

Data Interpretation Guide

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This document provides SLEDS users with information about interpreting and using the data in SLEDS reports and on the SLEDS website.

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Populations for Reporting

High School Graduates

The first section of reports on the SLEDS analytics website start with high school graduates at the state, district, or school level. The high school graduation year corresponds to when the student received their high school diploma. SLEDS does not differentiate between a four, five, or six year graduation rate when reporting high school graduates. Graduates in SLEDS are defined only by the year in which they receive their high school diploma regardless of how long it took them to graduate.

This methodology differs from what is reported on the Minnesota Department of Education (MDE) website related to graduation rates. MDE reports what is called an “adjusted cohort graduation rate” to meet federal requirements. The adjusted cohort graduation rate model follows students in a group, or a "cohort", throughout high school and determines if they graduate within four, five or six years. More information about the calculations used by MDE can be found in the [Minnesota Graduation Rates Functional Specifications](#).

SLEDS does not currently have the technical capability to calculate graduation rates using the same adjusted cohort graduation rate model used by MDE. Because of methodological differences, graduation counts and rates from SLEDS will not match what is reported by MDE at the state, district, or school level.

New College Students

The second set reports on the SLEDS analytics website examine new entering college students. New entering college students are:

- New Freshmen: Students who, to the institution’s knowledge, have not previously attended any post-secondary institution for credit, except while a secondary student; and
- New Transfer Students: Student who are transferring credits from another post-secondary institution.

College student data is limited to institutions for which data is collected, see *OHE Postsecondary Enrollment data* for more information.

College Graduates

The third set reports on the SLEDS analytics website examine college graduates. Individual receiving a formal award (diploma, certificate or degree) upon successful completion of a program of study from a Minnesota private and public postsecondary institutions. College graduate data is limited to institutions for which data is collected, see *OHE Postsecondary Completion data* for more information.

Minnesota Assessments Data

Minnesota Comprehensive Assessment in Reading, Mathematics, and Science

Each year, the Minnesota Comprehensive Assessment (MCA) are administered to students in reading in grades 3–8 and 10, mathematics in grades 3–8 and 11, and science in grades 5, 8, and high school. The purpose of the MCA is to measure Minnesota students' achievement on the Minnesota Academic Standards. The MCA results inform curriculum decisions at the district level; inform instruction at the classroom level; and, in reading and mathematics, demonstrate student academic progress from year to year.

The Reading and Mathematics MCA are the primary assessments Minnesota uses for ESEA accountability. All students are required to take these tests or a designated replacement, such as the Reading and Mathematics MCA-Modified for persistently low-performing students or the Reading and Mathematics Minnesota Test of Academic Skills (MTAS) for students with significant cognitive disabilities. The test results are used to calculate Adequate Yearly Progress (AYP) and Multiple Measurement Ratings (MMR) for Minnesota schools and districts. MCA results can be used to compare schools and districts across the state. Science MCA participation (or Science MTAS, for eligible students) is required under ESEA but is not included in AYP or MMR calculations at this time.

Minnesota Comprehensive Assessment-Modified (MCA-Modified) in Reading and Mathematics

The MCA-Modified is an alternate assessment in reading and mathematics in grades 5–8, reading in grade 10, and mathematics in grade 11 based on the same academic standards as the MCA but with modified achievement standards. The MCA-Modified is positioned between the MCA and the MTAS. Participation is limited to persistently low-performing students receiving special education services whose IEP team determines that they meet eligibility requirements for the MCA-Modified.

Minnesota Test of Academic Skills (MTAS) in Reading, Mathematics, and Science

The Minnesota Test of Academic Skills (MTAS) is an alternate assessment in reading and mathematics in grades 3–8, reading in grade 10, mathematics in grade 11, and science in grades 5, 8, and high school that is based on alternate achievement standards. The MTAS is part of a statewide program that measures the extent to which students with the most significant cognitive disabilities are making progress in the general education curriculum on standards that have been reduced in breadth, depth, and complexity.

