



Articulation and Transfer in Tennessee Higher Education 2022 Report

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Tennessee Higher Education Commission

2022-23 Commission Members

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Executive Summary

The 2022 Articulation and Transfer Report provides an update on the progress made toward full articulation between public institutions in Tennessee. This year's report includes an overview of the Articulation and Transfer Council and its work to promote articulation and transfer across the state, including updates on the work of the Council's subcommittees over the past year. This report uses data from Student Tracker, National Student Clearinghouse (NSC), Tennessee Higher Education Commission's Student Information System (THECSIS), and the Tennessee Board of Regents (TBR) to analyze transfer patterns and demographics of the fall 2015 first-time freshmen cohort. This data includes all students who showed up at Tennessee public community colleges and universities as a first-time freshman in 2015.¹ Findings from the report are summarized below.

For the purposes of this report, **transfer students are defined as any student who attended more than one institution during the six years following first enrollment**, which covers fall 2015 through summer 2021 for the fall 2015 cohort.

- In the fall 2015 cohort, 33.1% of students attended more than one institution in six years. This represents a decrease when compared to the fall 2014 cohort, where 39.7% of students transferred (**Figure 1**). However, the fall 2015 cohort includes an increase in statewide enrollment at community colleges which corresponds to the statewide implementation of Tennessee Promise. The fall 2015 cohort tracked in this report is 13.8% larger than the fall 2014 cohort due to increased enrollments at two-year institutions, and 34.5% of the fall 2015 cohort participated in Tennessee Promise (**Table 2**). Despite a larger cohort in fall 2015 than in fall 2014, fewer students in the fall 2015 cohort transferred (n=12,417) than in fall 2014 (n=13,082). Year-to-year comparisons should consider the different policy environment and cohort makeup for fall 2015 compared to previous cohorts.
- While overall transfer decreased, more students in the fall 2015 cohort transferred between a two-year institution and a four-year institution, completing a *vertical transfer*.² In the fall 2014 cohort, 13.5% of the cohort made a "24" (two-year to four-year institution) transfer, compared to 15.8% of students in the fall 2015 cohort (**Figure 8**). A "24" transfer is the most common transfer pattern for those students who do transfer in the fall 2015 cohort.
- Transfer students have higher six-year graduation rates (62.8%) than non-transfer students (43.7%) in the cohort. This gap is driven by many students who begin enrollment at a two-year institution, do not transfer, and do not graduate (**Figure 7**); graduation rates for non-transfer students who begin enrollment at a four-year are higher than those who begin at a two-year.
- Of those students who started at a Tennessee public two-year institution, 29.5% completed an associate degree within six years and 16.6% completed a bachelor's degree³; the completion rate for all students who started at a Tennessee public two-year institution is 36.5% (see **Figures 7 and 13** for more detail).

¹ For more information about specific features of the data and limitations, see pages 13-14.

² *Horizontal transfer*, by contrast, is transfer between a two-year institution and a two-year institution, or between two four-year institutions.

³ Of students who started at a public two-year institution, 12.2% earned both a bachelor's and an associate degree within six years. These students are included in both rates above.

- Fifty percent of students in the fall 2015 cohort obtained a degree in those six years. Overall completion is lower in the fall 2015 cohort than in the fall 2014 cohort (53.4%). However, since the fall 2015 cohort is larger, this graduation rate represents 18,757 students with awards compared to 17,603 students with awards in the fall 2014 cohort.
- Students who complete a vertical transfer from a two-year institution to a four-year institution, categorized here as a “24” transfer, are more likely than all other transfer patterns in the fall 2015 cohort to earn any type of degree within six years. These students also earn a wide variety of degrees. Of students in this transfer pattern, 74.6% earned a degree in six years, including 30.8% of students who earned both an associate and a bachelor’s degree (**Figure 13**). For more on transfer patterns, see pages 20-22.
- The Complete College Tennessee Act (2010) created Tennessee Transfer Pathways (TTPs) to facilitate seamless transfer between Tennessee’s community colleges and universities. See **Appendix E** for a complete list of TTPs. Of the students in the fall 2015 cohort who enrolled in a TTP, 50.2% transferred (**Figure 15**).
- Of students who enrolled in a TTP, 28.9% are only enrolled in a TTP for one term. Nearly one-fifth, 19.4%, remain enrolled in a TTP for five or more terms, longer than 100% of time to an associate degree, which is four terms (**Figure 14**).
- Of the 8,166 students who enrolled in a TTP⁴, 19.4% obtained an associate degree in a TTP major. The number of TTP awards earned by the fall 2015 cohort is 1,624, up from 1,080 earned by the fall 2014 cohort—a 50.4% increase (**Appendix F**). This substantial increase mirrors the increase in enrollment brought about by Tennessee Promise; the proportion of TTP participants who earned a TTP award increased slightly from 18.4% in the fall 2014 cohort to 19.7% in the fall 2015 cohort. Additionally, 41.8% of TTP participants earned any award in the six years following initial enrollment.
- The Articulation and Transfer Council includes representation from chief academic officers from each of Tennessee’s public universities, University of Tennessee System, Tennessee Board of Regents, and the Tennessee Independent Colleges and Universities Association. The 2020-2025 Articulation and Transfer Council is working on four issue areas: (1) designating courses that are not university parallel and implementing common course numbering per Tennessee Code Ann. § 49-7-202 (r)(3); (2) streamlining TTPs to minimize exceptions; (3) expanding data collection and dissemination on TTP utilization, completion, and transferability for the annual THEC Articulation and Transfer Report; and (4) Reverse Transfer.

This report highlights important successes in transfer for Tennessee students, including increasing proportions of students completing transfers between two-year and four-year institutions, and increasing numbers of transfer students earning awards. TTP participation is also increasing, and data collection is improving to better evaluate those successes. The report also identifies important areas of growth, including articulation with Tennessee Colleges of Applied Technology and increasing transfer opportunities across all demographic groups to ensure that all Tennesseans can meet their transfer aspirations. Finally,

⁴ In the fall 2015 cohort, 21.9% of students were matched to TTP data indicating TTP participation, compared to 17.9% of the fall 2014 cohort. This represents both an increase in TTP participation and data improvements in tracking TTP students.

the work of the Articulation and Transfer Council's subcommittees over the past year highlights important steps in coordinating statewide efforts to ensure transfer student success.

Note on COVID-19 Impact

COVID-19 presented unprecedented and unpredictable circumstances for Tennessee postsecondary education. While the students in this report were enrolled prior to the pandemic, some transfer behavior and degree attainment may have been impacted in 2020 and subsequent academic years, which are included in the data under consideration here. Tables and figures presented in this report may not be comparable to prior years due to the impact of the COVID-19 pandemic.

Legislative Overview

The annual Articulation and Transfer Report is prepared pursuant to Tennessee Code Annotated § 49-7-202 (r)(5), which directs the Tennessee Higher Education Commission (THEC) to: "...report to the chairs of the education and finance, ways and means committees of the senate and the chairs of the education administration and planning and finance, ways and means committees of the house of representatives no later than October 1 of each year on the progress made toward full articulation between all public institutions." See **Appendix A** for full text of T.C.A. § 49-7-202 (r)(1-5).

The 2022 Articulation and Transfer Report presents an update on the implementation of the articulation and transfer mandate through three primary sections:

- 1) The first section provides information on the composition and charge of the Articulation and Transfer Council, as well as an update on the current activities of the Council.
- 2) The second section examines the demographics, transfer behavior, and degree outcomes for the fall 2015 first-time freshmen cohort who enrolled at Tennessee public community colleges or universities. This section follows these students in the six years after their initial enrollment to provide a full, longitudinal view of their transfer behavior and resulting degree outcomes.
- 3) The third section examines the demographics, transfer behavior, and degree outcomes of those students in the fall 2015 cohort who ever enrolled in a Tennessee Transfer Pathway (TTP) associate degree program. TTPs are designed to facilitate a seamless transfer between Tennessee's public community colleges and four-year colleges and universities. For more information about TTPs, see page 28.



Section One:

Articulation and Transfer Council

Articulation and Transfer Council

The Articulation & Transfer (A&T) Council is necessary to fulfill the requirements in Tennessee Code Annotated § 49-7-202 (r)(1-5), including collaboration on the development and maintenance of Tennessee Transfer Pathways and of common course numbering. In 2020, the A&T Council was restructured by THEC to focus on a five-year period (2020-2025) with an emphasis on aligning the work of the Council with the various requirements of T.C.A. § 49-7-202 (r)(1-5), including development of Tennessee Transfer Pathways, clear communication to students through common course numbering and designation of non-transferrable courses, and ongoing effort to revise and update plans to achieve these requirements. See **Appendix A** for the full text of this section.

Current composition of the A&T Council consists of the chief academic officers from the Tennessee Higher Education Commission, Tennessee Board of Regents, University of Tennessee System Office, Tennessee Independent Colleges and Universities Association, Locally Governed Institutions, and University of Tennessee campuses. See **Appendix B** for complete membership.

The four primary focus areas for the 2020 – 2025 council are:

- Streamlining Tennessee Transfer Pathways (TTPs) to minimize exceptions;
- Expanding data collection and dissemination on TTP utilization, completion, and transferability for the annual THEC Articulation and Transfer Report;
- Designating courses that are not university parallel and implementing common course numbering; and
- Including Reverse Transfer in the Council.

The 2020-2025 Articulation and Transfer Council has developed four subcommittees to support the work of: (1) Tennessee Transfer Pathways; (2) Technical Tennessee Transfer Pathways; (3) Common Course Numbering; and (4) Reverse Transfer. Membership of the subcommittees represent various roles from across each of the represented entities on the Council. A brief overview of each subcommittee and their work over the past year is presented below.

Tennessee Transfer Pathways Subcommittee

This subcommittee is charged with reviewing, updating, and developing transfer policies, principles, and systemwide expectations to ensure legislative compliance. The subcommittee will use multiple taskforce groups to pragmatically develop a continuous improvement plan, ensuring the credits students earn through a Tennessee Transfer Pathway (TTP) program will apply to degree pathways at Tennessee's public universities and participating private universities.

The Tennessee Transfer Pathways subcommittee met in April 2022 to discuss the curriculum review process, ensuring all members were informed about changes to this process, including the updated timeline for review. Annual curriculum reviews occur on the five-year review cycle presented in **Table 1**. The subcommittee also discussed the process for proposal of new TTPs.

- *Membership:* Campus representatives in various roles including, but not limited to, admissions, records, advising, transfer centers, adult services, and veteran services.

- *Outcomes:* Present the annual TTP curriculum reviews to the A&T Council, provide updates to the A&T Council, review pathway categories and possible expansions.

