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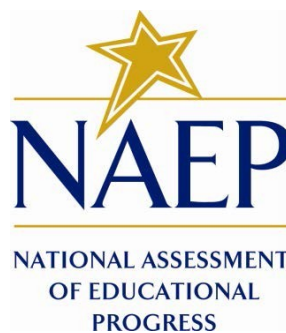
2019 and 2020

Long-Term Trend (LTT) 2020 Update 2

Appendix L

Findings and Recommendations from the National Assessment of Educational Progress (NAEP) 2017 Pilot Study of the Middle School Transcript Study (MSTS)

OMB# 1850-0928 v.16

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Methodological Report

U.S. DEPARTMENT OF EDUCATION

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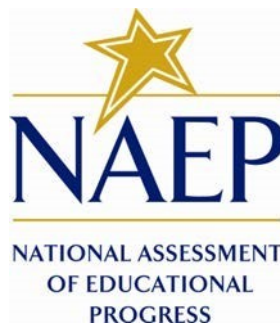
Methodological Report

January 2019

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January 2019

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This report was prepared in part under Contract ED-IES-13-C-0019 with Westat. Mention of trade names, commercial products, or organizations does not imply endorsement by the U.S. Government.

Executive Summary

The National Assessment of Educational Progress (NAEP) 2017 pilot study of the Middle School Transcript Study (MSTS) is the first NAEP transcript study to focus on the middle school level, collect student coursetaking data at the Trial Urban District Assessment (TUDA) level, and rely solely on the electronic submission of course catalogs and student transcripts. The purposes of this pilot study were to evaluate the feasibility of providing middle school student coursetaking data that link to the NAEP assessment data and contextual questionnaire data, to provide coursetaking measures and analyses that focus on issues relevant at the middle school level, and to explore the use of electronic school record collections as the data delivery system for future transcript studies.

This pilot study, conducted in three major stages, included recruitment, data collection and course coding, and analysis and reporting. It was limited to large urban districts, referred to as the TUDA jurisdictions, to help evaluate and streamline operations for potential future NAEP TUDA-based middle or high school transcript studies, as well as other electronic data-based transcript studies. The participation in this study was strictly voluntary for TUDA jurisdictions. TUDA jurisdictions who volunteered to participate agreed to submit information for all eighthgrade students enrolled in the schools sampled for the NAEP 2017 TUDA-based mathematics and reading assessments.

General Operational Findings of the Pilot Study

Overall, the NAEP 2017 MSTS pilot study was successful. All participating TUDA jurisdictions could submit required data files electronically and were able to provide course IDs on both the course catalogs and student course records, which made coding course records more efficient.

Below are specific operational findings:

- Approximately 123,800 student course records were collected, and 107,900 records were analyzed for the NAEP 2017 MSTS pilot study.

- Analyses on coursetaking measures (i.e., credits earned and grade point averages) showed similar general patterns in relationships that have been illustrated in the previous iterations of the NAEP High School Transcript Study (HSTS).

- Analyses on coursetaking measures and NAEP assessment scores demonstrated a successful linkage of student coursetaking information with the NAEP assessment and contextual questionnaire data, and showed similar general patterns in relationships among coursetaking, assessment and contextual data that had been illustrated in the prior NAEP HSTS.

Summary of Analytic Results

In examining the feasibility of providing student coursetaking data to supplement the NAEP assessment data, several analytic inquiries were conducted to investigate student coursetaking measures. These inquiries included how coursetaking measures relate to student performance on NAEP assessments,

how state assessments of student achievement relate to NAEP assessment scores, as well as how coursetaking measures relate to NAEP student contextual indices. Additional analyses of various academic programs (e.g., IB Middle Years Programme, and Project Lead the Way: Gateway) were conducted to further examine the coursetaking measures and their relations to measures of academic performance. Below is a brief list of the key analyses for the 11 participating TUDA jurisdictions that can be reported from this pilot study:

- estimated mean credits earned by eighth-grade public school students between sixth and eighth grades;

- overall grade point average earned by eighth-grade public school students on core academic courses (i.e., English, mathematics, science, and social studies courses) and other academic or nonacademic courses (i.e., fine arts, foreign languages, and career and technical education courses);

- the proportion of the eighth-grade public school students who earned high school credits in courses between sixth and eighth grades;

- the relationships between eighth-grade public school student coursetaking and performance on NAEP and state mathematics and reading assessments; and

- eighth-grade public school students reporting of levels of persistence in learning, enjoyment in solving complex problems, and interest and enjoyment in mathematics and reading in relation to their grade point averages in mathematics and English courses.

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Chapter 1. Study Planning and Design

Introduction

The National Assessment of Educational Progress (NAEP) 2017 pilot study of the Middle School Transcript Study (MSTS) is the first NAEP transcript study to focus on the middle school level. It is also the first NAEP transcript study to collect student coursetaking data at the Trial Urban District Assessment (TUDA) level and to rely solely on the electronic submission of course catalogs and student transcripts.

Information about operational aspects of the pilot study, such as sampling and recruitment, data collection, coding, and linking to the NAEP 2017 assessment data, is provided in this report. Findings and recommendations are also included for future studies that conduct electronic data collection for course catalogs and student course records.

The following sections describe the background and rationale of the study, including a description of the study design.

Background and Rationale

The NAEP 2017 MSTS pilot study was conducted by the National Center for Education Statistics (NCES), part of the U.S. Department of Education (OMB# 1850-0803 v.172 and v.180). Data for this pilot study were collected in conjunction with the NAEP 2017 eighth-grade mathematics and reading assessments. The data were linked to the NAEP assessment scores and the contextual questionnaire data so that relationships between student coursetaking and NAEP performance could be evaluated.

The purpose of this study was to investigate the feasibility of the following activities:

- collecting MSTS data that relied solely on the electronic submission of course catalogs and student course records;

- linking coursetaking data with the NAEP assessment and contextual questionnaire data;

- providing educators and education researchers with valuable information that would allow for new analyses and reporting in adolescent coursetaking and on issues that are relevant at the middle school level; and

- examining the use of electronic student transcript and course records data submissions for NAEP transcript-based studies.

Study Design

Westat was contracted by NCES to carry out the recruitment, data collection, coding of course catalogs and student course records, analyses, and reporting for the NAEP 2017 MSTS pilot study. The Educational Testing Service (ETS) was contracted by NCES to prepare student NAEP assessment scores (known as plausible values) for analyses with data collected from this pilot study. Additional information about generating the plausible values for the NAEP 2017 MSTS pilot study is provided in Chapter 4 of this report.

This pilot study proceeded in three major stages: recruitment, data collection and coding, and analysis and reporting. The study was limited to large urban districts, referred to as TUDA jurisdictions, to help evaluate and streamline operations for potential future NAEP TUDA-based middle or high school transcript studies, as well as other transcript studies that rely on electronic records. Participation in this study was strictly voluntary. TUDA jurisdictions that volunteered to participate agreed to submit information for all eighth-grade students enrolled in the schools sampled for the NAEP 2017 TUDA-based assessments.

In the first stage of this pilot study, Westat prepared materials and solicited TUDA jurisdictions for participation. Westat also held webinars with the NAEP TUDA coordinators to ensure that the participants interested in volunteering understood their responsibilities and the requirements for the study and had the opportunity to ask questions about the pilot.

In the second stage, data for the pilot study were collected and coded. The district information, course catalogs, student course records, and associated student education information were collected electronically. The district information and course catalogs were collected soon after a TUDA jurisdiction agreed to participate in the study, and the student course records and associated education information were collected during the following summer. Catalog courses were coded using the School Courses for the Exchange of Data (SCED) course classification system. Student course records were matched to the catalog course records through course ID numbers located on both the course catalog and student course records.