The MTAS is a performance-based assessment where performance tasks in reading, mathematics, and science are administered to students in a one-on-one setting. Test administrators score performance tasks using a script and task-specific scoring rubric.

Interpreting Trends

Trend data are available for the Minnesota Assessments. However, please use caution when interpreting trend data because assessments change when academic standards are revised. For example, a new baseline for mathematics in grades 3-8 was set in 2011, for science in 2012, for reading in 2013, and for mathematics grade 11 in 2014. For this reason, comparisons between the percentages of students who scored proficient should be done only when keeping in mind the standards measured from one year to the next.

The MCA-Modified was offered in spring of 2011, 2012, 2013, and 2014. The MTAS began in spring 2007.

Scale Scores

Scores are the end product of the testing process. They provide information about how each student performed on the tests. Scale scores are statistical conversions of raw scores or model-based scores that maintain a consistent metric across test. Use the scale score to determine how the student did on the test. Each year, the test is equated for difficulty with the previous year's test. This means the scale score has equivalent meaning and provides a valid comparison from year to year for a given grade and subject.

Specific details regarding the raw score to scale score relationship are reported on the Technical Reports section of the MDE website. View the Technical Reports section of the MDE website (<http://education.state.mn.us/MDE/SchSup/TestAdmin/MNTests/TechRep/index.html>).

When a test is revised, the scale scores should not be directly compared to scores from previous years. The list below provides the years each subject was revised to align to the most current academic standards.

- Mathematics Grades 3-8 – 2011
- Mathematics Grade 11 – 2014
- Reading Grades 3–8 and 10 – 2013
- Science Grades 5, 8, and high school – 2012

MCA

For each Reading, Mathematics and Science MCA, the scale score can range from G01 to G99, with "G" standing for "Grade." The first digit (i.e., 3–8) or first two digits (i.e., 10 or 11) represent the student's grade when tested. The last two digits of the number identify the position of the score on the grade scale. For example, a student in grade 4 could earn a scale score between 401 and 499, while a student in grade 11 could earn a scale score between 1101 and 1199. Note: While the high school Science MCA can be administered in any grade (9–12) depending on coursework completion, grade 10 is used to represent the grade for the high school scores.

MCA-Modified and MTAS

For each Reading and Mathematics MCA-Modified and Reading, Mathematics and Science MTAS, the scale score can range from 55-269.

Achievement Levels

There are four achievement levels for the Minnesota Tests:

- Exceeds the Standards/Modified Standards/Alternate Standards (E)
- Meets the Standards/Modified Standards/Alternate Standards (M)
- Partially Meets the Standards/Modified Standards/Alternate Standards (P)
- Does Not Meet the Standards/Modified Standards/Alternate Standards (D)

Students are assigned an achievement level based on their scale score. The commissioner approves cut scores used to assign achievement levels.

MCA

For MCA, the cut scores for levels Partially Meets the Standards (P) and Meets the Standards (M) are G40 and G50, respectively. The cut score for level Exceeds the Standards (E) varies by grade and subject.

MCA-Modified and MTAS

For MCA-Modified and MTAS, scores for levels Partially Meets the Standards (P) and Meets the Standards (M) for all grades and subjects are 190 and 200, respectively. The cut score for level Exceeds the Standards (E) varies by grade and subject.

ACT® Graduating Class Trend Data

These data were provided by ACT, and reflect only the most recent test result for students who tested on more than one occasion, and may include tests taken in grades 10, 11 or 12. **Starting with the graduating class of 2013, results from all ACT-approved accommodated administrations that result in college reportable ACT scores will be included as part of the ACT summary reports.**

The proportions and characteristics of students who choose to participate in the ACT can vary importantly across schools and districts. This variability in participation can make it very difficult to draw appropriate inferences about a school or district's graduating class as a whole, or to make meaningful comparisons of educational outcomes between schools and districts from these data. Results have been suppressed for cells where the count tested is less than 10.