Table 1: Tennessee Transfer Pathways Review Cycle by Focus Area

Focus Area	Review Cycle
Social Sciences & Education	2022-23
Arts & Humanities	2023-24
Health Sciences	2024-25
Business	2025-26
STEM & Applied Technology	2026-27

Technical Tennessee Transfer Pathways Subcommittee

This subcommittee is working to create a systematic approach to the development, tracking, and stacking of technical pathways similar in structure to the existing Tennessee Transfer Pathways. An emphasis is focusing on the transferability of Tennessee College of Applied Technology (TCAT) diplomas and certificates and Associate of Applied Science (AAS) degrees to both community colleges and universities.

The Technical Tennessee Transfer Pathways subcommittee met in April 2022, kicking off with a review of the goals of the subcommittee. Members then heard presentations from institution representatives where existing technical articulation agreements have been successfully implemented. These presentations detailed how these technical articulation agreements originated, developed, and are continuing to succeed. The subcommittee was then charged with completing and sharing a survey to capture more detail about other existing or proposed articulation agreements within technical education across the state. Results from this survey will inform further work of this subcommittee.

- *Membership:* Campus representatives from the Tennessee Colleges of Applied Technology, community colleges and universities in various roles including presidents, student services, workforce development, and records.
- *Outcome:* Create a process for implementation and maintenance of statewide technical pathways.

Common Course Numbering Subcommittee

This subcommittee will facilitate the ease of transfer for community college students from one community college to the other and from the community college to universities, improve program planning, and increase communication among all colleges. Per T.C.A. § 49-7-202 (r)(3), courses with common content will carry the same prefix, number, title, credits, description, and competencies.

The Common Course Numbering subcommittee met in February 2022 to review work that had already been done concerning common course numbering and discuss ways to expand that work. The recommendation for the next meeting was to identify other state systems that had developed common course numbering and to have them share their practices.

- *Membership:* Campus representatives from various roles including, but not limited to, faculty, advising, records, and information technology.

- *Outcome:* Create a process and database for a uniform set of course designations for students to use in determining course equivalency and to facilitate transfer.

Reverse Transfer Subcommittee

This subcommittee will advance the effectiveness of the Tennessee Reverse Transfer Program. The subcommittee will have oversight of the Reverse Transfer process and will review the policies and their impact annually.

As the Tennessee Reverse Transfer Program is transitioning from coordination at the University of Tennessee System to THEC, the Reverse Transfer subcommittee has not yet convened. To date, nearly 6,000 associate degrees have been awarded through the program. THEC will begin coordination of the Reverse Transfer Program effective January 2023.

- *Membership:* Representation from diverse campus roles including, but not limited to, records, information technology, admissions, advising, and academic affairs.
- *Outcomes:* Provide expertise and guidance in an advisory capacity to improve Reverse Transfer processes in Tennessee, establish Reverse Transfer best practices to facilitate effective collaboration among state partners and to aid in degree completion, provide recommendations for Reverse Transfer Policy, and provide updates to the A&T Council.



Section Two: Transfer Behavior of the Fall 2015 Cohort

Transfer Behavior of the Fall 2015 Cohort

This year's report continues the work of the previous report by tracking the transfer behavior of a cohort of students across six years. The report examines transfer behavior and degree outcomes for the cohort of first-time freshmen who enrolled at a Tennessee public university or community college in fall of 2015.⁵ By using a cohort view and data from the Student Tracker, National Student Clearinghouse (NSC), we can track students at most public and private, two-year and four-year, in-state and out-of-state institutions across the United States to see their transfers and degree attainment.⁶ The resulting dataset is a robust picture of the transfer behavior and degree outcomes of the students who began in Tennessee public community colleges and universities in fall 2015.

Our dataset consists of **37,514** Tennessee students in the fall 2015 cohort who are captured in NSC enrollment and graduation records. Of these students, **12,417 (33.1 percent)** attended more than one institution in six years; throughout this section, these students are identified as "transfer students," while the remaining **25,097** are identified as "non-transfer students."

When tracking students across institutions, we captured every instance of a student's enrollment at an institution as well as a count of the unique institutions a student attended. This allows us to examine the enrollment patterns of students who enroll at one institution, transfer to another, and subsequently return to the first institution. In instances where students were simultaneously enrolled at multiple institutions, we used previous enrollments, enrollment intensity (i.e., part-time, full-time, etc.), and length of enrollment at both institutions to determine whether a student changed institutions. For example, a student who first enrolls at University of Tennessee, Knoxville, subsequently enrolls at Pellissippi State Community College, and then returns to take courses at UT Knoxville would be shown in the data as enrolled at UTK (a four-year institution), PSCC (two-year), then UTK (four-year), translating to a "424" transfer pattern. However, a student taking a full-time course load at University of Tennessee, Knoxville and a part-time course load at Pellissippi State Community College in the same term would be shown as enrolled at UTK with a concurrent enrollment and as a non-transfer student. Thus, "concurrent enrollment" represents a student who is enrolled at more than one institution for overlapping dates in the same term. Concurrently enrolled students may or may not be transfer students. For more on transfer patterns and concurrent enrollment, see pages 20-22.

Data Sources

All data in this report are provided by the Tennessee Higher Education Commission and Student Assistance Corporation (THEC/TSAC), the Student Tracker, National Student Clearinghouse (NSC), and the Tennessee Board of Regents (TBR). The data used in each section are as follows:

⁵ The fall 2015 cohort includes first-time freshmen (FTF) who initially enrolled in fall 2015 or who initially enrolled in summer 2015 and returned in fall 2015 across TN public community colleges and universities. The completion data provide degree outcomes through summer 2021 (within six years of initial enrollment). This represents all FTF identified by THECSIS and found in Student Tracker, National Student Clearinghouse records.

⁶ In the enrollment years included in this section of the report (2015-2021), between 96.7% and 97.4% of all Title IV, degree-granting institutions reported enrollment and graduation data to the Student Tracker, National Student Clearinghouse. Additional information about National Student Clearinghouse data is available on their website at <https://www.nscresearchcenter.org/>.

Transfer Behavior of the Fall 2015 Cohort: This section examines enrollment and degree outcomes of the fall 2015 first-time freshmen cohort. In addition to the NSC data, demographic and academic details are sourced from THECSIS and financial aid information is available through the Financial Aid System of Tennessee (FAST), managed by TSAC. Financial aid information is missing for students who did not file a FAFSA or for whom we do not have a FAFSA record (e.g., non-residents) in the six years of enrollment. Missing FAFSA information impacts 8.9% of records; subsequent figures and notes clarify how missing data are handled. Using NSC data provides a full picture of a student's enrollment history, including at institutions outside of Tennessee. However, the Tennessee Colleges of Applied Technology (TCATs)⁷ are not a part of the NSC data.

Tennessee Transfer Pathways (TTP): This section examines enrollment and degree outcomes of a subset of the fall 2015 cohort who ever enrolled in a TTP at one of Tennessee's public community colleges. This section matches the NSC and THECSIS data with additional data on TTP enrollment and completions from TBR. This section also includes financial aid information from TSAC's FAST database.

Privacy Notice

Throughout this report, THEC complies with the federal Family Educational Rights and Privacy Act (FERPA) requirements to protect students' personally identifiable information. Therefore, when tables are presented, individual observations containing fewer than ten observations are suppressed. The suppressed counts are included in table totals. All cases in which observations are suppressed are identified with a note directly beneath the respective table.

Transfer and Non-Transfer Students in the Fall 2015 Cohort

This section summarizes differences between transfer and non-transfer students in gender, race, economic status, and first-generation status. **Table 2** provides demographic data for the overall fall 2015 cohort. One important difference between the fall 2015 cohort and previous cohorts is fall 2015 represents the statewide implementation of Tennessee Promise. In fall 2015, 34.5% of the cohort participated in Tennessee Promise. The 12,959 Tennessee Promise participants include those who were paid \$0 or more in fall 2015.⁸ The fall 2015 cohort is thus larger than previous cohorts due to increased enrollments at two-year institutions, and year-to-year comparisons should consider the different policy environment and cohort makeup for fall 2015 compared to previous cohorts.

⁷ TCAT Chattanooga is considered an academic division within Chattanooga State Community College. As a result, several diplomas conferred by TCAT Chattanooga are captured as awards in this analysis.

⁸ For more information on Tennessee Promise, see THEC's Tennessee Promise Annual Report at <https://www.tn.gov/content/tn/thec/research/tn-promise-annual-report.html>.

Table 2: Demographics of Fall 2015 Cohort

	Count	Percent
Gender		
Female	20,714	55.2%
Male	16,794	44.8%
Race		
Black, not Hispanic	7,015	18.7%
Hispanic	1,626	4.3%
Other	2,033	5.4%
Unknown	876	2.3%
White, not Hispanic	25,964	69.2%
Pell Eligible	22,929	61.1%
First-Generation	15,006	40.0%
Fall 2015 Promise Participant	12,959	34.5%
Overall	37,514	100%

Notes: The “Other” race category includes Alaskan Native, American Indian, Asian or Pacific Islander, and Multiracial. Pell eligibility describes any student who was eligible for the Pell grant at any point during the six-year period following initial enrollment. First-generation status is self-reported on the FAFSA by parent education level and describes any student who was categorized as first-generation at any point in the six-year period. Students who did not file a FAFSA or for whom we do not have a FAFSA record (e.g., non-residents) are categorized as not eligible for the Pell grant and not first-generation in this report.

Figure 1 displays the overall percent of students in the 2015 cohort who transferred at any point in the six-year period following their initial enrollment. In the 2015 cohort, 66.9% of students attended only one institution during this time and are “Non-Transfer”. Transfer students in the cohort attended as few as two unique institutions and as many as six.

Figure 1: Overall Transfer Status of Fall 2015 Cohort

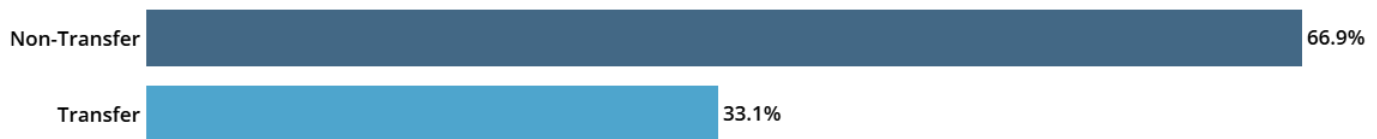


Figure 2 displays the proportion of transfer students by gender. Women comprised a majority of the fall 2015 first-time freshmen cohort (55.2%). Women were also more likely to transfer than their male counterparts.

