NCES' assessments could be included with no accommodations at all. In fact, Steven Ingels from National Opinion Research Center believes that NCES might be able to assess 85 percent of all students with disabilities with no accommodations. NCES is currently assessing only about 50 percent.
- There are at least three alternative ways to collect outcome data on students who are currently excluded from NCES' studies:
  - make accommodations to NCES' assessment instruments,
  - conduct portfolio assessments, and
  - collect background data on students from school officials about their ability and achievement levels and assign test scores based on these data.

  We do not know which method would yield the most accurate estimate of a student's achievement level. Nor do we know which would yield test scores most comparable to scores from the general assessment.
- A fourth approach may need to be developed for the most severely handicapped students for whom independent living skills, not academic achievement, would be the primary concern of special education instructors.
- Making accommodations to an assessment could stigmatize a student. His or her classmates could be aware that the student was receiving special treatment as a result of a disabling condition if the student was not already receiving the same accommodations as part of his or her instruction.

Data Validity Issues

Accommodations to Assessments

- Accommodations fall into two different categories: 1) those that are very unlikely to affect test scores, such as providing a separate room in which to take a test, and 2) those that are likely to affect test scores, such as providing additional time to complete the test.

- To the extent a test is time limited, the provision of additional time decreases the validity of the test score. A learning disability is the most common disabling condition and the most common accommodation made to assessments for students with this condition is additional time to complete the test.

- The National Center on Educational Outcomes for Students with Disabilities recently conducted a literature review on providing accommodations for students with disabilities. The literature indicated that accommodations have been made in many instances (e.g., for Scholastic Assessment Tests (SATs) and State-mandated tests). The literature review conducted by this research center did not indicate that accommodations were made to any assessments that were used primarily for statistical reporting. Research on accommodations made to the SAT and the Graduate Record Examination (GRE) indicated that most accommodations did not present serious problems with data validity. The most common accommodation, providing additional time, did present predictive validity problems. The test scores for students who received additional time biased the data and overpredicted their postsecondary grades (the bias equaled approximately one-third of a standard deviation). That is, students who received additional time to take the SAT and GRE did not perform as well academically as their test scores predicted they would. Although this study does not prove that providing additional time for some students to complete NAEP would undermine its validity, it does indicate that extended time to complete NAEP needs to be studied carefully.

- The test scores for students receiving different types of accommodations, which will vary depending on the type and severity of disability, may also need to be reported separately since they may not be psychometrically equivalent to one another.

Portfolio Assessments

- Portfolio assessments are considered by many individuals to be potentially more informative about a student's achievement level than paper and pencil tests, regardless of whether a student has a disabling condition. Portfolio assessments have not been commonly used to conduct large scale assessments for statistical purposes. In NAEP, however, it has been demonstrated that methodologies can be devised that permit uniform measurement on a wide variety of student writing. If the collected work of

students with disabilities falls outside the range of work that can be uniformly measured, then it will require separate reporting (even if all students, regardless of whether they have a disabling condition or not, are participating in the portfolio assessment).

Assigning Scores Based on Background Characteristics and Teacher Observations

- This approach requires that an empirical process be developed to establish the relationship between background variables and student achievement. This could pose a problem in NAEP since it does not currently collect information on key background variables that have been linked to achievement such as parents' income.

- If test scores are assigned to students based or "conditioned" on their background characteristics, the scores could potentially be biased. The test scores would be conditioned on the test scores of students with similar background characteristics. There might not be either a sufficient number of students with similar characteristics or a sufficient number of detailed items to properly match similar students. Either problem could potentially bias the test scores.

All Three Strategies

- The test scores for students participating under any of these three scenarios will probably need to be reported separately from the test scores for other students since the assessments would not be psychometrically equivalent (i.e., identical scores for students who did and did not receive accommodations would not reflect identical achievement or ability levels, instead they would reflect that the assessment with the accommodations was either easier or harder than the assessment without the accommodations). NCES does not report data for a given population if the number of individuals in the sample is below 30 (62 for NAEP).