The data reported include average student ACT scale scores in each domain (English, Math, Reading and Science) and for the Composite score, as well as percentages of students whose scores meet ACT College Readiness Benchmarks in English, Math, Reading, Science, and across all four subjects. **Starting with the 2013 Graduating Class data, the College Readiness Benchmarks for Reading and Science have been updated to reflect the most recent college coursework research.** More information on the 2013 reporting changes is available at <http://www.act.org/announce/improvements>.

Table 1. Changes in ACT College Readiness Benchmarks

College Course	Subject Area Test	Original ACT College Readiness Benchmark	Revised ACT College Readiness Benchmark
English Composition	English	18	18
Social Studies	Reading	21	22
College Algebra	Mathematics	22	22
Biology	Science	24	23

Postsecondary Data Overview

OHE Postsecondary Enrollment data

The Student Enrollment Record Data Base contains data on students enrolled in fall term at Minnesota private and public postsecondary institutions participating in state student financial aid programs. The individual-level data include all students enrolled at an institution during the fall in courses or other instructional activity creditable toward a diploma, or other formal award. This includes students enrolled in off-campus sites or centers. The data collected was established as a census of Minnesota students.

Students included are:

- Enrolled in courses or other instructional activity creditable toward a diploma, certificate, degree, or other formal award, including those enrolled in off-campus sites or centers.
- Enrolled in courses or other instructional activities that are part of a vocational or occupational program.

Students excluded are:

- Enrolled exclusively in courses or other activities not creditable toward a formal award or the completion of a vocational program.
- Exclusively taking continuing education units (CEUs).
- Exclusively auditing classes.
- Exclusively enrolled in any branch campus located outside of Minnesota.
- Enrolled exclusively in hour-based instruction at institutions in the Minnesota State Colleges and Universities (MnSCU) system.

The **data collection schedule** used depends on whether or not the institution has distinct academic terms. Most institutions have distinct academic terms, although some private career schools with clock-hour based instruction do not. If the institution has distinct academic terms, student enrollment data is collected at the tenth day of the fall term, or at the official fall reporting date. If the institution does not have distinct academic terms, data is collected once a year on all students who are enrolled during the period July 15 through October 15. This collection period serves as a proxy for fall term data.

OHE Postsecondary Completion data

The Degrees and Other Awards Conferred Database contains data on degrees and other formal awards (diplomas or certificates) conferred to students upon successful completion of a program of study from Minnesota private and public postsecondary institutions participating in state student financial aid programs.

Records included:

- One record for each degree and/or award conferred during the reporting period in programs of at least 15 quarter credits, 10 semester credits, 350 clock hours, or the equivalent in duration.

- Separate records for multiple degrees or awards conferred to a single student. If a student received two awards (for example, an associate degree and a baccalaureate degree, or two bachelor's degrees, e.g., B.S. and B.A., or two master's degrees, e.g., M.B.A. and M.A.), the data is reported in two separate records.
- If a student received one award type, such as a baccalaureate degree, but completed two majors/programs within the degree, one record is submitted and the information on the two majors/programs is included where appropriate.

Records excluded:

- Data on degrees and awards conferred to students by branches and campuses of an institution located outside of Minnesota.
- Honorary degrees and awards.
- Data on minors or concentrations within majors.
- Degrees and awards earned but not yet officially conferred. Examples include students who have completed required course work, but final administrative procedures for issuing the degree or award have not been completed.

Degrees and other awards conferred to students are reported during an academic year using the twelve-month period that begins July 1 of one calendar year and ends June 30 of the next calendar year. This is the State of Minnesota fiscal year and the same reporting period used to report degrees data for the National Center for Education Statistics through its Integrated Postsecondary Education Data System (IPEDS) surveys. For example the reporting period for 2012-2013 data would be: July 1, 2012 through June 30, 2013.