Figure 2: Overall Transfer Status of the Fall 2015 Cohort by Gender

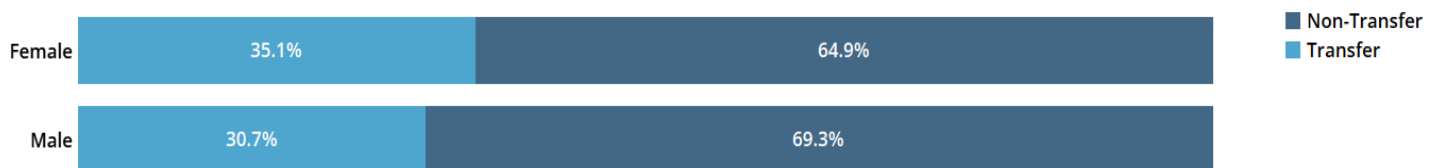
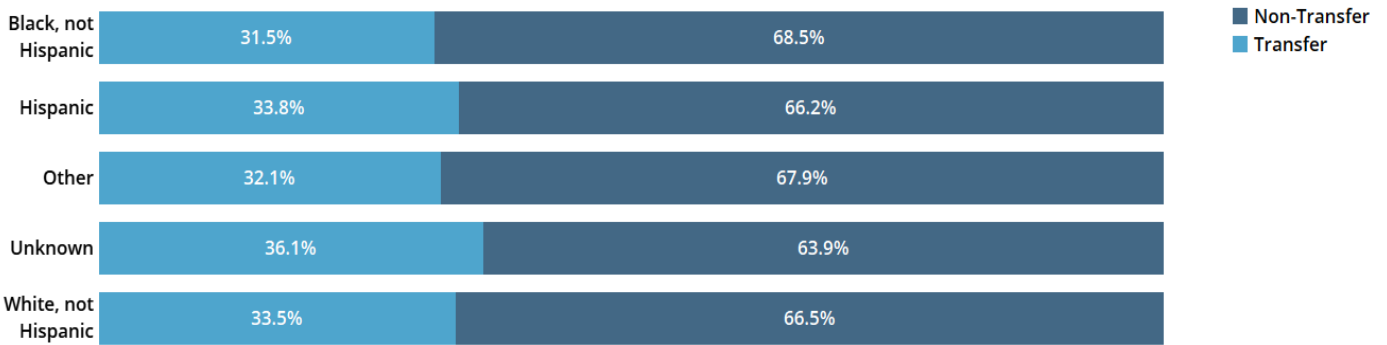


Figure 3 disaggregates transfer behavior by race. The chart shows the percent of each racial subgroup that transferred at any point in the six-year period following their initial enrollment. Hispanic students are

slightly more likely to transfer than other racial groups, and students whose race is unknown were more likely to transfer than their peers, though these are both small groups relative to the others (Hispanic n=1,626 and Unknown n=876).

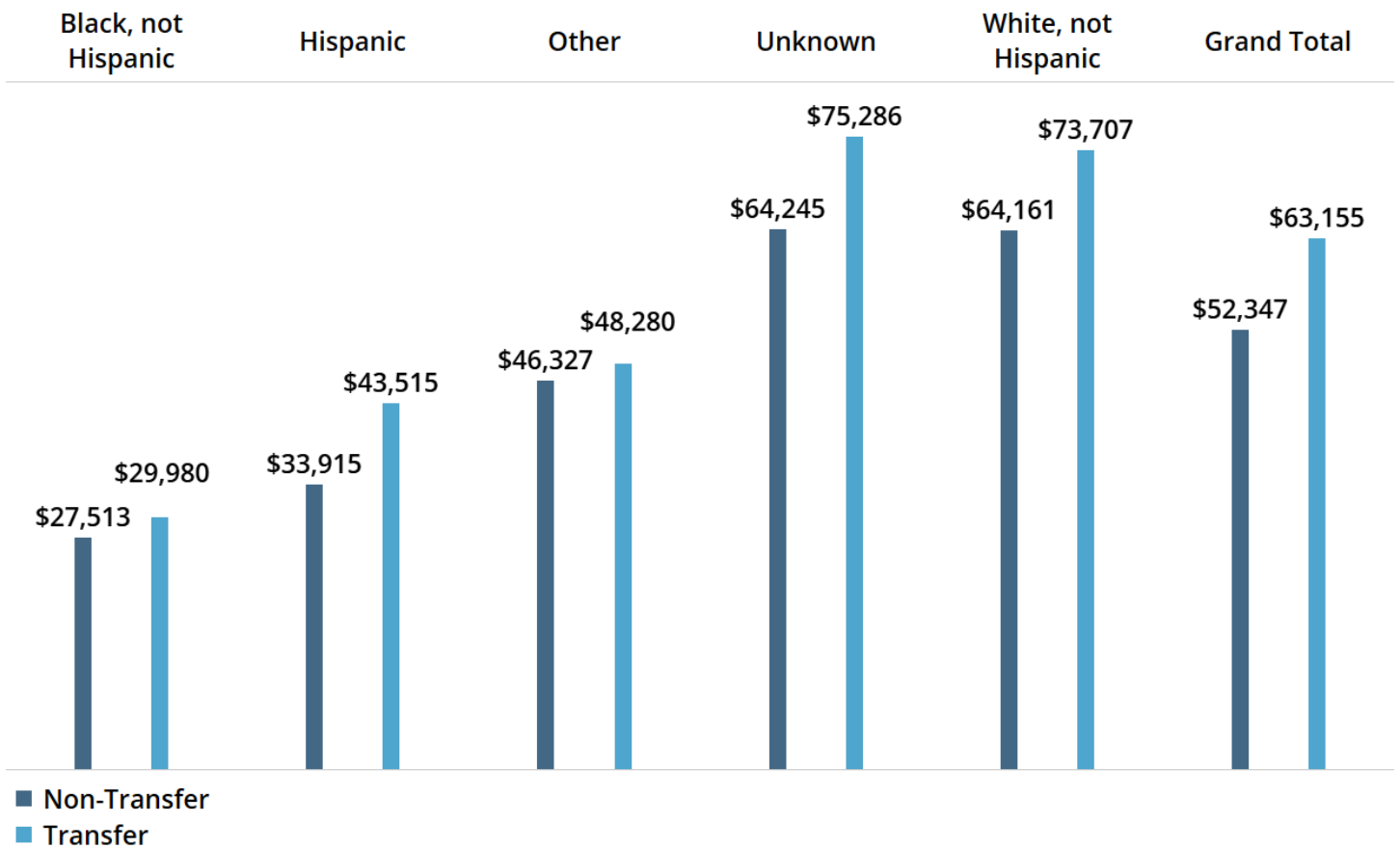
Figure 3: Overall Transfer Rates of the Fall 2015 Cohort by Race



Note: The “Other” race category includes Alaskan Native, American Indian, Asian or Pacific Islander, and Multiracial.

Figure 4 shows the median adjusted gross income (AGI) for the 2015-16 academic year, the first year of enrollment for the cohort, disaggregated by race and transfer status. Transfer students come from higher income backgrounds than their non-transfer peers, on average. Across all racial groups, the median AGI for 2015-16 is \$63,155 for transfer students and \$52,347 for non-transfer students. Income gaps are widest for “White, not Hispanic” students, which represent the largest share of students in the cohort, and for Hispanic students and students whose race is unknown, which are the two smallest shares of students in the cohort.

Figure 4: Median 2015-16 AGI of the Fall 2015 Cohort, by Race and Transfer Status



Note: The “Other” race category includes Alaskan Native, American Indian, Asian or Pacific Islander, and Multiracial. AGI is sourced from the FAFSA, so students who did not file a FAFSA or for whom we do not have a FAFSA record (e.g., non-residents) are not included in this figure.

Figure 5 displays the breakdown of the unique number of institutions attended for the 2015 cohort within six years of initial enrollment. Most students, 66.9%, attended only one institution during the six years immediately following enrollment (i.e., did not transfer). Students who transferred usually attended only two (81.3% of transfer students) or three (15.8% of transfer students) unique institutions during this period. A small number of students attended four or more unique institutions.

Figure 5: Number of Unique Institutions Attended, Fall 2015 Cohort

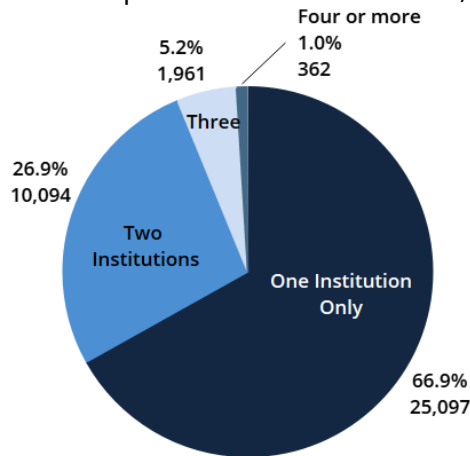
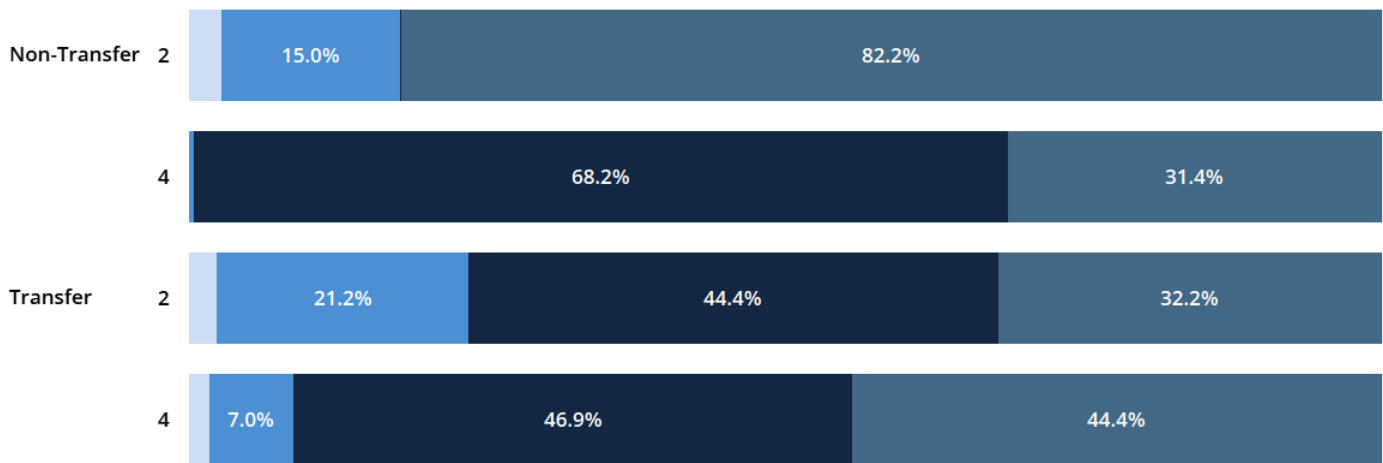


Figure 6 (next page) shows the outmigration of fall 2015 cohort students by the first state these students transferred to. This map includes all students who began at a Tennessee institution in fall 2015 and ever transferred to an out-of-state institution. Overall, 9.7% of all students in the cohort who began at a Tennessee institution transferred to an out of state institution at some point during the six years following initial enrollment (representing 29.3% of all transfer students). Out-of-state transfer was lower in the fall 2015 cohort (9.7%) than in the fall 2014 cohort (10.7%).⁹ These data also show students who enrolled in online programs headquartered elsewhere (e.g.: University of Phoenix in Arizona (n=60)). In these cases, it is likely that the student did not move to the state headquartering the online institution.