In the third stage, the NAEP 2017 assessment scores of the students were adjusted using conditional variables and weights provided by Westat to ETS using secure protocols already developed for NAEP. Those variables and weights were used by ETS to generate scores (known as plausible values) for the students in this pilot study. Preliminary analyses focusing on coursetaking measures, relations to NAEP performances, and other education outcome variables were conducted. The methodological report on the MSTS pilot study focused on documenting the technical aspects of the study, as well as the analytic possibilities of linking MSTS data to NAEP assessment scores, NAEP contextual variables, and state assessment scores provided by the TUDA jurisdictions. In addition, each TUDA jurisdiction receives an individualized report based on the available data provided by the TUDA jurisdictions. The analyses in the TUDAspecific report include findings related to estimated credits earned, grade point averages, linking NAEP assessment scores and contextual variables, and state assessment scores, if data are available. Both the methodological report and the individual TUDA reports are not to be released to the public.

Sampling, Recruitment, and Participation Requirements

The primary sampling objective of this pilot study was to collect middle school student coursetaking information from a sample of the TUDA districts interested in participating in the study. The study initially aimed to seek voluntary participation from six to eight TUDA jurisdictions that were part of the NAEP 2017 TUDA-based assessments but was expanded to include all 11 TUDA jurisdictions that expressed interest.

Recruitment materials included a description of benefits to TUDA districts of participating in the study (appendix A), a letter of solicitation (appendix B), and a brochure about the NAEP 2017 MSTS pilot study (appendix C). These materials were sent in early December 2016 to the 27 TUDA jurisdictions participating in the NAEP 2017 TUDA-based assessments, following the OMB approval of the pilot study.

A follow-up web meeting with interested TUDA coordinators or representatives was conducted in December 2016 to further explain the objectives of the study and its data collection process and to field any questions the representatives had. Interested TUDA districts were asked to complete and submit a letter of interest to NCES before the end of January 2017 (appendix D).

TUDA jurisdictions that were interested in participating in the NAEP 2017 MSTS pilot study needed to meet the following criteria:

- an electronic school records system and the ability to transmit student records electronically;

- the ability to provide electronic course catalogs containing courses available to students from sixth through eighth grades; and

- course ID numbers available on the electronic student records that match the course ID numbers available in the electronic course catalogs.

For the purpose of this pilot study, electronic records systems were defined as school course listings and student course records stored in electronic database formats, such as Microsoft Excel or Access files, statistical software databases (e.g., SAS, SPSS, STATA), or file formats that can be easily converted into databases (e.g., comma-separated values or extensible markup language files). Portable document format (PDF) transcripts are considered analogous to paper copies because they require the NCES data collection contractors to manually enter information from the transcripts into a database.

An electronic records system, which also can be referred to as an electronic-based student information system, is a centralized database (or set of databases) of student education information that maintains data on students' educational progress from elementary to secondary schools. The system may be able to identify courses in which students are currently enrolled or have taken in the past, document grading or grading systems, provide results of student assessment scores, and track student attendance and other student-level data.

Exhibit 1 shows yellow stars to represent the 11 TUDA jurisdictions that volunteered to participate in the pilot study and grey circles to represent nonparticipating TUDA jurisdictions.

Exhibit 1. Participating TUDA jurisdictions in the NAEP 2017 MSTS Pilot Study
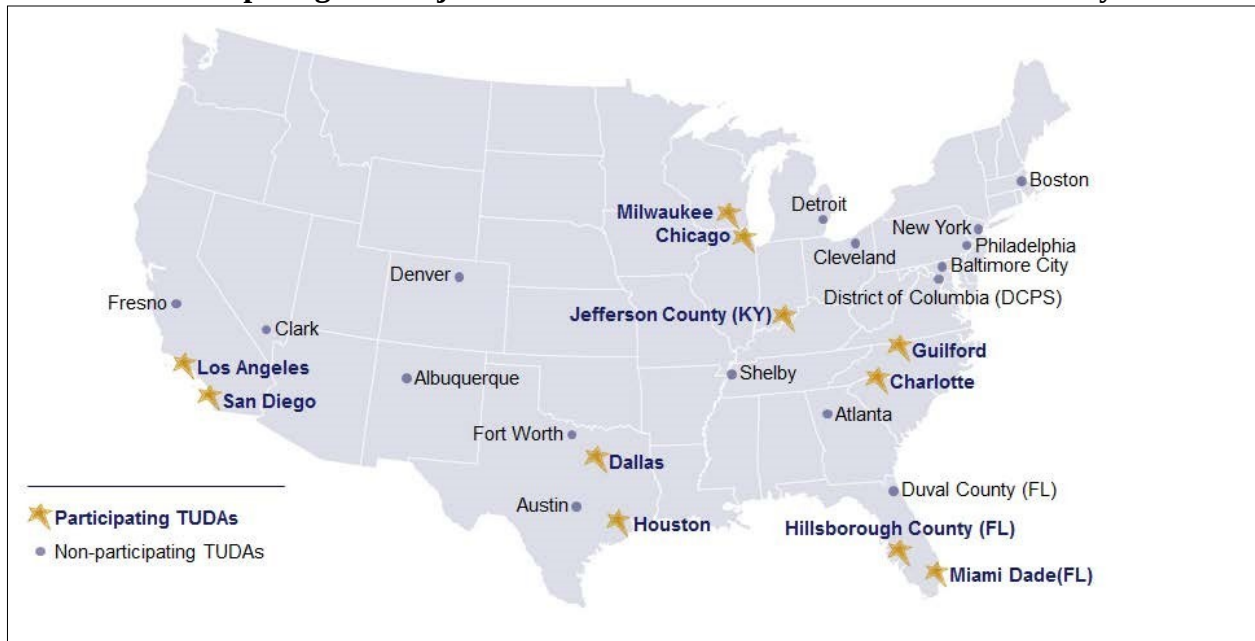
All 11 TUDA jurisdictions that volunteered to participate in the pilot study met the study's participation criteria and were able to complete the district information form and submit the course catalogs and the student course records electronically.

Burden Estimate

Because data was solely collected electronically at the district-level, the NAEP 2017 MSTS pilot study did not result in any known burden to the students, teachers, or schools. The level of burden was estimated only to be limited to the TUDA district administrative and information technology staffs to review, approve, and implement the request for the electronic submissions of course catalogs and student course records data, along with electronic supporting documentation. Table 1 lists the hourly estimates of response burden for each participating TUDA jurisdiction by activity (as approved in the OMB package). The hourly burden was estimated to be no more than 12 hours for each participating TUDA jurisdiction for submitting the required data.

Table 1. Estimated hourly response burden for each participating TUDA jurisdiction in the NAEP MSTS Pilot Study, by activity: 2017

Activity	Hours per response
Interview to collect initial MSTS information	1
Collection of District Information Form	2
Submission of course catalogs to secure FTP site	1
Submission of student course records to secure FTP site	8
Total	**12**

A follow-up email communication was sent in late April 2017 to the participating TUDA jurisdictions asking about the time it took to complete the district information form and submit the course catalogs. The 11 participating TUDA jurisdictions reported estimated burden hours are within the estimated hourly burden listed in Table 1. For the student course records and education-related data submission, the participating TUDA jurisdictions noted the submitting process was straightforward and efficient once project staff at Westat provided additional details and answers to questions related to student course records.

Chapter 2. Data Collection

Overview

Data collection for the NAEP 2017 MSTS pilot study occurred in three phases, first collecting district information forms, then course catalogs, and finally student course records with associated education information. Participating TUDA jurisdictions were responsible for transferring the electronic files to secure NAEP file transfer protocol (FTP) sites hosted at Westat. An MSTS Help Desk was provided by Westat in case TUDA representatives needed technical assistance preparing or submitting electronic files.

No individual schools were involved in the data collection process. As mentioned previously, the data collection was done at the TUDA level. Therefore, there was no requirement for field staff to collect student course records at the participating NAEP assessment schools as has been traditionally done with the NAEP HSTS. Additionally, an automated approach was provided to collect and process the student course records data, with each participating TUDA jurisdiction electronically submitting and uploading the data files containing student coursetaking information to the secured FTP site at Westat. These procedures limited the need for a keying unit to enter the collected course information into analyzable databases, which were necessary for the previous paper-based student course records data collection operations. This reduced the time and cost needed to process the student course records, and eliminated data entry errors that could occur in student course records keying operations.

