

Tennessee Education to Employment (E2E) Dashboard 2025 Technical Documentation

Overview

Tennessee's Education to Employment Dashboard (E2E) was produced by Tennessee's Office of Evidence and Impact (OEI) utilizing data from Tennessee's longitudinal integrated data system, Tennessee Data Analytics for Transparency and Accountability (TN DATA). The E2E dashboard leverages data submitted to TN DATA from the [Tennessee Higher Education Commission](#), [Tennessee Independent Colleges and Universities Association](#), [Tennessee Department of Education](#), and [Tennessee Department of Labor and Workforce Development](#). Information provided through TN DATA may differ from other reports produced due to distinct data processes and reporting requirements.

The E2E dashboard provides insight into Tennessee's high school and postsecondary graduates by instructional program area and their wages one to five years after graduation, as reported by Tennessee's unemployment insurance wage record data. Some values have been suppressed to preserve individual privacy. The dashboard has been reviewed and approved for publication by the partnering agencies.

Background

TN DATA is a statewide initiative led by OEI and Strategic Technology Solutions (STS) to improve state services and programs by supporting and coordinating agency partnerships through data sharing and analytics. Comprised of more than ten (10) partner state agencies and data sources, TN DATA enables new insights into complex challenges and advances Tennessee's goal of being the best-managed state with high-quality services.

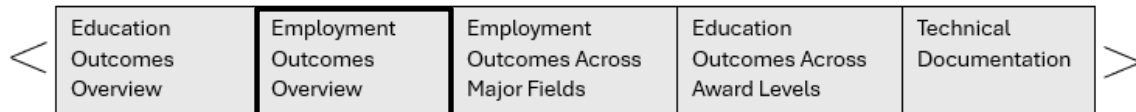
OEI's Role

Since 2024, OEI has created reports that provide details on education and workforce outcomes for high school and postsecondary students by subgroups and instructional programs. Utilizing TN DATA, interactive publicly available dashboards were created to easily access data from a variety of sources in one place.

Dashboard Navigation

This dashboard is divided into four distinct pages: *Education Outcomes Overview*, *Employment Outcomes Overview*, *Employment Outcomes across Award Levels*, and *Employment Outcomes across Major Fields*. These dashboards provide insight into Tennessee's high school and postsecondary graduates by instructional program area and their wages one to five years after graduation, as reported by Tennessee's unemployment insurance wage records.

Users can navigate to the different dashboards by clicking the tabs at the top of the page. Technical information can be accessed by clicking the Technical Documentation tab or at the end of this report, which defines the terminology and methods of analysis in the report.



Filters

Each dashboard page has five unique filters. Filters do not carry across the dashboard pages. Each page will need to have filters selected. Statewide totals in each dashboard can be viewed by selecting *All TN* under the institution filter. To view the data available, each filter must be selected or verified the intended selection is visible in the filter text. **To view a different data breakdown always start with filter 1 and move down the filter options.**

Accessibility Information

The dashboard was created using Tableau which has some known accessibility limitations. Keyboard interaction with individual visualization marks may be limited and may not fully replicate mouse functionality. Those using screen readers may need to click the enter key to select options in filters. Filters are found on the lefthand side of each page. This dashboard is best viewed on a desktop computer. Alternative accessible formats of the data and technical information can be downloaded using the links above. If you have any questions, please contact oei.research@tn.gov.

Dashboard Pages Overview

Education Outcomes Overview: Dashboard displays two charts for graduation class 2018-2022 total completions. The first denotes the total completions counts by graduation year. The second details the percentage of completions by major fields (2-digit CIP code) for each individual graduation year. The data is aggregated by gender or race/ ethnicity and award level.

Employment Outcomes Overview: Dashboard displays the annual median wage of graduates by graduation year, award level, gender, race/ethnicity, major fields (2-digit CIP code), or major subfields (4-digit CIP code) for one to five years after graduation. Percentage employed in Tennessee indicated in the tooltip of the chart. Data can be further disaggregated by subgroup for the selected indicator and graduation class.

Employment Outcomes Across Major Fields: Dashboard displays the annual median wage of graduates by time after graduation for a single award level and multiple selected major fields (2-digit CIP codes). Data can be further disaggregated by graduation class. Also included are the percentage employed in Tennessee indicated in the tooltip of the chart.

Employment Outcomes Across Award Levels: Dashboard displays the annual median wage of graduates by time after graduation for single major field (2-digit CIP code) across multiple selected award levels. Data can be further disaggregated by graduation class. Also included are the percentage employed in Tennessee indicated by the in the tooltip of the chart.

Technical Documentation: Dashboard depicts the business rules including definitions and calculations used throughout the dashboards.

KEY INFORMATION

Data Sources: Data was aggregated and extracted from Tennessee Data Analytics for Transparency and Accountability (TN DATA). Tennessee State agencies reporting into TN DATA for this dashboard include Tennessee Department of Education (TDOE), Tennessee Higher Education Commission (THEC), Tennessee Independent Colleges and Universities Association (TICUA), and Tennessee Department of Labor and Workforce Development (TLWD).