National Student Clearinghouse Enrollment and Completion data

National Student Clearinghouse data includes enrollment activity and completion data for Minnesota public high school graduates attending a college participating in National Student Clearinghouse data submission services. Approximately 98% of all postsecondary students in public and private U.S. institutions are included in the data. A list of participating colleges can be found here http://www.studentclearinghouse.org/high_schools/studenttracker/participating_colleges.php

Students who opt-out of data sharing under the Family Educational Rights and Privacy Act at their institution of attendance are excluded from the individual-level data.

IPEDS Institutional Characteristics

The IPEDS Institutional Characteristics data set contains directory information for every institution in the 2003-2012 IPEDS universe and includes name, address, city, state, and zip code. It also includes variables derived from the Institutional Characteristics survey which collects basic institutional information such as control and level of institution, highest level and highest degree offered and Carnegie classifications.

Workforce Data Overview

To see the workforce outcomes of college graduates the OHE Postsecondary Completion data was linked to DEED Employment data, which captures the quarterly hours worked and total wages paid of employees of businesses subject to Minnesota Unemployment Insurance taxes in Minnesota.

The Unemployment Insurance Program covers about 97 percent of Minnesota employment. Workers and jobs excluded from these statistics include proprietors and the self-employed, railroad workers, family farm workers, full-time students working for their school, elected government officials, insurance and real estate salespeople, and others who work only on a commission basis.

Interpreting Workforce Data

Graduates

Count of individuals who graduated in the given school year. Graduates who earned more than one degree in the same academic year are classified according to the highest degree obtained. Programs with fewer than ten graduates are not displayed.

Graduates With Reported Wages

Count of graduates with reported wages in Minnesota Unemployment Insurance (UI) wage records one year after graduation. For a person graduating in April, May, or June 2010, this would be the quarter April, May, or June 2011. This is a count of individuals, not jobs.

Median Hourly Wage

Among all graduates with reported wages one year after graduation, half earned more and half earned less than this median hourly wage. Hourly rates lower than \$6.00 are excluded from the calculation because they represent training wages paid to employees under 20 years old.

Annual Median Wage

For someone graduating in Spring 2010, this figure represents median wages earned from Spring 2011 to Spring 2012. Individuals with reported earnings any time during the year are included regardless of number of hours worked. Hourly rates lower than \$6.00 are excluded.

Percent of Employed Grads Working Full-time Year-Round

Percent of employed graduates who worked each quarter of the year for at least 1,820 hours, representing an average of 35 hours a week for a full year. This metric represents workforce attachment (not tenure with the same employer) and gives an idea of the likelihood of finding a full-time job.

Full-time Year-round Median Wage

For someone graduating in Spring 2010, this figure represents median wages earned from Spring 2011 to Spring 2012 by individuals working each quarter of the year for at least 1,820 hours. This measure is based on a smaller subset of employed graduates. When there are fewer than 10 valid employment

records the figure is suppressed for confidentiality and data quality reasons.

Percent Graduates With Reported Wages In MN During The Year

Percent of graduates with reported wages in Minnesota during the second year after graduation. Individuals with reported earnings any time during the year are included, regardless of number of hours worked. This measure underestimates the employment rate because graduates employed at federal agencies, self-employed, or employed in other states are not included in Minnesota wage records.

Workforce Data Limitations

- A degree or award has a value beyond employment and earnings. Personal interest and satisfaction with a major, or a job, are intangible benefits that cannot be measured through this tool's data.
- The job market varies across the state and over time. Past outcomes cannot predict the market success of future graduates in all locations.
- Outcomes represent only the graduates who worked in Minnesota as identified in the state's Unemployment Insurance wage records.
- Graduates who re-enrolled in school after completing a degree and chose not to seek work will not appear in wage records.
- Work outcomes for programs with few graduates can fluctuate significantly over time.
- Wages are based on initial earnings and may not reflect long-term prospects.
- The data cannot be used to evaluate the overall return on investment of postsecondary education compared to no postsecondary education because Minnesota does not have the ability to link high school graduate records to workforce records.

Contact Us

If you have comments, questions, or suggestions, don't hesitate to send us a message at: sleds.support@state.mn.us.

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