Because the NAEP 2017 MSTS pilot study falls under the NAEP program, the collection of electronic student course records fell under the auspices of the overall NAEP data collection procedures and protocols (described in OMB #1850-0928 v. 1–2), and student course records disclosure is permitted under the exception of the Family Educational Rights and Privacy Act to the general consent requirement that permits disclosures to authorized representatives of the Secretary for the purpose of evaluating federally supported education programs (34 CFR §§ 99.31 [a][3][iii] and 99.35). The following sections describe each of the data collection phases in more details.

District Information Form

The district information form asked for information related to the availability of electronic course catalogs, whether the course catalogs included course descriptions, the availability of course ID numbers in the course catalogs and on student course records, as well as various data elements of the student course records (see appendix E). These data elements are needed to code the course catalogs and student course records. Table 2 lists the major required and optional data elements listed in the district information form.

Table 2. Major required and optional data elements listed in the NAEP MSTS Pilot Study's district information form: 2017

District-level education information	Is data element required?
Eighth-grade completion requirements	Yes
Credits earned for a year-long course	Yes
Common grading standard	Yes
State or district assessment scores	Strongly recommended, but not required
Districtwide education programs	Strongly recommended, but not required
School calendar (semester vs. quarter)	No

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, Middle School Transcript Study (MSTS) Pilot Study, 2017.

The district information form also asked for the eighth-grade completion requirements, the number of credits earned for a year-long course, the grading standard, the availability of districtwide education programs, and the state or district assessments taken between sixth and eighth grades. Participating TUDA jurisdictions were able to complete and return the form between March and April 2017, which was in line with the target timeline for this phase of data collection.

Course Catalogs

District-level course catalogs were required to have, at a minimum, a list of school courses offered to students in each TUDA jurisdiction between sixth and eighth grades. Each course was required to have a unique ID code that corresponded with the course ID codes found on the electronic student course records. TUDA jurisdictions were encouraged to include course descriptions and topics taught in each course. Course designations for special education, English language learner (ELL) courses, online courses, and courses where students earned high school credit were also collected. Table 3 lists the required and optional data elements for the districtlevel course catalogs.

The collection of district-level course catalogs occurred shortly after the collection of the district information form. The majority of the participating TUDA jurisdictions were able to submit either course catalogs or course lists in April 2017, and all course catalogs were received by June 2017. Overall, data collection for the district-level course catalogs was timely and well within the expected target timeline for this pilot study.

Table 3. Required and optional data elements collected for the district-level course catalogs in the NAEP MSTS Pilot Study: 2017

District-level course catalog information	Is data element required?
Course name	Yes
Course ID number	Yes
Course description	Strongly recommended, but not required
Number of credits earned for the courses	Strongly recommended, but not required
Designation for special education courses	Strongly recommended, but not required
Designation for English language learner courses	Strongly recommended, but not required
Designation for online courses	Strongly recommended, but not required

Student Course Records and Education-Related Data

The data collection of the student course records and associated education information started in June 2017. The student course records included courses taken by the students from sixth through eighth grades, with such data elements as course name, course ID number, grade level and year taken, course length, course credits earned, course grade earned, and designations for online and transfer courses. The associated education information included indicators of advancement to ninth grade, number of days absent, participation in academic-based programs, and state and district assessment scores for sixth through eighth grades. Tables 4 and 5 lists the required and optional data elements for the student course records and student education information.

The majority of the participating TUDA jurisdictions were able to submit data for this stage during the targeted timeline of June through August of 2017. Some TUDA jurisdictions were delayed briefly because they had to wait for an official sign-off before they could release their education information data for the pilot study.

Table 4. Required and optional data elements collected for the student course records in the NAEP MSTS Pilot Study: 2017

Student course records information	Is data element required?
Course name	Yes
Course ID number	Yes
Grade level and year taken	Yes
Length of course	Yes
Number of credits	Yes
Grade earned (letter or numeric)	Yes
Level of courses	Strongly recommended, but not required
Designation for special education courses	Strongly recommended, but not required
Designation for English language learner courses	Strongly recommended, but not required
Designation for online courses	Strongly recommended, but not required
Designation for transfer courses	Strongly recommended, but not required

Table 5. Required and optional data elements collected for the student education information records in the NAEP MSTS Pilot Study: 2017

Student education information	Is data element required?
Eighth-grade completion status	Yes
Number of days absent	Yes
Student transfer status	Yes
Number of credits earned	Yes

Grade point average	Yes
State/district assessment scores	Strongly recommended, but not required

Procedures for Data Quality Assurance in Data Collection

The data quality staff checked each data file upon receipt for whether the required data elements were present. The NAEP 2017 MSTS pilot study adapted the standard quality assurance protocols developed for previous HSTS studies. The data quality staff specifically checked each file for whether course names, course ID numbers, grade levels and year taken, course credits, course grades, course lengths, and state assessment scores were provided on the student course records data files. The TUDA representatives were contacted if additional information or clarifications were needed.

Overall, most participating TUDA jurisdictions did not provide course credits because they did not assign credits for middle school courses. For TUDA jurisdictions that provided course credits, the credits were converted to standardized Carnegie units of credit (i.e., one credit per year-long course). Carnegie unit of credit is defined as a single unit and is equal to 120 hours of classroom time over the course of a year. The converted Carnegie credits were compared to the original credits provided by the TUDA jurisdictions as an additional data quality assurance measure. For the TUDA jurisdictions that did not provide course credits, the course credits were derived using the Carnegie credit standard based on the course length data provided in the student course records files.

For participating TUDA jurisdictions that provided numeric and letter grades earned in middle school courses, the grades were standardized to a four-point grading scale (A, B, C, D, and F) as a standard protocol developed for previous HSTS studies. Points were assigned to each letter grade (A = 4, B = 3, C = 2, D = 1, and F = 0) and multiplied by the number of Carnegie credits earned for the course. Dividing the sum of grade points by the sum of Carnegie credits earned resulted in a grade point average for those courses. Courses in which a student did not receive a letter grade, such as pass/fail and ungraded seminars, did not factor into the grade point average calculation. All courses were weighted equally in the calculation of grade point averages. This process did not standardize for differences in grading practices across the participating TUDA jurisdictions.

Chapter 3. Course Coding Operation

Course Coding Training

The course coding operation began with a two-day training session conducted by experienced HSTS coding supervisors to ensure coding standardizations and high coding quality. The coding unit was trained on coding the district-level course catalogs and student course records using version 4.0 of the SCED classification system. This is the first time that SCED was used in a NAEP transcript-based study. The coders were trained specifically on how to use the SCED, and used practice course catalogs during training to become familiarized with the using the SCED.

After completing the coding training, the coding unit began to code the district-level school course catalogs. Inter-rater reliability and quality control checks were regularly conducted to ensure high coding and data quality. Coding of the course catalogs was performed as the course catalogs and course lists were being received.

Before the student course records were collected, a one-day training session was held to instruct coders on the automated and manual matching process of student course records. The course ID numbers provided on both the course catalogs and student course records served as the link that automated the matching process. If course ID numbers were not available on the course catalogs, coders manually matched course titles from student records to the course titles in the catalogs.

The coding unit began the automated matching process as soon as student course records were received. At this time coding supervisors also reviewed all manually-coded student course records for accuracy by cross-checking coded values with the course catalogs and student course records.

Adapting School Courses for the Exchange of Data (SCED)

The NAEP 2017 MSTS pilot study used the SCED classification system to code the course catalogs and student course records. The SCED is a new course classification system that was developed by the National Forum on Education Statistics for prior-to-secondary and secondary school courses. It is maintained by a working group of state and local education agencies and hosted by NCES. Different from the Classification of Secondary School Courses (CSSC), which was the previous course classification system, the SCED system consists of four elements that provide a basic structure for classifying course content. These elements are a five-digit course code, course level (i.e., basic/remedial, general/regular, enriched/advanced, and honors), grade span, and course sequence. One of the major changes between CSSC and SCED is that SCED does not include a specific category for special education courses. Thus, specific to the NAEP 2017 MSTS pilot study, additional attributes were added to the SCED codes to capture course designations for special education, as well as ELL courses, online courses, and courses where high school credits were earned.