Reporting Metrics Overall: Data included in this dashboard may differ from reports produced by Tennessee Department of Education (TDOE), Tennessee Higher Education Commission (THEC), Tennessee Independent Colleges and Universities Association (TICUA), and Tennessee Department of Labor and Workforce Development (TLWD) due to agency distinct data processes and reporting requirements. This data was provided by the above agencies and aggregated through TN DATA by the Office of Evidence and Impact (OEI).

High School Reporting Metrics: Student high school graduates (award) data was reported into TN DATA by TDOE and was extracted from TN DATA by OEI. Only high school graduates were included in the data. High school career and technical education (CTE) status program of study was matched to NCES Classification Instructional Program (CIP) codes.

Postsecondary Reporting Metrics: Postsecondary enrollment and award data was reported into TN DATA by THEC and the National Student Clearinghouse (NSC) and was extracted from TN DATA by OEI. Postsecondary institution reported data from THEC includes data from public institutions, Tennessee Colleges of Applied Technology (TCATs), Tennessee Bureau of Regents (TBR) community colleges, locally governed institutions, University of TN system colleges, and some private institutions who are members of TICUA. NSC data includes only enrollment data for in and out-of-state and private institutions for the fall following high school graduation. Data does not include out-of-state NSCH data or industry- recognized credentials, so the overall completion rate is likely higher than presented in this data.

Postsecondary enrollment data (THEC, TICUA, NSCH) are not used directly in the dashboard but are used to exclude graduates from the employment outcomes data. Only postsecondary **awards** data is directly used and reported in the dashboard.

Employment Reporting Metrics: Employment data was reported into TN DATA by TLWD and was extracted from TN DATA by OEI. Graduates were considered to be employed in Tennessee if they earned wages at a firm covered by the UI System during any quarter of Federal Fiscal Year (FFY) 2016- 2023 and were not enrolled at a postsecondary institution during that year. The UI System does not include most self-employed, most federal employees, military, or several other smaller categories of employment. To compare across time, inflation adjusted wages were reported on the dashboard and rounded to the hundred.

Demographics: 212 records with Gender reported as unknown or missing were excluded from the data. 8,117 records where Race/ Ethnicity was reported as unknown or missing were categorized into the *Other Race/ Ethnicity* category.

Suppression: Cells with less than 10 counts are suppressed and indicated with the word Suppressed or were removed from the presented data and noted in the (i) content. Suppressing cells with small counts allows the data to be published in this dashboard in compliance with state and federal law by limiting potential unauthorized disclosure of personally identifiable information.

DEFINITIONS

Total Completions: High school or postsecondary graduate outcome data includes students who graduated from high school or postsecondary institutions/ colleges from academic years 2018- 2022. Each student is counted by their award level and may be counted more than once if they received multiple awards during these years or were enrolled in multiple programs of study or classification of instructional programs (CIP) codes. For example, if a student received multiple bachelor's degrees in 2020 they would be counted for each in 2020.

Completion data does not include out-of-state NSCH data or industry- recognized credentials, so the overall completion rate is likely higher than presented in this data. To capture those students who received at least a certificate or degree, sufficient credential and basic skills completer award levels were excluded. All other degree (award) levels, from less than one-year certificates through doctoral degrees are included.

Graduation Year: High school or postsecondary graduates categorized by completion period between August 1 to July 31 of next year and determined by the school year and represented by the end of timeframe year. Example: Graduated during academic year 08/01/2017– 07/31/2018 which is school year 2017-2018, and is represented in the data as graduation year (class of) 2018.

Class of	Postsecondary Award Terms
2018	summer 2017, fall 2017, spring 2018 (Academic Year 2017-18)
2019	summer 2018, fall 2018, spring 2019 (Academic Year 2018-19)
2020	summer 2019, fall 2019, spring 2020 (Academic Year 2019-20)
2021	summer 2020, fall 2020, spring 2021 (Academic Year 2020-21)
2022	summer 2021, fall 2022, spring 2022 (Academic Year 2021-22)

Award Level: High school or postsecondary graduates who received a degree (award) are counted at each level achieved during 2018-2022. All award levels, from less than one-year certificates through doctoral degrees are included except sufficient credential and basic skills completer. High school diploma, certificate/ diploma, associate, bachelors, and postbaccalaureate award levels are reported.

Certificate/ Diploma: Award level combines Certificate less than 1 year, Certificate 1-2 years, TCAT Certificate, and TCAT Diploma award levels.

Postbaccalaureate: Award level combines Certificate Post- Bachelors, Masters, Certificate Post-Masters, First- Professional, and Doctoral award levels.

HS CTE and Non- Concentrators: High school career and technical education (CTE) concentrators and non-CTE concentrators are included under the *High School Diploma* award level. Program of study was aligned to a six digit NCES classification of instructional program code (CIP) and reported within the Major Field and Major Subfield variables. In order to align with the Perkins V Tennessee State Plan, the dashboard includes only high school CTE concentrators who concentrated in programs of study that fall under the 16 nationally recognized career clusters. High school CTE concentrators can be identified by selecting *High School Diploma* award level and the specified Major Field in the data.