Overall, 62.8% of transfer students earned a credential within six years of initial enrollment, while only 43.7% of non-transfer students earned a credential in the same time frame. This disparity is largely driven by the low attainment rates (17.2%) of non-transfer students in the two-year sector, as shown in **Figure 7**. This figure shows the highest degree earned for students from the fall 2015 cohort, disaggregated by transfer status and sector (two-year or four-year) of initial enrollment.

Figure 7: Highest Degree Earned by Transfer and Non-Transfer Students and Initial Enrollment Sector, Fall 2015 Cohort

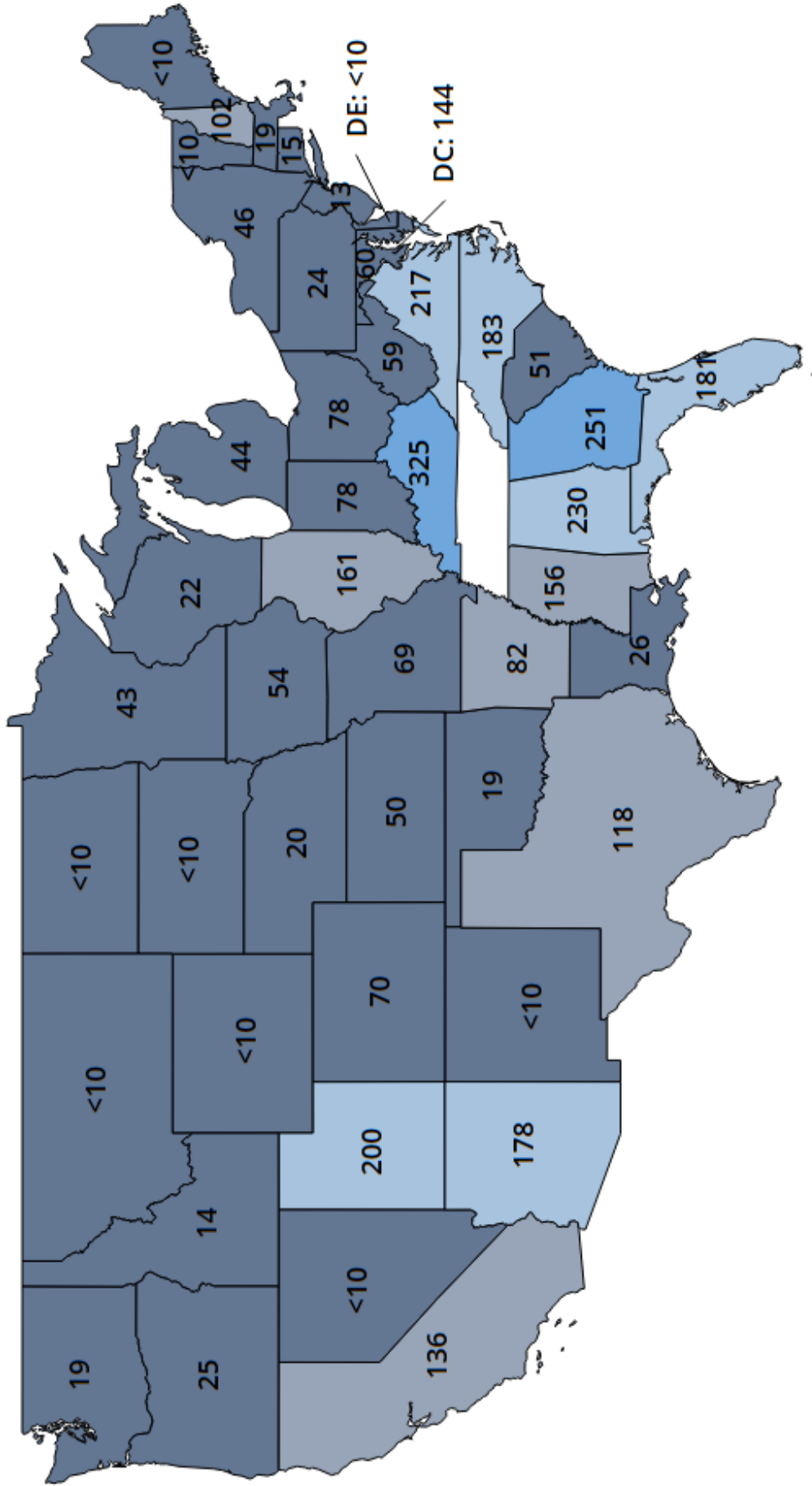


- None
- Bachelor's
- Associate
- Certificate/Diploma

Note: Diplomas are a small portion of awards; in the fall 2015 cohort, 0.3% (n=94) of students obtained a diploma within six years of initial enrollment. Diplomas are presented here with certificates. A very small number of students (n=27) obtained both a diploma and a certificate; these students are counted only once in the “certificate/diploma” category. Additionally, NSC data shows students who have obtained an award with no additional details. Where possible, these students were matched with THECSIS data to fill in award information. The remaining students whose award details were unknown (n=120) were considered as “no award” in this figure and graduation rate calculations.

⁹ For additional details on out-of-state transfer in fall 2014 cohort, see 2021 Articulation & Transfer report at <https://www.tn.gov/content/tn/the/research/at.html>.

Figure 6: Tennessee Transfers to Out-of-State Institutions, Fall 2015 Cohort



Note: Colors in the map represent four quartiles of the range of values, with dark navy blue as the lowest quartile values and bright blue as the highest quartile values. Individual cells containing fewer than ten observations are suppressed, in accordance with FERPA requirements; missing values do not indicate zero students. Alaska, Hawaii, and Puerto Rico are not shown, but each did receive students, though counts are not shown in accordance with FERPA requirements.

Transfer Patterns of the Fall 2015 Cohort

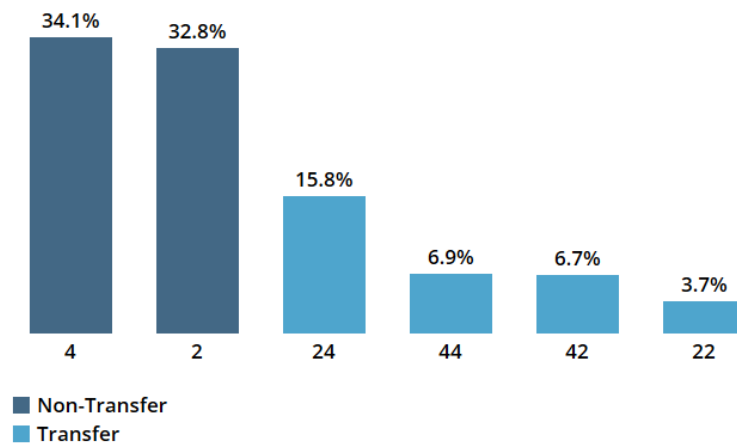
To further examine transfer behavior of the students in the fall 2015 cohort, this section provides data disaggregated by transfer pattern. A transfer pattern codes each sector (two-year or four-year) in which a student was enrolled, chronologically. For example, a student who began at a two-year institution then enrolled in a four-year institution student is coded as “24” transfer in this section; similarly, a student who began at a four-year institution then enrolled in a different four-year institution is coded as “44” transfer.

Returns to a previously attended institution are included in the full transfer pattern. The transfer pattern does not include information about when a student transferred, only the order of institutions attended. Using NSC data, these transfer patterns include non-public and out-of-state institutions in addition to Tennessee public institutions, allowing us to determine the full transfer pattern of a student. For example, “2424” is used for a student who began at a two-year community college, transferred to a four-year university, returned to the community college, then transferred to another four-year college or university.

There were 105 different transfer patterns within the fall 2015 cohort, which demonstrates the many pathways of transfer students. See **Appendix C** for a matrix of sending and receiving institutions for students who make a “24” transfer between Tennessee public institutions and **Appendix D** for students who make a “42” transfer between Tennessee public institutions. These appendices show common transfer patterns for students moving between in-state public institutions.

Figure 8 provides a look at the first two institutions attended by transfer and non-transfer students. Most students (66.9%) attended only one institution in the six years following initial enrollment and are considered non-transfer students. Transfer students generally performed a vertical transfer, moving either from a two-year institution to a four-year (“24”) or vice versa (“42”). More common among vertical transfer students were those students who started at a two-year institution and transferred to a four-year institution (“24”); this pattern is more common in the fall 2015 cohort (15.8%) than it was in the fall 2014 cohort (13.5%). A smaller number of students took advantage of horizontal transfer, or transfer from one institution to another institution in the same sector (“44” and “22”). Given that 73.3% of students in the cohort attended either one or two total institutions, examining transfer patterns by first two institutions captures most of the variation in transfer behavior. Students who attended more than two total institutions are categorized in this section according to the sectors of the first two institutions they attended.

Figure 8: First Two Institutions Attended by Fall 2015 Cohort

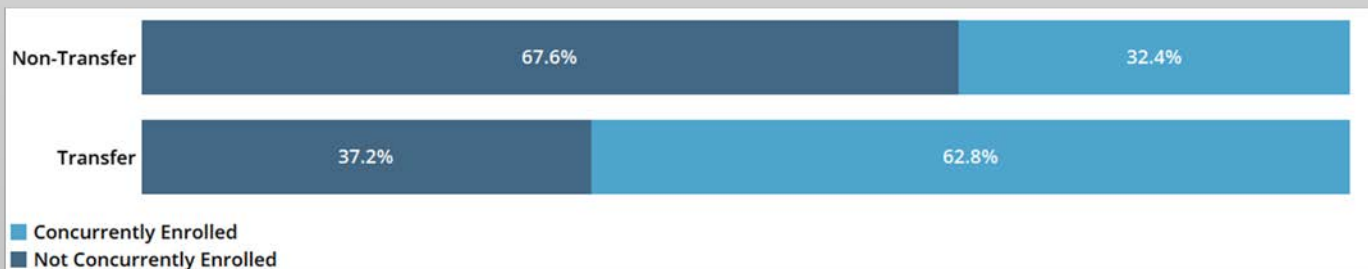


Summer Swirl and Concurrent Enrollment

Students transfer between institutions for a variety of reasons. In addition to vertical transfers, from a two-year institution to a four-year institution, or transfers due to institutional fit or change of educational plans, students may also use transfer strategically. Students may transfer between institutions to maximize their success in particular courses, to leverage winter or summer breaks to complete credits, or to take advantages of opportunities not offered at other institutions. When students take coursework at a different institution over a summer term, then continue enrollment at their original institution in the following fall, this behavior is known as “summer swirl”. Liu and Fay (2020) find that four-year students who enroll in limited numbers of credits at community colleges had higher numbers of credits earned, both overall and in STEM courses; higher bachelor’s degree attainment; and better employment outcomes than four-year students who never earned credits from a two-year college.