Data Quality Assurance Protocol for Coding Operation

The coding of course catalogs and student course records was conducted by coders who were trained by experienced HSTS supervisors. Each course catalog was double-coded for coding reliability. An intercoder reliability rating of 95 percent was maintained throughout the coding operations, which lasted between June and August 2017 for course catalogs and September 2017 for student course records. Additionally, between 10 and 15 percent of the courses were randomly selected for additional coding verification by the coding supervisor to ensure consistency as part of the data quality assurance protocol.

Because of the requirement to have course ID numbers available on both the course catalogs and student course records, over 90 percent of the student course records were electronically matched to the course catalogs by Westat's proprietary course coding software. This key data element made the coding of the student course records significantly faster to complete than coding the student course records individually without the matching of course ID numbers. Overall, the coding operation was completed in three months for course catalogs, which included approximately 6,000 course titles, and in only one month for about 123,800 student course records.

During the coding operation, technical discussions were held regularly to resolve and document any ambiguities or disagreements between course codes. Systematic programming checks were regularly performed to ensure consistency and data quality (e.g., SCED codes assigned to match the description of the course titles).

After coding of the course catalogs and student course records was completed, additional systematic programming checks were performed for consistency, and preliminary frequency analyses were conducted to identify similar course patterns within and across the participating TUDA jurisdictions. In addition, TUDA jurisdictions were contacted to confirm and verify the results of coding on course catalogs.

Inclusion Criteria for Coursetaking Analysis

Before student course records data could be used in the analysis, a set of inclusion criteria was applied. Adapted from previous HSTS data quality inclusion criteria, each student must have course records including:

- at least two years of data, including eighth-grade courses taken during the 2016–2017 school year;

- at least 12 Carnegie credits in courses listed; and

- Carnegie credits earned in English courses.

The percentage difference between collected and analyzed student course records was similar to the previous HSTS studies after inclusion criteria are applied. The criteria for inclusion in the analyses were established to ensure that the course records for each student were complete and valid.

Chapter 4. Constructing Databases and Linking to the NAEP 2017 Data

Constructing Databases

One of the major goals for the NAEP 2017 MSTS pilot study is to provide coursetaking data that supplements the NAEP assessment and contextual questionnaire data at the middle school level. To do that, student course records collected for the pilot study needed to be linked to the NAEP 2017 data for the students who are in the NAEP 2017 mathematics and reading assessment samples. Because NCES requires that the TUDA jurisdictions not know which of their students were sampled for the NAEP assessments, procedures were put in place to inform the TUDA jurisdictions which students they need to submit student course records without revealing the student sample. As mentioned previously, TUDA jurisdictions who volunteered to participate in NAEP 2017 MSTS pilot study agreed to submit information for all eighth-grade students enrolled in the schools sampled for the NAEP 2017 TUDA-based assessments. Confidential information is protected during transmission to and from NAEP systems by the use of robust secure file transfer protocol (FTP) platforms and of data encryption technologies, such as secure sockets layer, secure shell, and digital certificates and signatures that encrypt data, validate data integrity, and authenticate the parties in a transaction.

As part of the NAEP 2017 assessments, each sampled school submitted a list of all eligible eighth-grade students. The list included a NAEP-assigned unique ID for each student. The unique ID served as the linking variable between the students sampled for NAEP assessments and the pilot study to maintain the privacy of student and school identities. Specifically, when the electronic student course records were provided by district personnel, they completed the following process by downloading a list of all students included on the roster of students, plus any new enrollees added during the Update Student List process (this includes the information previously provided by the district); adding student course

record information to the downloaded file; and uploading the student course records file to the secure FTP site.

Westat MSTS project staff then added the student course records data to the student demographic records by matching on the NAEP-assigned unique student identifier. This student course records information was then sent to Educational Testing Service (ETS), who matched the information with the data from NAEP assessment by using the NAEP-assigned unique student identifier. At no time was any personally identifiable information about the students transmitted with the student course records sent to ETS, nor merged with the NAEP assessment data.

Creating Student Weights

Four sets of student weights were created for the NAEP 2017 MSTS pilot study, similar to the previous NAEP HSTS studies. Each set of weights included a survey weight, used to produce point estimates, and replicate weights, used to compute variances for point estimates. All four sets of weights were designed to produce estimates for all eighth-grade students in each participating TUDA jurisdiction. The type of weight that was used depended on the type of data the user was analyzing.

The first set of weights reflect the probability-sampling scheme used to arrive at the sample of students for whom a valid transcript was collected. These weights were constructed without regard to the NAEP participation.

The second, third, and fourth sets of weights were linked to the eighth-grade NAEP assessments. The second set of weights were derived for the subsample of MSTS students for whom a valid transcript was collected and also took the mathematics assessment. Similarly, the third set of weights were derived for the subsample of MSTS students with valid transcripts and took the reading assessment. These weights allowed users to analyze the relationship between students' mathematics or reading proficiencies, respectively, as measured by their NAEP assessment outcomes and students' coursetaking in their middle school careers.

The fourth set of weights were derived for the MSTS students with valid transcripts and took either the mathematics or reading assessments. This set of weights was used for NAEP contextual items that are asked of students on both assessments.

Generating Plausible Values

Before the student course records data could be analyzed, the NAEP mathematics and reading assessment scores for the sampled students needed to be adjusted to account for the additional student coursetaking information. A set of conditioning variables was prepared for ETS to generate the NAEP 2017 mathematics and reading plausible values for the eighth-grade students in the NAEP 2017 MSTS pilot study sample. The conditioning variables included most of the variables that were used in the analyses, such as various credits earned and grade point average variables. All four sets of student weights for the NAEP 2017 MSTS pilot study were also provided to ETS to generate the NAEP 2017 mathematics and reading plausible values for the pilot study. Because additional conditioning variables were used for the MSTS, the NAEP 2017 eighth-grade NAEP mathematics and reading plausible values for the MSTS pilot study may differ from the plausible values generated for the TUDAs in the main NAEP study. Data files provided to and received from ETS used secured protocols established and implemented for the main NAEP operation.

Chapter 5. Findings of the Electronic Submission Feasibility Study

All participating TUDA jurisdictions were able to submit required data files electronically and provide course IDs on both the course catalogs and student course records. Specifics of the electronic submission feasibility are described in the following sections.

Types of Course Catalogs

Seven out of 11 TUDA jurisdictions were able to offer course catalogs with course descriptions or web links to where course descriptions were available. Course descriptions offer additional information that helped to assign precise SCED codes, mainly if a course title includes information about different subject areas (i.e., *History of Science and Technology*). Other TUDA jurisdictions provided course lists with course titles, and coding of the courses relied solely on the course title information. Where necessary, the coding unit searched state and district websites to find additional information about the middle school curriculum and course offerings. Over 6,000 course titles were collected and coded for this pilot study.

Characteristics of Student Course Records

Overall, approximately 123,800 sets of student course records (i.e., middle school transcripts) were collected, and 107,900 sets were analyzed from 11 TUDA jurisdictions for the NAEP 2017 MSTS pilot study. Table 6 shows the approximated number of student transcripts collected for other NCES transcript studies between 1982 and 2013.

Table 6. Number of transcripts collected for selected NCES high school transcript studies: 1982–2013

NCES transcript study	Approximate number of transcripts[1]
1982 High School and Beyond	12,700
1987 NAEP High School Transcript Study	34,100
1990 NAEP High School Transcript Study	21,500
National Education Longitudinal Study of 1988 Second Follow-Up (1992)	17,300
1994 NAEP High School Transcript Study	25,500
1998 NAEP High School Transcript Study	25,000
2000 NAEP High School Transcript Study	21,000
Education Longitudinal Study of 2002 First Follow-Up (2004)	16,400
2005 NAEP High School Transcript Study	27,200
Education Longitudinal Study of 2002 Second Follow-Up (2006)	14,900
2009 NAEP High School Transcript Study	37,700
High School Longitudinal Study of 2009 (2013 Update)[2]	25,200

[1] Includes transcripts that were not included in the final reports because they were out of scope. Out-of-scope transcripts include transcripts from students who did not graduate in the year of the study, nonstandard transcripts that could not be incorporated or standardized with the other transcripts, and transcripts with less than three years of data. Each of the studies listed had transcripts that were out of scope.