  A cell size of 30 (62 for NAEP) is sufficient to report on a given population, but it might not be large enough to make statistical comparisons between estimates. The standard errors for two numbers need to be small enough that apparently large differences will be statistically significant. The standard error increases as the cell size decreases. Data for these small cells might not be interesting to researchers if conclusions cannot be drawn about large differences between estimates because the standard errors are too large for the differences to be statistically significant.[5]

- Any of these three scenarios could potentially render the time series data invalid. A

[5]If the numbers being compared are not inherently comparable, as may be the case when the assessment is not administered in a similar fashion, having a cell size large enough to compare two averages is unimportant.

portion of students participating in NAEP take an assessment that is designed to provide long-term national time series data. This assessment consists of test items and administrative procedures that have not been changed in any of the years that are included in the trend. Another portion of students participating in NAEP take an assessment that provides short-term time series data. In addition, data from NCES' longitudinal data sets are sometimes compared to one another, thus they can provide time series data as well as longitudinal data.[6] If accommodations are made or portfolio assessments are conducted as part of a study that is designed to produce time series data, students might not be taking tests psychometrically equivalent to the administrations of assessments that did not provide alternative assessments. As a result, NCES might not be able to make valid comparisons between years in which alternative tests were and were not permitted. In addition, even if the assessments were psychometrically equivalent, they could potentially disrupt the trend data because students with disabilities might tend to score lower and more of them would be included. The result might be declining test scores when achievement may be static or even rising.

Students with Limited English Proficiency

- Some psychometricians believe that assessments in different languages are not psychometrically equivalent. Therefore, test scores may need to be reported separately for each language (as they are for the SAT).

- Students with limited English proficiency could be assessed in their native language if knowledge about a subject is the primary policy interest of the study. The primary policy interest behind many education assessments, however, is the ability of U.S. students to compete economically. In the U.S., there are economic advantages to the individual that stem from fluency in English.

- Spanish is by far the most prominent language spoken by students with limited English proficiency. So few students with limited English proficiency speak any other language that NCES would be unlikely to obtain sufficient sample size within a randomly-drawn national sample (unless the sample size for NCES' surveys increases dramatically) to report separate test scores for languages other than Spanish. NCES does not report estimates when the number of observations is insufficient because with so few observations (less than 62 for NAEP and 30 for its other surveys), estimates are of questionable accuracy. Also, Spanish is spoken in many different dialects.

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[6]For example, if data on high school seniors are compared using two different longitudinal studies, the National Longitudinal Study of 1972 (which has data on 1972 high school seniors) and High School and Beyond (which has data on 1982 high school seniors), the data would be considered to be time series data since it would study a population with a similar characteristic (being high school seniors) at two different points in time.

NCES might not be able to administer just one Spanish test if the Department of Education decided to translate assessments. Moreover, students are not always literate in the language spoken at home and some languages are only spoken and not written. As a result, paper and pencil tests may be difficult to administer to students with limited English proficiency, even if the tests are translated into a student's native language.

- Translated assessments could disrupt the trend data because students with limited English proficiency would tend to score lower and more of them would be included. The result could be declining tests scores when achievement may be static or even rising.

4. NEXT STEPS

NCES is undertaking studies designed to include students with disabilities and limited English proficiency in NAEP as part of the 1995 NAEP field test. NCES will provide accommodations to these students to determine the feasibility of using accommodations to include them. NCES is also testing different inclusion and exclusion criteria to determine which criterion maximizes the number of students included in NAEP.

Accommodations

Limited English proficient students in grades 4 and 8 will be administered two types of assessments:

- a Spanish-English side-by-side bilingual assessment and
- a Spanish-only assessment.

This will allow NCES to determine which type of assessment students find most useful. These assessments will be administered to students categorized as both limited English proficient and Spanish-speaking. Some of the tested students will be those who would have normally been excluded from the NAEP assessment; some would have normally been tested in English. Test questions are being translated into standard Latin American Spanish and NCES is evaluating the accuracy of the translation. (ETS and Westat, Inc., 1995)

As part of the 1995 field test, NCES will examine the feasibility of a variety of accommodations for students with disabilities including: Braille, large print, one-on-one administrations, extended testing time, multiple administrations, oral administration, and oral answering. All assessments will be conducted by the student's normal facilitator. For the Braille sessions, students will be given special instructions several days ahead of the assessment on the use of either a talking calculator or a Braille calculator and will be given one to use during the assessment session. (ETS and Westat, Inc., 1995)

Inclusion and Exclusion Criteria

The 1995 NAEP field test will examine two different sets of procedures for students with disabilities and two different sets of procedures for students with limited English proficiency that are designed to maximize the participation rates of these students.

Students with Disabilities

One set of procedures will be used for students with disabilities participating in the math assessment and a different set of procedures will be used for those participating in the science assessment.