Utilizing the Student Tracker, National Student Clearinghouse (NSC) data allows us to track when a student leaves and later returns to the same institution, including instances of summer swirl. Additionally, we can see when a student enrolls concurrently at multiple institutions. This year’s report utilizes a series of rules to capture concurrent enrollment in the same term more accurately, to avoid categorizing this behavior as a transfer. Where a student was enrolled at multiple institutions in the same term, we used previous enrollments, enrollment intensity (i.e., part-time, full-time, etc.), and length of enrollment at both institutions to determine whether a student changed institutions. These improvements reduced the number of total institutions a student attended. With this improvement, all students with multiple enrollments at different institutions over the same dates were flagged as concurrently enrolled. Overall, 42.5% of students in the fall 2015 cohort were concurrently enrolled at some point in six years. Concurrent enrollment is much more common for transfer students, as seen in **Figure 9** below, with 62.8% of transfer students concurrently enrolling at least one term; by contrast, less than one-third of non-transfer students concurrently enroll.

Figure 9: Concurrent Enrollment by Transfer Status, Fall 2015 Cohort



For more information on summer swirl and additional trends in nationwide transfer, see Bobbitt, R., Causey, J., Kim, H., Lang, R., Ryu, M., and Shapiro, D. (Aug 2021), COVID-19 Transfer, Mobility, and Progress, Academic Year 2020-2021 Report, Herndon, VA: National Student Clearinghouse Research Center or <https://nscresearchcenter.org/transfer-mobility-and-progress/>. For research on strategic course taking, see Lui, V. and Fay, P. (June 2020), Does Taking a Few Courses at a Community College Improve the Baccalaureate, STEM, and Labor Market Outcomes of Four-Year College Students?, New York, NY: Columbia University Community College Research Center.

For transfer students in the fall 2015 cohort, the total number of institutions attended accounts for cases where a student returned to a previously attended institution (as opposed to the unique institutions counts shown in **Figure 5**). The distribution of total number of institutions attended for transfer students only is shown in **Figure 10**. Students attended as many as ten non-unique institutions. Students who returned to an institution are students whose total number of institutions attended is higher than their unique number of institutions attended. In the cohort, student “swirlers” represent 3.9% of students, or 11.9% of students who ever transfer.

Figure 10: Total Number of Institutions Attended, Fall 2015 Cohort Transfer Students

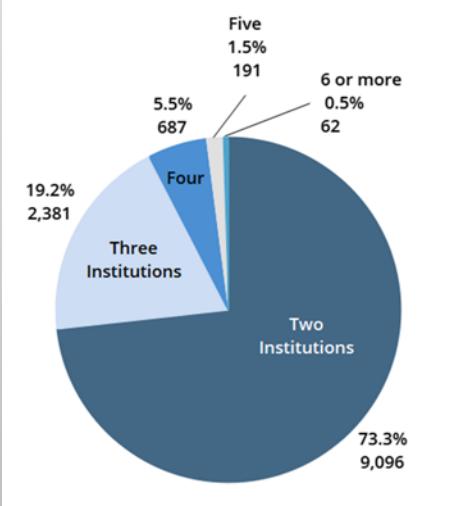
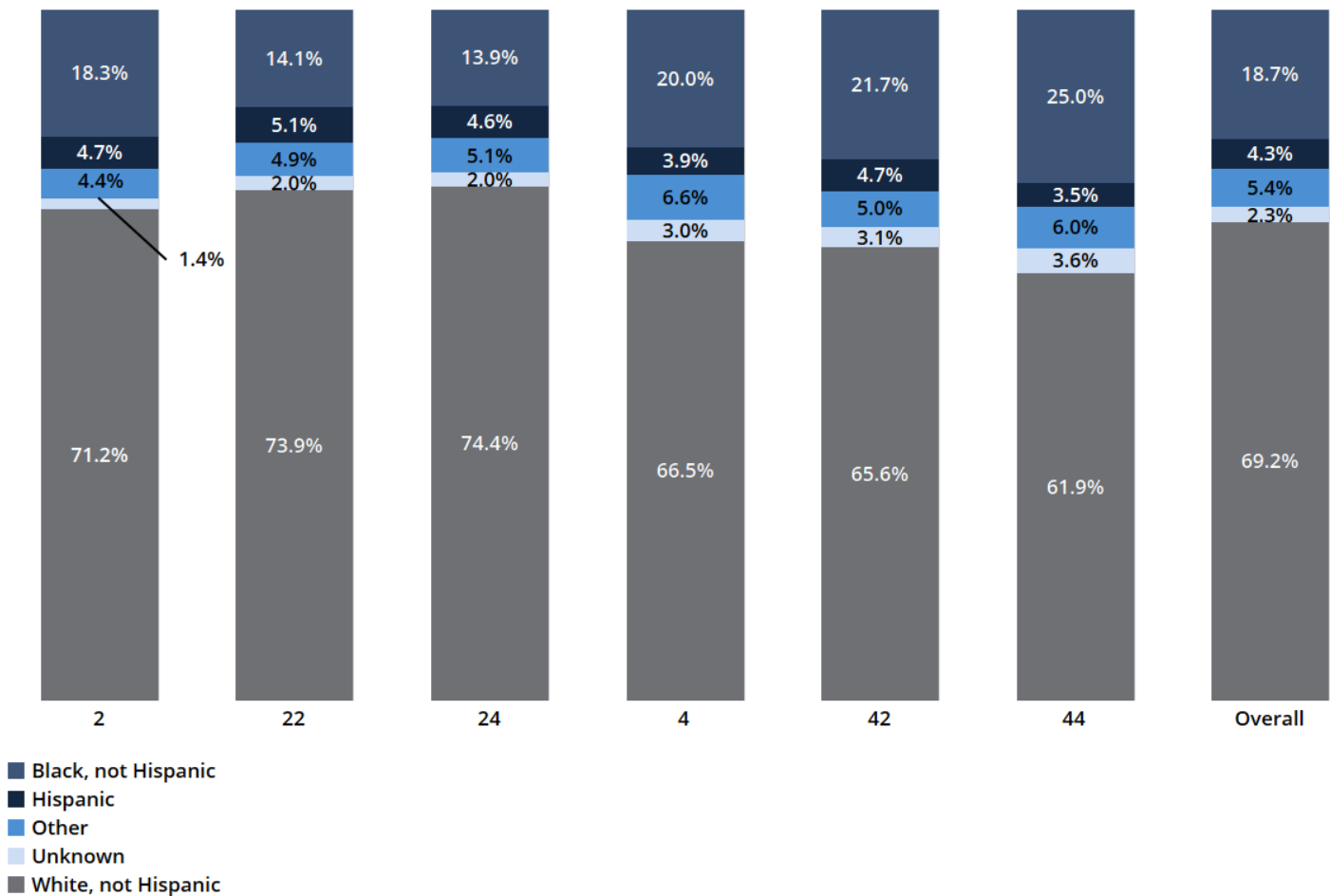


Figure 11 disaggregates the transfer patterns of the fall 2015 cohort by race. The distribution of racial demographics varies across transfer patterns. For example, students identified as “Black, non-Hispanic” comprise 18.7% of the overall sample but only 13.9% of students who completed a “24” transfer; they are over-represented among students who complete a “42” or “44” transfer.

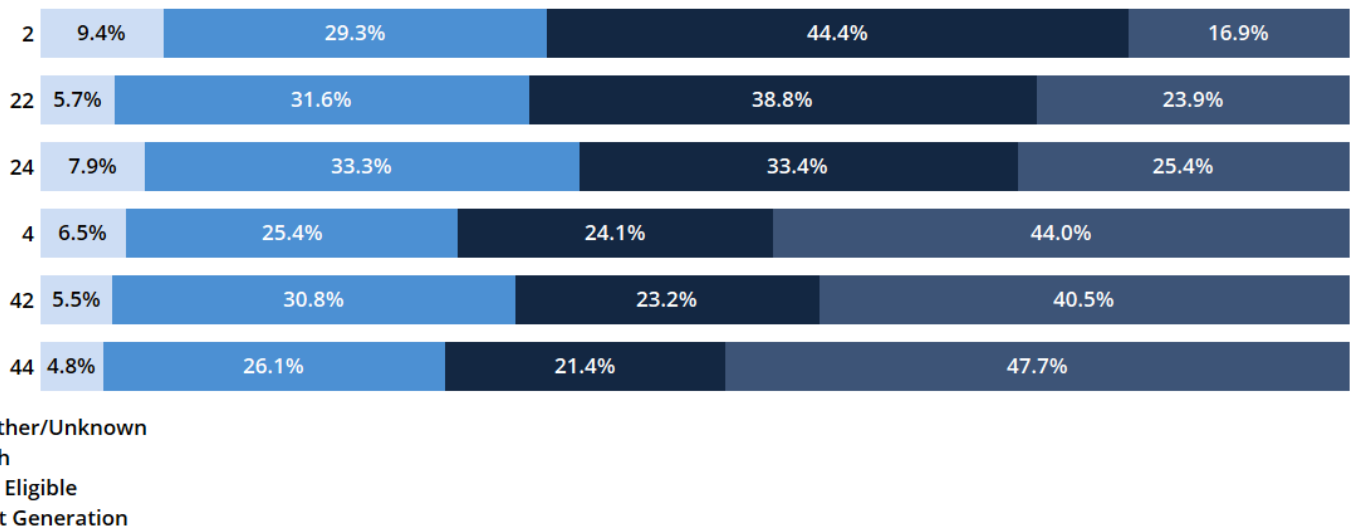
Figure 11: Demographics of Fall 2015 Cohort by First Two Transfer Pattern



Note: The “Other” race category includes Alaskan Native, American Indian, Asian or Pacific Islander, and Multiracial.

Figure 12 illustrates the proportion of students in each transfer pattern who are Pell eligible, first-generation, or both. Students who attended a two-year institution as their first enrollment are more likely to be Pell eligible, first-generation, or both than their four-year counterparts. Students who start at a community college and do not transfer are more likely to be Pell eligible, first-generation, or both than students who start in the same sector and do transfer, but that pattern does not hold for students who start at a four-year institution.