[2] Includes high school transcripts that were eligible but not responded in the 2013 update.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics,

High School and Beyond (HS&B), 1982; National Education Longitudinal Study of 1988 (NELS:88/92), Second Follow-Up, 1992; Education Longitudinal Study of 2002 (ELS:2002/04), First Follow-Up, 2004; Education Longitudinal Study of 2002 (ELS: 2002/06), Second Follow-Up, 2006; High School Transcript Study (HSTS), selected years, 1987–2009; High School Longitudinal Study of 2009 (HSLS:09), 2013 Update, High School Transcript Study.

In comparison, the NAEP 2017 MSTS pilot study collected and analyzed nearly three times more student course transcripts than the NAEP 2009 HSTS, which was the largest transcriptbased study between 1987 and 2013. This result provides evidence of the effectiveness of this pilot study regarding the volume of data collected electronically. The differences in the numbers of collected versus analyzed records were similar between this pilot study and previous HSTS administrations.

Key Data Elements Provided on Student Course Records

To help illustrate the ability of TUDA jurisdictions to provide key data elements for student coursetaking information, Table 7 shows the number of TUDA jurisdictions that were able to provide the major aspects of coursetaking measures. The major aspects of the coursetaking measures needed for the MSTS analyses were course credit, course grade, course length, and state assessment scores. Overall, three TUDA jurisdictions provided course credits on their student course records data files. The majority of the TUDA jurisdictions did not provide course credits because credits were not assigned for middle school courses. For these TUDA jurisdictions, the course credits were derived using the Carnegie credit standard (i.e., one credit per year-long course) based on the course length data provided in the student course records files. Almost all TUDA jurisdictions provided course grades and state assessment scores.

Table 7. Number of TUDA jurisdictions in the NAEP MSTS Pilot Study providing major aspects of coursetaking measures: 2017

Coursetaking measure	Provided	Not provided/derived[1]
Course credit	3	8
Course grade	9	2
Course length	11	0
State assessment scores	10	1

[1] Course credits were derived using the Carnegie credit standard (i.e., one credit per year-long course) based on the course length data provided in the student course records.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, Middle School Transcript Study (MSTS) Pilot Study, 2017.

Summary of Key Analytic Results

In assessing the feasibility of collecting and linking student coursetaking data with NAEP assessment data, several analytic inquiries were conducted to investigate the following questions:

- whether the standard coursetaking measures (i.e., credits earned and grade point averages) could be adapted from the NAEP HSTS definitions and used in various courserelated analyses;

- how coursetaking measures relate to student performance on NAEP assessments; • how NAEP

   assessment scores relate to student achievement on state assessments; and

- how coursetaking measures relate to NAEP student contextual indices.

Differences among students by demographics (i.e., gender and race/ethnicity) and course-related variables were analyzed. Additional analyses on various academic programs were conducted to further examine the coursetaking measures and their relations to various measures of academic performance. Other exploratory analyses included identifying students at the middle school level who may be at risk of dropping out of high school and determining student access to various digital resources for learning in school and at home. Per the OMB# 1850-0803 clearance (v.180), the study findings do not constitute official statistics and are not to be released to the public, but aggregate results were provided to the participating TUDA jurisdictions for feedback. Below is a brief list of the major findings that can be reported from this pilot study:

- estimated mean credits earned by eighth-grade public school students between sixth and eighth grades for the 11 participating TUDA jurisdictions;

- overall grade point average earned by eighth-grade public school students on core academic courses (i.e., English, mathematics, science, and social studies courses) and other academic or nonacademic courses (i.e., fine arts, foreign languages, and career and technical education courses) for the 11 participating TUDA jurisdictions;

- the proportion of the eighth-grade public school students who earned high school credits in courses between sixth and eighth grades;

- the statistical relationships between eighth-grade public school student coursetaking and performance on NAEP and state mathematics and reading assessments (e.g., group comparisons and correlations); and

- eighth-grade public school students reporting of levels of persistence in learning, enjoyment in solving complex problems, and interest and enjoyment in mathematics and reading in relation to their grade point averages in mathematics and English courses. Chapter 6. Conclusions and Recommendations

Conclusions

Findings from the NAEP 2017 MSTS pilot study showed that all 11 participating TUDA jurisdictions could submit required MSTS data files electronically. TUDA jurisdictions were able to provide course IDs on both the course catalogs and student course records. Having the course IDs on both data files made coding the student course records more efficient. The majority of the TUDA jurisdictions were able to offer course catalogs with course descriptions or web links to where course descriptions were available. Course descriptions offer valuable information that helped to assign accurate SCED codes, especially in cases where a course title included information about different subject areas (e.g., *History of Science and Technology*).

The study also demonstrated the feasibility of linking student coursetaking information with NAEP assessment data. Preliminary data analyses focused on the student coursetaking measures, and how those measures relate to the NAEP assessment score and contextual data, state assessment scores, and participation in special academic programs. These analyses revealed potential similarities as well as

variabilities in the results among the TUDA jurisdictions. Preliminary data analyses that focused on student coursetaking measures (i.e., credits earned and grade point averages) and NAEP assessment scores demonstrated similar general patterns in these relationships that have been illustrated in the previous HSTS studies. Additionally, preliminary analyses that focused on the relationships between the NAEP assessment scores and students' performance on their state assessments provided additional approaches to examine student achievement from different sources.

Further analyses were conducted to examine the relationships between the new NAEP 2017 contextual indices on affective disposition and the coursetaking measures, such as how grade point averages relate to student reporting of levels of persistence in learning, enjoyment in solving complex problems, and interest and enjoyment in mathematics and reading. Results from these analyses on the contextual indices provide additional evidence for the construct validity of these indices.

These results show that data collected from this pilot study can supplement the NAEP assessment and contextual questionnaire data to allow richer analyses at the middle school level. The pilot study also shows that policy-related analyses can be conducted at the middle school level and may help identify additional analyses for future middle school transcript studies.

Furthermore, results from this study can shed light on the fundamental core and supplementary courses that are being taught in middle school, and the degree of challenge in coursetaking patterns that may promote and facilitate intellectual growth. Concerning the student dropout issue, the signs that a student is at risk of dropping out of school tend to first appear in middle school. Student coursetaking data from middle school years can help to identify specific maladaptive coursetaking patterns that may be indicative of a high likelihood of students dropping out. Conversely, it can also help to identify adaptive academic coursetaking behaviors and possible academic success pathways that help keep students in school.

Recommendations

Based on the operational experiences and findings from this pilot study, the recommendations involving the use of curriculum-related terminology in middle school, adapting the SCED classification system for middle school courses, and additional data quality assurance requirement are described in the following sections.

The Use of Terminology in Middle School

Experiences from the various stages of the operations and logistics for this pilot study indicate that terminology and education policies related to coursework, coursetaking, and curriculum in middle school are different from high school. For example, the term "student transcript" is often not used at the middle school level, where the courses students took are instead referred to as "student course records." The meaning and definition of grade systems varied at the middle school level as well. For example, the notion of eighth-grade completion requirements was deemed more ambiguous than high school graduation requirements. Almost all of the TUDA jurisdictions in the NAEP 2017 MSTS pilot study were not able to provide a complete list of curriculum requirements that students must achieve before the end of eighth grade. Future studies should ask districts to provide specific course requirements that students need to attain for promotion to next grade level, and information on how students are promoted to high school (e.g., passing specific courses and state assessments).

Suggestions to the SCED Working Group

Courses at the middle school level tend to be more integrated with each other and may not fit into one particular SCED category (e.g., *3-D Design and Printing* as an art technology course, *Foundations of Robotics* as a history of robotics course, and *Movement and Technology* as a dance course with various technologies used). The coding unit also encountered challenges in using the SCED classification system to code the course level for special education courses. Exhibit 2 provides a list of major issues documenting the challenges in using the SCED classification system for coding courses at the middle school level as well as recommendations for future studies.