- In the math assessment, students with disabilities will be included in the assessment unless their IEP prohibits their participation in assessments. Those students whose IEPs specify that they require an accommodation to participate in the math assessment will generally receive the accommodation.[7]

- Students with disabilities selected for the science assessment will not be assessed if their IEP prohibits their participation in assessments. In addition, students who require an accommodation to participate in the science assessment will not be included. (ETS and Westat, Inc., 1995)

Students with Limited English Proficiency

For students with limited English proficiency, one set of procedures will be used for the math assessment in grades 4 and 8 and a different set of procedures will be used for the math assessment in grade 12 and the science assessment in grades 4, 8, and 12.

- Students with limited English proficiency selected to participate in the math assessment in grades 4 and 8 will be assessed in English if they have received instruction in English for three or more years. Students who have received instruction in English for fewer than three years will be included if the school determines that they can participate meaningfully in the assessment in English or Spanish. These students will receive the assessment in the language in which they are believed to be strongest. If a school decides that a student is strongest in Spanish, the student will receive either an assessment in Spanish only or an assessment that presents Spanish and English versions of the assessment in a side-by-side fashion.

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[7]Students will not always receive the accommodation in their IEP. For instance, there will not be a Braille version of the math assessment in grade 4 since many blind students are not able to read Braille at this grade level.

- Students with limited English proficiency selected to participate in the math assessment at grade 12 or the science assessment at any of the three grade levels will be assessed in English if they have received instruction in English for the past three years. If these students with limited English proficiency have not received instruction in English for this time period, schools will be asked to determine if they can participate in the assessment in English. If schools determine that a student can participate, then he or she will be included, if not, the student will be excluded. (ETS and Westat, Inc., 1995)

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Listing of NCES Working Papers to Date

Number	Title	Contact
94-01	Schools and Staffing Survey (SASS) Papers Presented at Meetings of the American Statistical Association	Dan Kasprzyk
94-02	Generalized Variance Estimate for Schools and Staffing Survey (SASS)	Dan Kasprzyk
94-03	1991 Schools and Staffing Survey (SASS) Reinterview Response Variance Report	Dan Kasprzyk
94-04	The Accuracy of Teachers' Self-reports on their Postsecondary Education: Teacher Transcript Study, Schools and Staffing Survey	Dan Kasprzyk
94-05	Cost-of-Education Differentials Across the States	William Fowler
94-06	Six Papers on Teachers from the 1990-91 SASS and Other Related Surveys	Dan Kasprzyk
94-07	Data Comparability and Public Policy: New Interest in Public Library Data Papers Presented at Meetings of the American Statistical Association	Carrol Kindel
95-01	Schools and Staffing Survey: 1994 papers presented at the 1994 Meeting of the American Statistical Association	Dan Kasprzyk
95-02	QED Estimates of the 1990-91 Schools and Staffing Survey: Deriving and Comparing QED School Estimates with CCD Estimates	Dan Kasprzyk
95-03	Schools and Staffing Survey: 1990-91 SASS Cross-Questionnaire Analysis	Dan Kasprzyk

Listing of NCES Working Papers to Date (Continued)

Number	Title	Contact
95-04	National Education Longitudinal Study of 1988: Second Follow-up Questionnaire Content Areas and Research Issues	Jeffrey Owings
95-05	National Education Longitudinal Study of 1988: Conducting Trend Analyses of NLS-72, HS&B, and NELS:88 Seniors	Jeffrey Owings
95-06	National Education Longitudinal Study of 1988: Conducting Cross-Cohort Comparisons Using HS&B, NAEP, and NELS:88 Academic Transcript Data	Jeffrey Owings
95-07	National Education Longitudinal Study of 1988: Conducting Trend Analyses HS&B and NELS:88 Sophomore Cohort Dropouts	Jeffrey Owings
95-08	CCD Adjustments to the 1990-91 SASS: A Comparison of Estimates	Dan Kasprzyk
95-09	The Results of the 1993 Teacher List Validation Study (TLVS)	Dan Kasprzyk
95-10	The Results of the 1991-92 Teacher Follow-up Survey (TFS) Reinterview and Extensive Reconciliation	Dan Kasprzyk
95-11	Measuring Instruction, Curriculum Content, and Instructional Resources: The Status of Recent Work	Sharon Bobbitt & John Ralph
95-12	Rural Education Data User's Guide	Samuel Peng
95-13	Assessing Students with Disabilities and Limited English Proficiency	James Houser