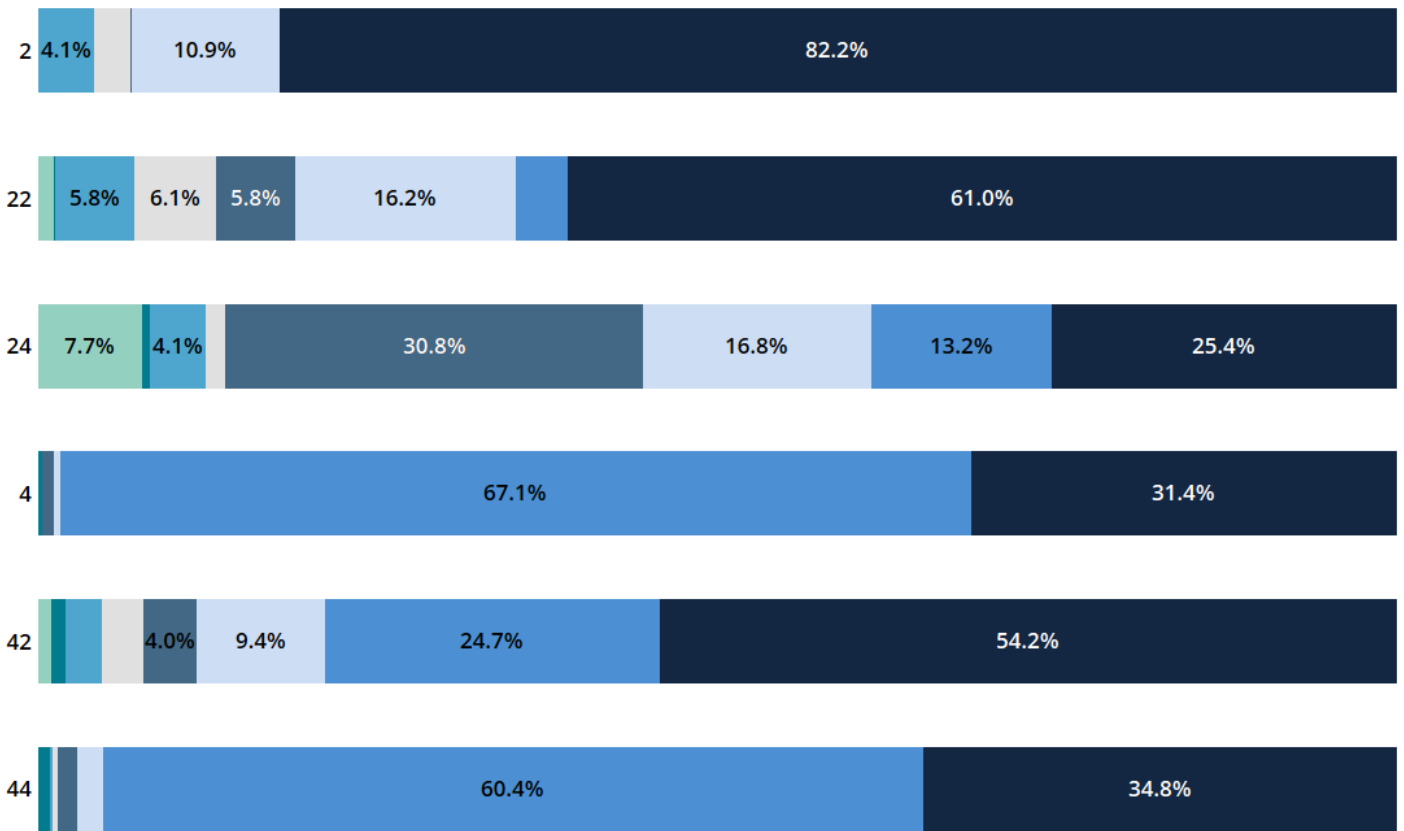
Figure 12: First-Generation and Pell Eligibility Statuses by First Two Transfer Pattern, Fall 2015 Cohort



Note: Pell eligibility describes any student who was eligible for the Pell grant at any point during the six-year period following initial enrollment. First-generation status is self-reported on the FAFSA by parent education level and describes any student who was categorized as first-generation at any point in the six-year period. Neither/Unknown describes a student who filed a FAFSA and did not meet either criteria or a student who did not file a FAFSA or for whom we do not have a FAFSA record (e.g., non-residents) at any point in the six-year period following initial enrollment. Students who did not file a FAFSA are classified as ineligible for the Pell grant and are not categorized as first-generation in this figure.

Figure 13 displays the percentage of students within each transfer pattern who earned a certificate/diploma, associate, or bachelor’s degree. Degree outcomes vary widely across transfer patterns. Only 17.8% of non-transfer students who began at a two-year institution earned a credential in the six years following enrollment, but 39.0% of students who transferred from one two-year institution to another (“22”) obtained an award. Students who transferred from one four-year institution to another (“44”) saw similar overall outcomes to non-transfer four-year students. Nearly half (45.8%) of students whose first two institutions were a four-year and then a two-year (“42”) earned a credential, lower than counterparts who started at a four-year and did not transfer, who have a 68.6% graduation rate. Students who utilized a “24” transfer had a diverse set of credentials within six years and were most likely of all transfer patterns to have obtained at least one award. Overall, completion is lower in the fall 2015 cohort (50.0%) than in the fall 2014 cohort (53.4%), but since the fall 2015 cohort is larger, this represents 18,757 students with awards compared to 17,603 students with awards in the fall 2014 cohort.

Figure 13: Degrees Earned by First Two Transfer Pattern, Fall 2015 Cohort



- No award
- Bachelor's
- Associate
- Associate and Bachelor's
- Certificate/Diploma
- Certificate/Diploma and Associate
- Certificate/Diploma and Bachelor's
- Certificate/Diploma, Associate, and Bachelor's

Note: Diplomas are a small portion of awards; in the fall 2015 cohort, 0.3% (n=94) of students obtained a diploma within six years of initial enrollment. Diplomas are presented here with certificates. A very small number of students (n=27) obtained both a diploma and a certificate; these students are counted only once in the "certificate/diploma" category. Additionally, NSC data shows students who have obtained an award with no additional details. Where possible, these students were matched with THECSIS data to fill in award information. The remaining students whose award details were unknown (n=120) were considered as "no award" in this figure and graduation rate calculations.

tnAchieves Transfer Pilot Program

The tnAchieves Transfer Pilot Program was started in 2021 to assist Tennessee Promise students in making the transfer from a two-year to a four-year institution. This program was highlighted in the 2021 Articulation and Transfer in Tennessee Higher Education report as a promising development to improving equitable access for all students to transfer opportunities.

A survey of incoming tnAchieves freshmen found that 65% of students intend to transfer from a community college to a four-year institution; however, the current tnAchieves transfer rate is 25%. This reveals a clear disconnect between student aspiration and reality. The tnAchieves Transfer Program Pilot identifies a random subset of these Tennessee Promise students who seek to transfer and provides high quality, proactive coaching to students leveraging Tennessee Transfer Pathways.

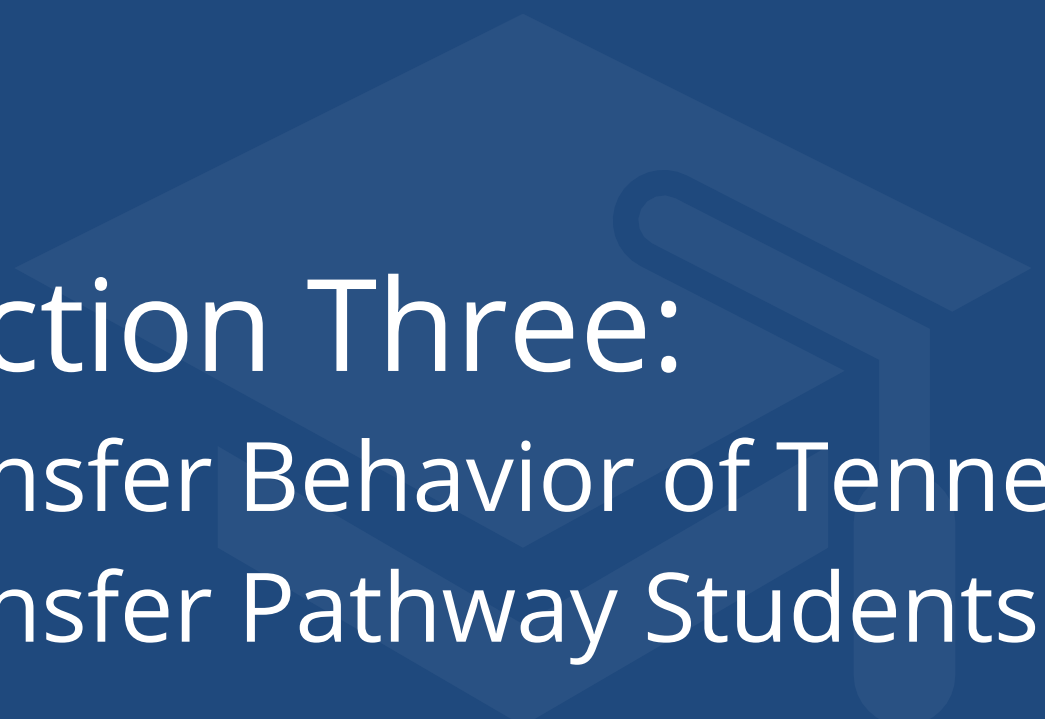
In partnership with Tennessee Higher Education Commission (THEC) and the State Collaborative on Reforming Education (SCORE) and building off its COMPLETE coaching model, tnAchieves launched the Transfer Program Pilot with three coaches focused on serving students in each grand division for a period of three years. Beginning in fall 2021, tnAchieves Transfer coaches proactively worked with 891 Tennessee Promise college sophomores who have indicated intent to transfer. The Transfer Program's goals are to retain more students in college, increase the likelihood of a student graduating from a community college, and ultimately increase the percentage of students enrolling at four-year institutions directly following associate degree completion.

It is currently too early to assess success metrics, but the pilot program cohort represents a diverse group of tnAchieves coaching participants:

- 61% are female
- 43% are Pell eligible
- 21% are non-white
- 31% reported first-generation status

Future reporting will provide success metrics of the pilot, including outcomes for students who ultimately do successfully transfer.

All data in this section is reported by tnAchieves; for more information, please find contact information at <https://tnachieves.org/about-us/contact/>.



Section Three:

Transfer Behavior of Tennessee Transfer Pathway Students

Tennessee Transfer Pathways

This section explores the transfer and success of students within the fall 2015 cohort who utilized a Tennessee Transfer Pathway (TTP) at any point during the six-year period following initial enrollment. Of the **37,514** students identified in the Student Tracker, National Student Clearinghouse (NSC) data, **8,224** students enrolled in a TTP at some point during the six-year period following initial enrollment. Throughout this section, these students are identified as “TTP Students” while the remaining **29,290** students are referred to as “Non-TTP Students”. By definition, all students who never enrolled at a Tennessee two-year public institution are “Non-TTP” students; TTPs are only offered at TBR community colleges and designed to transfer to all public and participating private four-year colleges in Tennessee.¹⁰

Tennessee Transfer Pathways are a creation of the Complete College Tennessee Act (2010) and are provided for in T.C.A. § 49-7-202 (r)(1-2), which states that THEC will “require all state institutions of higher education to collaborate and develop a transfer pathway for at least the fifty (50) undergraduate majors for which the demand from students is the highest and in those fields of study for which the development of a transfer pathway is feasible based on the nature of the field of study.” For a complete listing of Tennessee Transfer Pathways, see **Appendix E**.