Exhibit 2. Major issues identified with using the SCED classification system for middle school courses in the NAEP 2017 MSTS Pilot Study

Course name	Issue	SCED code decision	Recommendations
Project Lead the Way: Gateway (PLTW Gateway)	PLTW program specifically designed for students in middle school. The SCED currently does not have specific codes for these courses.	21099 (Technology, Other)	Suggestion to add a code for PLTW Middle School to cover all courses under PLTW-Gateway units.
Cambridge Program	An accelerated program designed for students in middle school that focuses on improving skills in mathematics, reading, science, and English. The SCED currently does not have specific codes for these courses.	01099, 02099, 03099, with H for Course Level	Suggestion to add codes for the Cambridge program for the main academic subjects (i.e., English/language arts, mathematics, and science).
IB Middle Years Programme (IB MYP)	The SCED currently does not have specific codes for new IB MYP courses	01099, 02099, 03099, etc., with H for Course Level	Suggestion to add additional codes for the new IB MYP courses or add "Other IB MYP" codes to existing IB MYP subject areas.
Braille	No code in the SCED	22999 (MISCELLANEOUS— OTHER)	Additional discussion may be needed for courses offered to students who are visually impaired.
Special Education	No code in the SCED	Coded to regular courses. Flagged with SPED. Coding of course level depended on course descriptions.	Additional discussions are needed.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, Middle School Transcript Study (MSTS) Pilot Study, 2017.

For most of the participating TUDA jurisdictions, neither course titles nor course descriptions clarified whether the special education courses were general content courses modified for special education students (i.e., a general/regular course level) or courses that taught content below the grade level (i.e., a basic/remedial course level).

Additional Data Quality Assurance Requirement

Because the NAEP 2017 MSTS pilot study was the first NAEP transcript study to focus on the middle school level, and because it relied solely on the electronic transmission of course catalogs and student course records, districts were contacted several times throughout this study to review, verify, and confirm the course coding as additional quality assurance measures. It is duly essential to request the TUDA representatives to provide a final review and approval of their results before the release of the data.

Appendix A—Recruitment Communication:
Benefits to TUDA Districts Participating in the Study

Recruitment Communication:
Benefits to TUDA Districts Participating in the Study

1. **Customized TUDA-level data summaries at no cost to TUDAs**. Each participating TUDA will receive a data summary containing analyses specific to issues important to their district, deepening their understanding of topics such as students' course trajectories, curriculum rigor, and achievement gap problems. MSTS staff will work with each TUDA to customize these data summaries at no cost to the districts. Note that given this is a feasibility study, the summaries will be unofficial and cannot be published or shared outside of the district office.

2. **Expanded TUDA-level NAEP analysis with the MSTS feasibility study data**. Data collected from the MSTS feasibility study will provide TUDAs more contextual data to explain their eighth-grade students' NAEP assessment scores. What courses they took and their performance in those courses, combined with their attitudes toward the courses as asked in the student questionnaire, will provide a more complete picture of how students perform on the eighth-grade NAEP assessments.

3. **New measures to focus on key issues in middle school at TUDA-level**. Measures of middle school curriculum levels will be developed to look at the rigor of middle school curriculum and examine academic tracking issues. The MSTS feasibility study will also be able to take a comprehensive look at the digital divide issue at the middle school level by combining data from the NAEP questionnaires and the information about online courses provided by the TUDAs. By examining student coursetaking patterns, maladaptive coursetaking behaviors, and other factors that are typically associated with student dropouts (i.e., as absenteeism, and grade level/course repeats), middle school success indicators could be developed to further identify students who are at risk of dropping out.

4. **No burden to schools and students**. Unlike previous transcript studies where data collections are done at the school level, data collection for the Middle School Transcript Study (MSTS) 2017 feasibility study will be done at the district level, thereby placing no burden on schools and students.

5. **Minimal labor cost to the districts for data collection**. Because the MSTS 2017 feasibility study will be a part of the NAEP 2017 Grade 8 assessments, there will be no cost to the districts, except for minimal labor cost from TUDA data personnel to extract and prepare electronic data files to submit for this study.

Appendix B—Recruitment Letter From NCES

Recruitment Letter From NCES

Dear TUDA District Superintendent_____ (each letter to be individually addressed):

I am writing to invite your district to participate in a new initiative that will expand the National Assessment of Educational Progress (NAEP) to include a transcript study focusing on middle school grades. In 2017, the National Center for Education Statistics (NCES) will conduct a feasibility study of the collection of middle school student coursetaking information for students selected for the NAEP grade 8 assessments. This feasibility study will rely solely on electronic submission of course catalogs and student transcripts and will provide educators and policymakers a new resource for exploring the relationship between students' coursetaking patterns and their performance on NAEP.

The feasibility study of the groundbreaking Middle School Transcript Study (MSTS) is the first NAEP transcript study to focus on middle school grades. While it may eventually be expanded to schools across the country, your district and other large urban districts are the first to have an opportunity to participate. This is also the first transcript study to rely entirely on electronic submissions, which will substantially reduce cost, time, and effort over previous transcript studies. In return, you will receive detailed district-level analyses.

Costs for this feasibility study will be the responsibility of the federal government, as with NAEP assessments at grades 4 and 8. NCES contractors will work with your district staff to obtain electronic course catalogs and student transcripts; this is the only additional burden placed on your district. There is no additional burden at the school level. The MSTS is part of an overall movement in NAEP transcript studies toward relying on more efficient electronic records.

To meet critical deadlines for data collection preparation, it is necessary to identify interested districts now. In the event that NCES receives letters of interest from more districts than funding can accommodate, we will select a sample of districts that is as regionally representative and demographically diverse as possible, while also considering the quality of electronic records in each district.

NCES will host a WebEx on **[DATE]** for jurisdictions interested in participating in the study to review the details of the study, including the study timeline, data to be collected as part of the transcripts, and reporting plans. Details about the WebEx will be emailed to your NAEP TUDA Coordinator.

If your district wishes to participate in this innovative feasibility study, please complete and submit the enclosed form by close of business on **[DATE].** Districts will be notified of their participation by **[DATE].**

Thank you for considering participation in this important activity. NCES will keep you apprised of the status of the feasibility study. If you have any questions, please contact Linda Hamilton at 202-245-6360 or linda.hamilton@ed.gov.

Sincerely,
Peggy G. Carr, Ph.D.
Acting Commissioner

National Center for Education Statistics cc: Mike Casserly,
Council of the Great City Schools (CGCS) TUDA Coordinator
(edit with TUDA coordinator name)
Enclosures: Benefits to TUDAs [Appendix A], Brochure [Appendix C], Letter of Interest [Appendix D]

Appendix C—TUDA Recruitment Brochure Text

TUDA Recruitment Brochure Text

COVER
NAEP 2017 Middle School Transcript Study (MSTS) Feasibility Study

INTERIOR
What is the Feasibility Study of the NAEP 2017 Middle School Transcript Study?
As part of the National Assessment of Educational Progress (NAEP) 2017 grade 8 assessments, the feasibility study of the NAEP 2017 Middle School Transcript Study (MSTS) is the first landmark NAEP study to examine the feasibility of linking middle school students' coursework from sixth through eighth grades with NAEP 2017 grade 8 assessment data.

The NAEP 2017 MSTS feasibility study is also the first NAEP transcript study to provide student coursetaking data at the district level and to rely solely on the electronic submission of course catalogs and student transcripts.

The NAEP 2017 MSTS feasibility study is conducted by the National Center for Education Statistics (NCES), part of the U.S. Department of Education. The data collection will be a part of the NAEP 2017 assessments for mathematics, reading, and writing.

Why is NAEP 2017 MSTS feasibility study important?
The NAEP 2017 MSTS feasibility study provides valuable student coursetaking data that supplements NAEP assessment data along with school, teacher, and student questionnaire responses. It allows for the comparison of student coursetaking data within jurisdictions and informs the decision if additional Middle School Transcript Studies should be conducted in the future. In addition, the MSTS feasibility study relies on electronic school records for collecting data for this and future transcript studies, which eliminates the burden on individual schools to provide paper copies of transcripts.