TDOE CTE information: <https://www.tn.gov/education/educators/career-and-technical-education.html>

HS Graduates (Non-CTE)*: Students who concentrated in a special program of study, non-aligned to TDOE Perkins V reporting, and non- CTE concentrators were counted under *HS Graduates (Non-CTE)** major field and major subfield.

Major Fields: Represent the **2- digit classification of instructional program (CIP) codes** reported by their descriptive titles. The dashboard **excludes two 2-digit CIP codes, 32 and 36**, both are not valid for IPEDS reporting.

Major Subfields: Represent the **4- digit classification of instructional program (CIP) codes** reported by their descriptive titles. Major Subfields data can be found reported on the *Employment Outcomes Overview* dashboard. The dashboard **excludes all 4-digit CIP codes that would fall under 32XX and 36XX** codes. They are not considered valid for IPEDS reporting.

2-Digit and 4-Digit CIP Codes: Defined as a classification of instructional program (CIP) code. A list of National Center for Education Statistics (NCES) CIP codes can be found here <https://nces.ed.gov/ipeds/cipcode/browse.aspx?y=56> . The dashboard **excludes two 2-digit CIP codes**, namely **32** and **36** (both are not valid for IPEDS reporting) and **all 4-digit CIP codes that would fall under 32XX and 36XX**. *Major Field* represents 2-digit CIP codes and *Major Subfields* represent 4- digit CIP codes in the dashboard.

Employment: Graduates were considered to be employed in Tennessee if they earned wages at a firm covered by the UI System during any quarter of Federal Fiscal Year (FFY) 2016- 2023 and were not enrolled at a postsecondary institution during that year. The UI System does not include most self-employed, most federal employees, military, or several other smaller categories of employment.

Wage: Generated from Federal Fiscal Year 2016-2023, which encompasses October 2016- September 2023.

Annual Wages: Those considered employed during each year and rounded to the nearest hundred. Students enrolled in postsecondary institution were excluded from wage data for that year. Calculated as the median of the sum of all four fiscal quarters for each employed individual in the dataset.

Median Wage: 50th percentile and denotes the midpoint within the range of values, with 50% above and 50% below the given figure

25th Wage Percentile: Indicates that 25% of the wages are below the given figure, with 75% above it.

75th Wage Percentile: Indicates that 75% of the wages are below the given figure, with 25% above it.

Inflation Adjusted Wages: Inflation adjusted wages were used for wage data. Inflation was created by using the Minneapolis Fed's inflation calculator and Consumer Price Index data table using 2023 inflation (304.7) for calculation listed on site below.

<https://www.minneapolisfed.org/about-us/monetary-policy/inflation-calculator/consumer-price-index-1913->

Percent Employed in TN: The percentage is calculated by dividing the number of graduates (completers) employed in Tennessee during their Federal Fiscal Year (FFY) Oct - Sept, who were not enrolled in a post-secondary institution that year, by the total number of graduates not enrolled in postsecondary institutions. Wage data includes individuals employed by firms covered under the Tennessee UI system.

Postsecondary Enrollment Data: Used to exclude currently enrolled students from employment data and is not directly reported in the data presented in the dashboard. Student postsecondary enrollment data was extracted from the Tennessee Longitudinal Data System, TN DATA. Postsecondary data was populated by Tennessee Higher Education Commission (THEC), who submits two postsecondary enrollment tables. The files include: The Tennessee public institutions files, which is created from the THEC data systems and includes enrollment for in-state, public four-year universities, community colleges and technical colleges, and The National Student Clearinghouse (NSC) file, which includes enrollment in out-of-state and private institutions for the fall following high school graduation.

Time after Graduation: High school or postsecondary graduates who received a degree (award) are counted at each level achieved during 2018-2022 variable based on graduation year and length of time since graduation (graduation year plus 1 to 5 years). Breakdown is based on aggregation by cohort, award level, gender, race/ethnicity, 2-digit or 4-digit CIP codes. Below years were combined to create time after graduation values.

Graduation Year	1 year after graduation	2 years after graduation	3 years after graduation	4 years after graduation	5 years after graduation
2018	2019	2020	2021	2022	2023
2019	2020	2021	2022	2023	
2020	2021	2022	2023		
2021	2022	2023			
2022	2023				

Gender: Only male or female reported gender were included in the data. 212 records with gender reported as unknown or missing records were excluded from all the data.

Race/ Ethnicity: Categories were collapsed into Black Non-Hispanic, Hispanic, Other, and White Non-Hispanic in order to provide the most information available in a viewable format. *Other* category includes Alaskan Native, American Indian, Asian or Pacific Islander, Multiracial and Unknown reported race/ethnicity.

Additional Resources

The interactive dashboard is available on [OEI's website](#). Previous versions of the dashboard and other similar reports can be found on the OEI E2E webpage under the *Similar Resources* section.

For further questions, please contact OEI.Research@tn.gov