What is a Tennessee Transfer Pathway?

According to the Tennessee Board of Regents, TTPs are advising tools. For community college students who plan to transfer to a Tennessee public university, or to select non-profit private colleges and universities in Tennessee, the TTP provides a guarantee that courses will transfer. TTPs are also an agreement between community colleges and four-year colleges and universities that the community college courses transferred satisfy major preparation requirements.¹¹

How do the pathways work?

Students who complete all courses on a Tennessee Transfer Pathway will earn an associate degree at the community college. Their transcript will show that the pathway has been followed, and the student will earn transfer credits accepted at the college or university toward completion of a particular major. If the student transfers to another Tennessee community college, courses taken on the pathway are also guaranteed to transfer.¹²

Table 3 exhibits the demographic characteristics of students in the fall 2015 cohort who participated in a TTP at any point in the six years following initial enrollment (not just in fall 2015) compared to students in the cohort who ever enrolled at a two-year institution but did not enroll in a TTP (n=14,193). TTP students

¹⁰ Due to discrepancies in student matching methodologies between THECSIS, TBR, and the Student Tracker, National Student Clearinghouse, a small number of students (n=58) were identified as having participated in a TTP despite no Student Tracker record of enrollment at a two-year institution. These observations have been dropped from all subsequent figures.

¹¹ Tennessee Transfer Pathway. (2014, September 26). Retrieved September 8, 2022, from <https://www.tbr.edu/initiatives/tennessee-transfer-pathway>

¹² Tennessee Transfer Pathway. (2014, September 26). Retrieved September 8, 2022, from <https://www.tbr.edu/initiatives/tennessee-transfer-pathway>

are nearly equally likely to be male or female, while two-year non-TTP students show a greater gender disparity. TTP students were less likely to be “Black, not Hispanic”, but slightly more likely to be in the “Hispanic” or “Other” race categories compared to their non-TTP counterparts. TTP students were nearly equally likely to be Pell eligible or identified as first-generation compared to two-year students who did not enroll in a TTP.

Table 3: Demographics of TTP Students in Fall 2015 Cohort

	Two-Year, TTP Students		Two-Year, Non-TTP Students		All Two-Year Students	
	Count	Percent	Count	Percent	Count	Percent
Gender						
Female	4,111	50.3%	8,368	59.0%	12,479	55.8%
Male	4,055	49.7%	5,824	41.0%	9,879	44.2%
Race						
Black, not Hispanic	1,187	14.5%	2,700	19.0%	3,887	17.4%
Hispanic	437	5.4%	608	4.3%	1,045	4.7%
Other	424	5.2%	628	4.4%	1,052	4.7%
Unknown	158	1.9%	242	1.7%	400	1.8%
White, not Hispanic	5,960	73.0%	10,015	70.6%	15,975	71.4%
Pell Eligible	5,702	69.8%	9,777	68.9%	15,479	69.2%
First-Generation	3,733	45.7%	6,743	47.5%	10,476	46.9%
Overall	8,166	100%	14,193	100%	22,359	100%

Notes: The “Other” race category includes Alaskan Native, American Indian, Asian or Pacific Islander, and Multiracial. Pell eligibility describes any student who was eligible for the Pell grant at any point during the six-year period following initial enrollment. First-generation status is self-reported on the FAFSA by parent education level and describes any student who was categorized as first-generation at any point in the six-year period. Students who did not file a FAFSA or for whom we do not have a FAFSA record (e.g., non-residents) are categorized as not eligible for the Pell grant and not first-generation in this report. This table is limited to students who ever enrolled at a two-year institution, but that two-year institution was not necessarily in Tennessee.

Students are categorized as TTP participants if they have any record of enrollment in a TTP at any point in the six-year period examined here. However, the number of terms enrolled in a TTP varies widely. **Figure 14** shows the distribution of the number of terms that students are found enrolled in a TTP within six years. Most students (28.9%) are only enrolled in a TTP for one term. Nearly one-fifth, 19.4%, remain enrolled in a TTP for five or more terms, longer than 100% of time to an associate degree, which is four terms. Prolonged TTP enrollment may indicate enrollment in summer terms or additional time taken to earn a degree.

Figure 14: TTP Participation, Number of Terms Enrolled, Fall 2015 Cohort

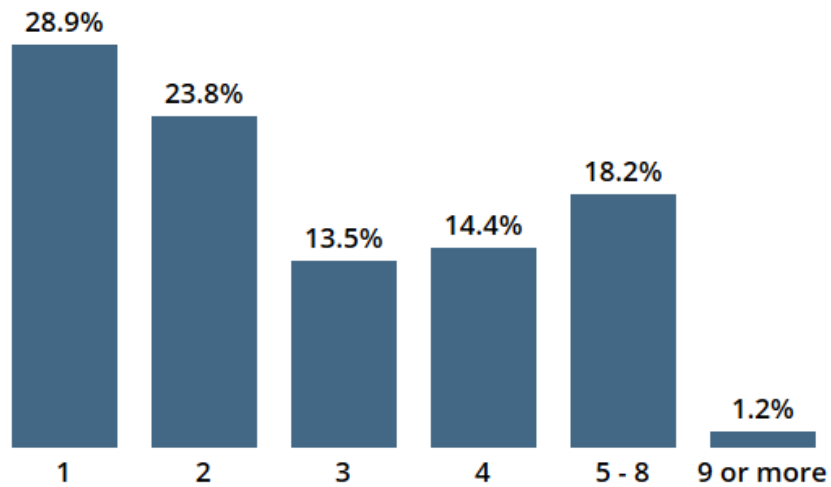


Figure 15 displays the overall transfer rates of students in the fall 2015 cohort who ever participated in a TTP (n=8,166). Half of TTP students (50.2%) transferred during the six-year period following initial enrollment. Additionally, TTP students were also more likely than the overall cohort to complete a transfer (see Figure 1).

Figure 15: Overall Transfer in Fall 2015 Cohort TTP Students



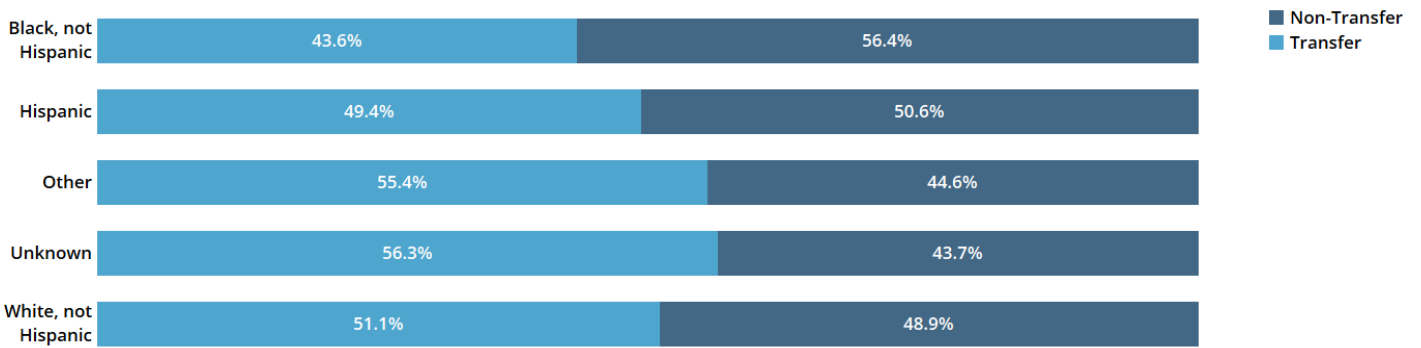
Figure 16 breaks down transfer of TTP students by gender. The gap between male and female transfer rates for TTP students is smaller than for the overall cohort (see **Figure 2**).

Figure 16: Fall 2015 Cohort TTP Transfer by Gender



Figure 17 compares the transfer rates of TTP students by race. “Black, not Hispanic” TTP participants are less likely to transfer than TTP participants in other race categories.

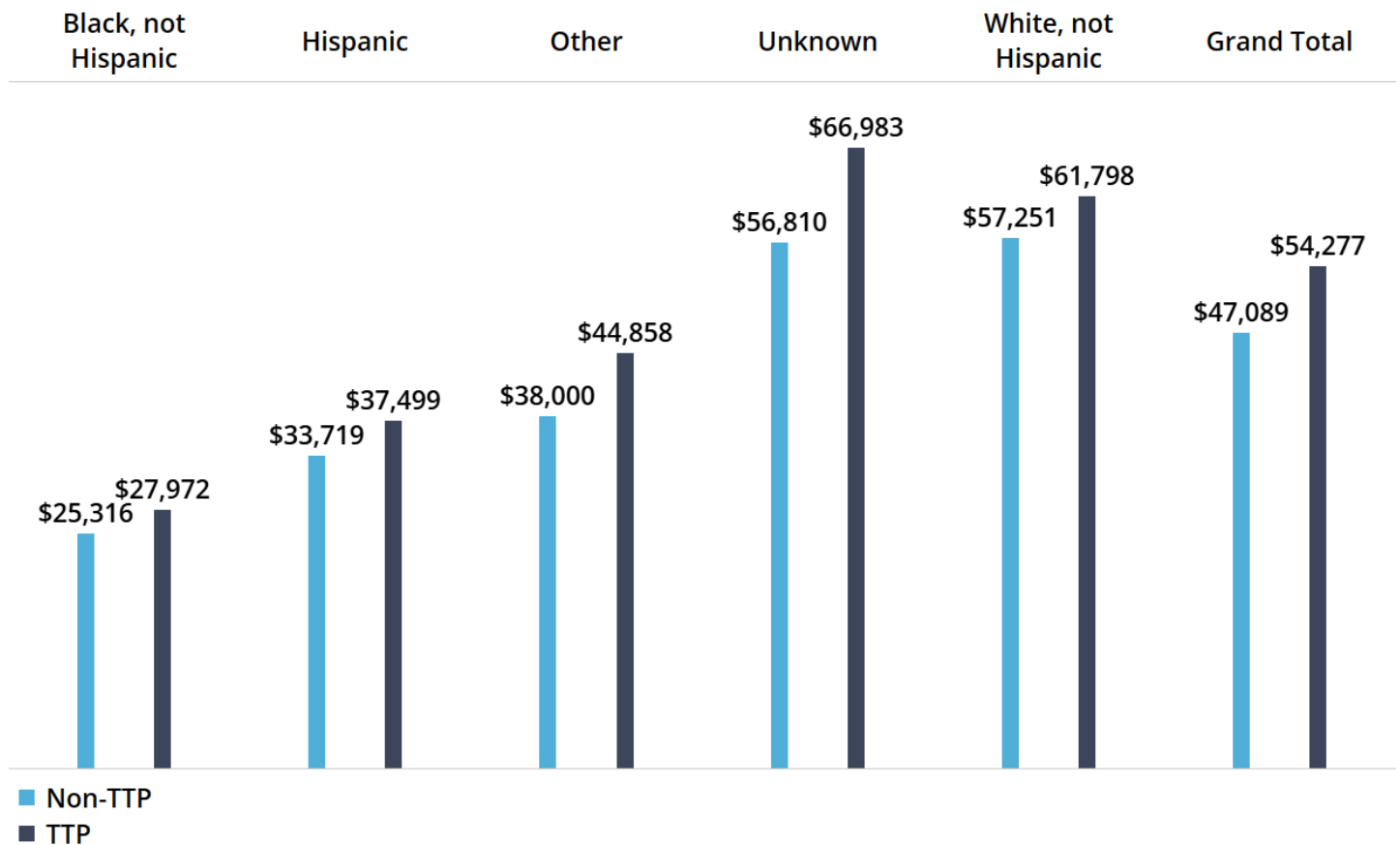
Figure 17: Fall 2015 Cohort TTP Transfer by Race



Note: The "Other" race category includes Alaskan Native, American Indian, Asian or Pacific Islander, and Multiracial.