Why participate in NAEP 2017 MSTS feasibility study?
The study promotes a deeper understanding of student academic achievement by examining coursetaking patterns, middle school curriculum rigor, and potential student academic tracking. Coupled with the NAEP school, teacher, and student survey questionnaire information, this study provides valuable information to help identify academic coursetaking behaviors and possible academic pathways to success.

Study Timeline:
Winter 2017   Participation Recruitment Spring/Summer
2017   Data Collection
Spring/Summer 2018   Reporting

Requirements for Participation in the NAEP 2017 MSTS Feasibility Study
Districts interested in participating in the NAEP 2017 MSTS feasibility study must have the following:
- An electronic school records system and the ability to transmit student records electronically,
- The ability to provide electronic course catalogs containing courses available to students from grades 6 through 8, and

- The course ID number available on the electronic student record serving as a linking variable to match course numbers in the course catalogs.

BACK

The National Assessment of Educational Progress (NAEP) is a congressionally mandated project conducted by the National Center for Education Statistics (NCES), within the U.S. Department of Education and the Institute of Education Sciences.

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

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

For questions about the NAEP 2017 MSTS feasibility study, please email MSTS@westat.com.

Appendix D—Recruitment Material: Letter of Interest From Districts

Letter of interest from districts

Linda Hamilton
National Center for Education Statistics
Potomac Center Plaza
550 12th Street SW
Room 4093
Washington, D.C. 20202, USA

Dear Ms. Hamilton,

_____ (insert TUDA District's name) is interested in participating in the feasibility study of the NAEP 2017 Middle School Transcript Study (MSTS). I understand that, if NCES receives letters of interest from more TUDA districts than funding can accommodate, they will select a sample of districts that is as regionally representative and as demographically diverse as is possible; the quality of electronic school records may also be taken into consideration. Thank you very much.

Sincerely,

_____ (signature)

       Please mail to:

Linda Hamilton
National Center for Education Statistics
Potomac Center Plaza
550 12th Street, SW
Room 4093
Washington, D.C. 20202, USA

Appendix E—District Information Form

DISTRICT INFORMATION FORM

Course Catalog and Student Transcripts Fillable Questionnaire

Thank you for agreeing to participate in the feasibility study of the 2017 NAEP Middle School Transcript Study. It is the first NAEP middle school transcript study, and it relies solely on the electronic submission of both course catalogs and student transcripts. The purpose of this form is to collect information about the middle school course catalog and student transcripts. Completing this form should take about 45 minutes, and you may need access to the district's course catalog and student transcripts to answer the questions.

All obtained student transcript data may be used only for research purposes and will not be disclosed or used in identifiable form for any other purpose except as required by law [Education Sciences Reform Act of 2002, 20 U.S.C. §9573].

1. Is there a <u>publicly</u> available online version of your district's middle school course catalog; that is, a catalog of courses that are available to students in the sixth through eighth grade?
   ☐ Yes (continue with Question 1a) ☐ No (skip to Question 1b)

   a. If an online catalog is available, please list the web address where we can find this catalog, then skip to Question 2.

   _____
   _____

   b. If the catalog is not publicly available online, can you provide us with an electronic copy of the middle school course catalog?
      ☐ Yes ☐ No

      If No, please explain below how we can get a list of middle school courses offered in your district, then skip to Question 4.

      _____
      _____
      _____
      _____

2. Does the course catalog provide descriptions of the content for the courses (i.e., what topics are taught in the courses) or simply list the available courses?
   ☐ Yes, the catalog includes course content descriptions. ☐
   No, the catalog only lists available courses.

3. For each middle school course, does the course catalog provide the following information:

   a. the number of credits a student earns for passing the course?
      ☐ Yes ☐ No
   b. a designation in either the course title or course description that indicates if the course is a special education course?
      ☐ Yes ☐ No

c. a designation in either the course title or course description that indicates if the course is an English language learner course?

☐ Yes ☐ No

d. a designation in either the course title or course description that indicates if the course is only available as an online course?

☐ Yes ☐ No

e. a designation in either the course title or course description that indicates if the student earns high school credit for passing the course?

☐ Yes ☐ No

4. Does the catalog (or whatever course lists can be provided to us) include an identification number for each course?
☐ Yes (continue with Question 4a) ☐ No (skip to Question 4b)

a. If you answered Yes to Question 4, are these identification numbers included (or can be included) on the electronic transcripts so that courses from the transcripts can easily be linked to the catalog or course lists? ☐ Yes ☐ No

b. If you answered No to Question 4, please explain below how you match courses between the catalog or course lists and the electronic transcripts.

_____
_____
_____
_____

Next, we will ask some questions about the information that can be found on the electronic student transcripts.

5. Is the following course information identified on the transcripts? If the information can be found on the transcripts, how are they indicated (e.g., a field on the record or notation in the course title)?

a. Course level (i.e., regular, honors) ☐ Yes ☐ No

_____
_____

b. Course taken off campus ☐ Yes ☐ No

_____
_____

c. Special education course ☐ Yes ☐ No

_____
_
_____
_

    d.   English language learner course ☐ Yes ☐ No

_____

_____

    e.   High school credit earned for the course ☐ Yes ☐ No

_____

_____

    f.   Course taken online ☐ Yes ☐ No

_____

_____

    g. Transfer course ☐ Yes ☐ No

_____

_____

6.   Are the course titles listed on the transcripts the same or abbreviated versions of the course titles listed in the middle school course catalog?
☐ Yes ☐ No

If you answered No to Question 6, please explain below what differences there are between the catalog course titles and transcript course titles.

_____

_____

_____

_____

Next, we would like to know how to interpret data found on the electronic transcripts.

7.   What graduation requirements must a student meet to advance from eighth grade to ninth grade?

_____

_____

_____

_____

8.   How many credits does an eighth-grade student earn for a year-long course; that is, a course taken for a single period over the 2016-2017 school year or its block equivalent?

Number of credits, 2016-2017: _____

    a.   Is the number of credits earned for a year-long course <u>different</u> for either sixth or seventh grade?
       ☐ Yes ☐ No
       If you answered Yes to Question 8a, how many credits does a student in the following grades earn for a year-long course?

       Number of credits, sixth grade: _____

Number of credits, seventh grade: _____

    b. Has this number of credits earned for a year-long course by sixth- through eighth-graders changed during the previous two school years?

       ☐ Yes ☐ No

       If you answered Yes to Question 8b, how many credits did a student earn for a year-long course in the following school years?

       Number of credits, 2014-2015: _____
       Number of credits, 2015-2016: _____

9. What grading system is used in the district for the eighth grade? (*Mark one box.*)

☐ Letter grade (A, B, C, D, etc.)
☐ Letter grade with modifiers (A, A-, B+, B, etc.)
☐ Pass/Fail
☐ Excellent/Satisfactory/Needs Improvement/Unsatisfactory
☐ Other (*Please specify*)

_____
_____

    a. Is the grading system different for either sixth or seventh grade?

       ☐ Yes ☐ No

       If a different grading system is used in sixth and/or seventh grades, please indicate the grading system below.

       _____
       _____

    If a letter grading system (with or without modifiers) is used in the district for sixth, seventh, or eighth grades, please answer Question 10. Otherwise, skip to Question 11.

10. What is the numerical range (on a 0 to 100 scale) for each of the letter grades used in the state/district?

11.

Letter Grade or Alternate Symbol	Range (or description, if range not possible)
A+	
A	
A-	
B+	
B	
B-	
C+	
C	
C-	
D+	
D	
D-	
F	
Pass	
Fail	
Excellent	
Satisfactory	
Needs improvement	
Unsatisfactory	

12. Are the credits earned and grading system the same for all courses, regardless of course level (i.e., special education, honors)? ☐ Yes ☐ No

If you answered No to Question 11, please explain the differences below (for example, honors courses earn more credits, special education courses use a different grading scale).

_____
_____
_____

13. Does the state or district require students to complete one or more assessments to advance from sixth, seventh, or eighth grade? ☐ Yes ☐ No

If you answered Yes to Question 12, please list these assessments and at what grade levels the students take them.

_____
_____
_____

14. Does the district offer any educational programs to students in sixth through eighth grades that focus on their coursework (i.e., offers them courses not normally taught to middle grade students, offers courses that supplement what is normally taught)?

☐ Yes ☐ No

If you answered Yes to Question 13, please list these educational programs and at what grade levels the students take them.

_____
_____
_____

Next, we will ask you about some additional student data that we would like to collect at the same time we collect the student transcripts. These data are all related to the student's academic standing and coursework in grades 6 through 8.

15. Can the following student information be collected and sent electronically along with the student transcripts?

    a. Eighth-grade completion status (i.e., a variable that indicates whether or not the student advanced from eighth grade at the end of the 2016-2017 school year) ☐ Yes ☐ No

    b. The number of days the student was absent in sixth, seventh, and eighth grades (reported by individual grade level, not a combined count) ☐ Yes ☐ No

    c. Student transfer status (i.e., a variable that indicates whether or not the student transferred into the district in sixth, seventh, or eighth grade) ☐ Yes ☐ No

    d. The number of course credits the student earned in sixth, seventh, and eighth grades (reported by individual grade level, not a combined count) ☐ Yes ☐ No

    e. The grade point average the student earned in sixth, seventh, and eighth grades (reported by individual grade level, not a combined count) ☐ Yes ☐ No

    f. The scores on any state or district assessments the student took in sixth, seventh, and eighth grades ☐ Yes ☐ No

If you can only provide partial data for any of the elements above (e.g., a combined count of absent days or the grade point averages only for seventh and eighth grades) or can explain why any of the elements above cannot be provided, please note it in the field on the top of the next page.

_____
_____
_____
_____
_____
_____

Finally, we will ask you some questions about collecting the catalog, transcript, and other student information discussed above.

If you indicated in Question 1 that you can provide an electronic course catalog (or course lists) to us, please complete the questions below about the format of the course catalog and how to send it. If you

indicated in Question 1 that an online course catalog for sixth through eighth grades was available, please skip to Question 17.

15. In what format is the course catalog stored; for example, a Microsoft Word file, a Microsoft Excel workbook, ASCII data files, rich text format (RTF) files, PDF files, or some other format?

   _____
   _____
   _____

16. Will you be encrypting the file containing the course catalog (i.e., a password-protected PDF, a zipped file with a security password)?
   □ Yes □ No

   If you answered Yes above, how will the file will be encrypted?

   _____
   _____

   Please send the password used to encrypt the course catalog file via email to Westat at MSTS@westat.com.

Questions 17 through 20 ask about the format of the student transcripts and how they will be sent.

17. Are the electronic transcript data managed and stored within the school district's data center, or does an outside vendor manage the district's electronic transcripts?

   □ School district data center
   □ Outside vendor

   a. If you answered Outside vendor, are you the person to contact the vendor to arrange the electronic transfer of the transcripts? □ Yes □ No

   b. If you are not the contact person, please list the name, telephone number, and email address of the person we would need to contact.

   _____
   _____
   _____

18. In what format are the electronic transcript data files stored; for example, Microsoft Word files, Microsoft Excel workbooks, Microsoft Access databases, SAS databases, SPSS databases, ASCII data files, rich text format (RTF) files, PDF files, or some other format?

   _____
   _____
   _____

19. Is there personal information about the students listed on the electronic transcripts, such as student name or address

□ Yes □ No

If you answered Yes, Westat can remove this personal identifying information upon receiving the transcripts, or you (or your vendor) can remove this information before sending the transcripts. Which process of removing the student personal identifying information would you prefer?

□ Westat removes the data
□ School district/vendor removes the data

20. Will you be encrypting the file containing the transcript data (i.e., a password-protected Excel file, a zipped file with a security password)? □ Yes □ No

If you answered Yes above, how will the file will be encrypted?
_____
_____

Please send the password used to encrypt the student transcript file via email to Westat at MSTS@westat.com.

Questions 21 and 22 ask about the format of the additional student information (as outlined in Question 14) that needs to be sent.

21. In what format will this additional student information be stored; for example, a Microsoft Word file, a Microsoft Excel workbook, ASCII data files, rich text format (RTF) files, PDF files, or some other format?
_____
_____
_____

22. Will you be encrypting the file containing the additional student information (i.e., a passwordprotected Excel file, a zipped file with a security password)? □ Yes □ No

If you answered Yes above, how will the file will be encrypted?
_____
_____

Please send the password used to encrypt the student information file via email to Westat at MSTS@westat.com.

Thank you. Westat will set up a secure FTP site for your school district where the course catalog, student transcripts, and additional student information should be uploaded. A follow-up email that contains the web address for your FTP site will be sent to the TUDA coordinator or the contact person the coordinator designates.

Thank you for completing the questionnaire. Be sure you save your responses to the form before exiting, otherwise your responses will be lost. Please email the completed form to the MSTS help desk at MSTS@westat.com. If you have any questions, please feel free to contact the MSTS help desk at the email address above.

Appendix F—List of Request Data

TUDA educational information
Eighth-grade graduation requirements
Credits earned for completing a year-long course
Common grading standard (for course grade standardization)
State or district assessments students take in grades 6–8 (if any)
District-wide educational programs available to students in grades 6–8
TUDA district catalog
Course name
Course ID number (linkable to transcripts)
Course description (if available)
Credits earned for passing the course
Special education course designation
English Language Learner course designation
Online course designation
Student ID and demographic information
Unique Student Identifier (to match with NAEP)
NAEP assessment student took *(will get from NAEP)*
Month of birth *(will get from NAEP)*
Year of birth *(will get from NAEP)*
Gender *(will get from NAEP)*
Race/ethnicity *(will get from NAEP)*
NSLP status *(will get from NAEP)*
IEP/ELL status *(will get from NAEP)*
Student educational information
Eighth-grade graduation status (yes/no)
Number of days absent (sixth, seventh, eighth grade)
Student transfer into TUDA between grades 6–8? (yes/no)
Number of credits earned (sixth, seventh, eighth grade)
Grade point average (sixth, seventh, eighth grade)
State and/or district assessment scores (if requested)
Student course records data
Course name
Course ID number (linkable to catalog)
Grade level taken
School year taken
Length of course (semester, quarter, etc.)

Number of credits earned
Grade earned (letter or numeric)
Level of course (regular, honors, etc.)
Location, if not taught at school
Special education course designation
English Language Learner course designation
Transfer course designation

Appendix G—NCES Affidavit of Nondisclosure

NCES Affidavit of Nondisclosure

Affidavit of Nondisclosure

(Job Title) (Date Assigned to Work with NCES Data)

(Organization, State or Local Agency Name)

(Organization or Agency Address)
(NCES Database or File Containing Individually Identifiable Information*)

I, _____, do solemnly swear (or affirm) that when given access to the subject NCES database or file, I will not -

(i) use or reveal any individually identifiable information furnished, acquired, retrieved, or assembled by me or others, under the provisions of Section 183 of the Education Sciences Reform Act of 2002 (P.L. 107-279) and Title V, subtitle A of the E-Government Act of 2002 (P.L. 107-347) for any purpose other than statistical purposes specified in the NCES survey, project, or contract; (ii) make any disclosure or publication whereby a sample unit or survey respondent (including students and schools) could be identified or the data furnished by or related to any particular person or school under these sections could be identified; or (iii) permit anyone other than the individuals authorized by the Commissioner of the National Center for Education Statistics to examine the individual reports.

_____
(Signature)

[The penalty for unlawful disclosure is a fine of not more than $250,000 (under 18 U.S.C. 3571) or imprisonment for not more than five years (under 18 U.S.C. 3559), or both. The word "swear" should be stricken out when a person elects to affirm the affidavit rather than to swear to it.]

City/County of _____ Commonwealth/State of _____ .

Sworn to and subscribed before me this _____ day of

_____, 20_____ . Witness my hand and official Seal.

(Notary Public/Seal) My commission expires_____ .

* Request all subsequent follow-up data that may be needed. This form cannot be amended by NCES, so access to databases not listed will require submitting additional notarized Affidavits. Form last revised 02/08/07