Figure 18 disaggregates the median Adjusted Gross Income (AGI) in the students' first academic year (2015-16) by race and TTP enrollment. TTP students' economic backgrounds vary by race; however, the income gaps between TTP and non-TTP students are generally small, with TTP students from each racial group having slightly higher AGIs than their non-TTP counterparts.

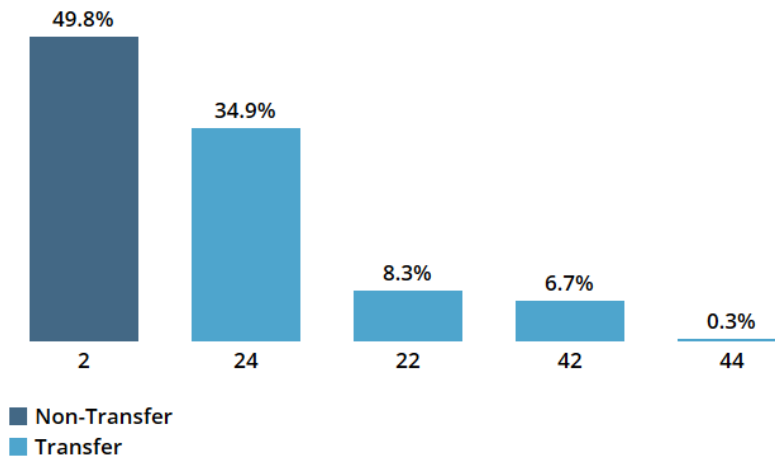
Figure 18: Median 2015-16 AGI of the Fall 2015 Two-Year Cohort by Race and TTP Status



Note: The "Other" race category includes Alaskan Native, American Indian, Asian or Pacific Islander, and Multiracial. By definition all students who never enrolled at a two-year are "Non-TTP" students. To provide a reasonable comparison group, this figure shows only "Non-TTP" students who ever enrolled at a two-year institution (n=14,193). AGI is sourced from the FAFSA, so students who did not file a FAFSA or for whom we do not have a FAFSA record (e.g., non-residents) are dropped from this figure.

Figure 19 displays the first two institutions attended by TTP students. Nearly half, 49.8%, of TTP students enrolled at a two-year institution and did not transfer during the six-year period following initial enrollment. 34.9% of all TTP students completed a “24” transfer as their first two institutions.

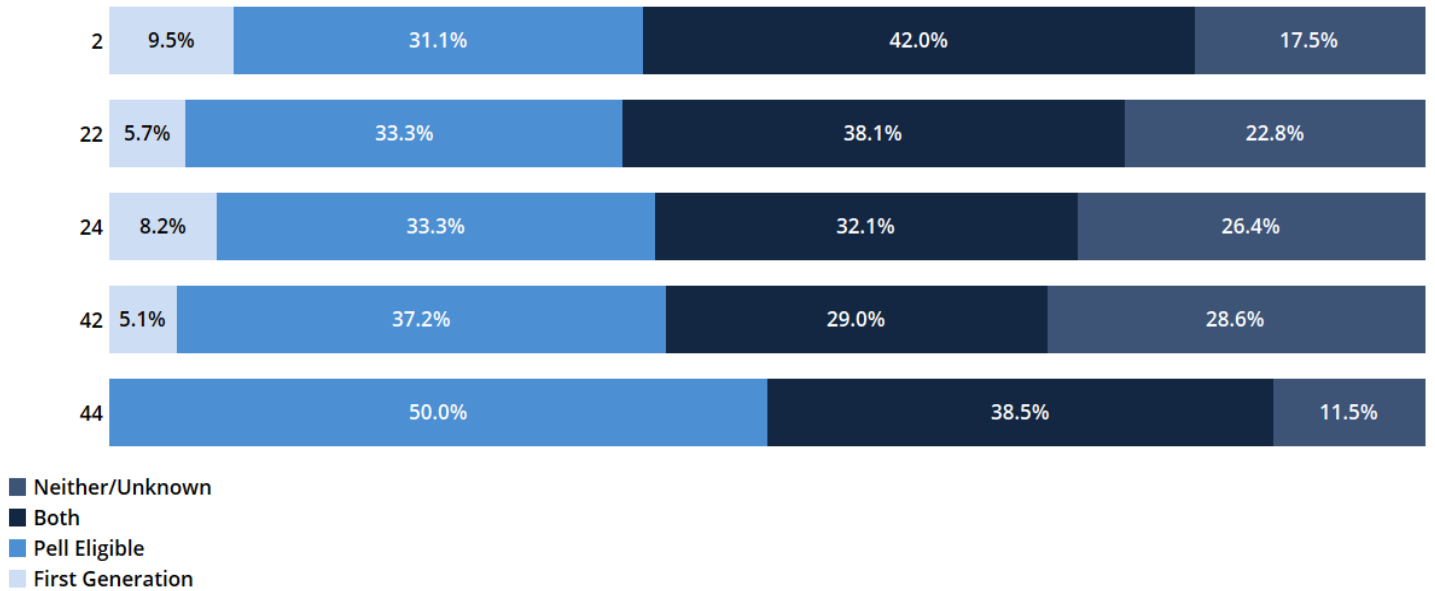
Figure 19: First Two Institutions Attended by TTP Students in the Fall 2015 Cohort



Note: Due to discrepancies in student matching methodologies between THECSIS, TBR, and the Student Tracker, National Student Clearinghouse, 58 students were identified as having participated in a TTP despite no Student Tracker record of enrollment at a two-year institution. These students have been removed from the graphic above. The remaining students in the “44” group (n=26) ultimately did enroll at a two-year institution, just not as one of their first two enrollments.

Figure 20 demonstrates the first-generation and Pell eligibility statuses of TTP students in the fall 2015 cohort by transfer pattern. First-generation and/or Pell eligible students are represented at lower rates among transfer TTP students than non-transfer TTP students, except for the very small “44” transfer group (n=26).

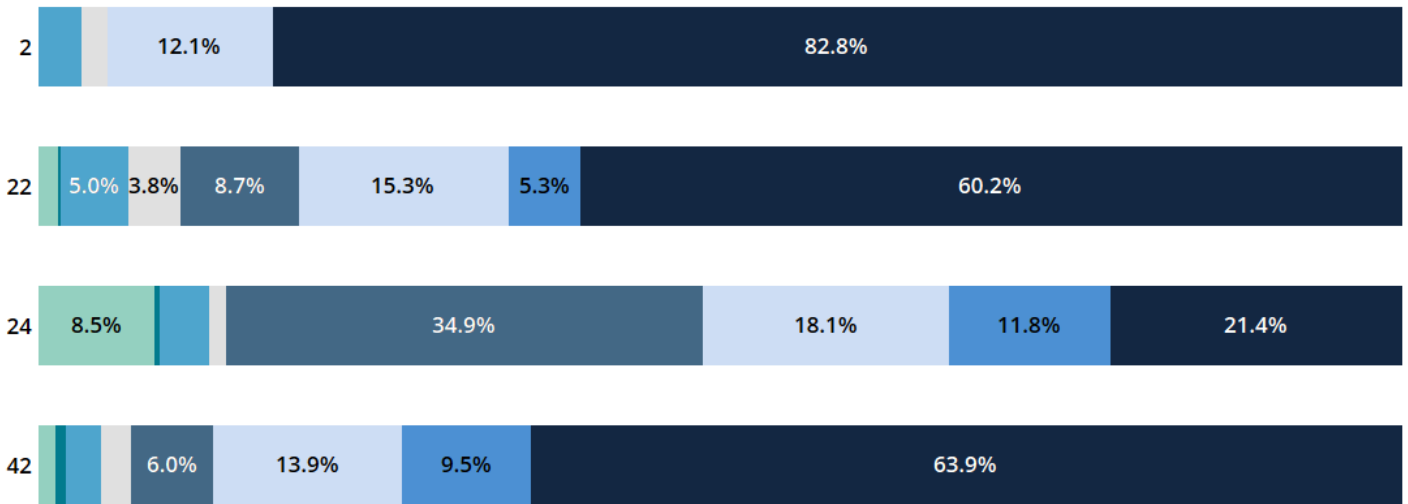
Figure 20: First-Generation and Pell Eligibility Statuses of Fall 2015 Cohort TTP by First Two Transfer Pattern



Note: Due to discrepancies in student matching methodologies between THECSIS, TBR, and the Student Tracker, National Student Clearinghouse, fifty-eight students were identified as having participated in a TTP despite no Student Tracker record of enrollment at a two-year institution. These students have been removed from the graphic above. The remaining students in the “44” group ultimately did enroll at a two-year institution, just not as one of their first two enrollments. We observe larger swings in the “44” group year-to-year due to the relatively small size of the “44” transfer group compared to other transfer patterns. Pell eligibility describes any student who was eligible for the Pell grant at any point during the six-year period following initial enrollment. First-generation status is self-reported on the FAFSA by reported parent education level and describes any student who was categorized as first-generation at any point in the six-year period. Neither/Unknown describes a student who filed a FAFSA and did not meet either criteria or a student who did not file a FAFSA or for whom we do not have a FAFSA record (e.g., non-residents) at any point in the six-year period following initial enrollment. Students who did not file a FAFSA are classified as ineligible for the Pell grant and are not categorized as first-generation in this figure.

Figure 21 shows the degrees earned within six years for TTP students within the fall 2015 first-time freshman cohort. TTP students in the fall 2015 cohort were more likely than the overall cohort to have earned both an associate and a bachelor’s degree six years after initial enrollment, with 16.5% of TTP participants obtaining both degrees compared to 7.1% of the full cohort. Students completing a “24” transfer were most likely of all transfer patterns to have an award after six years. For a complete listing of Tennessee Transfer Pathways and participation of fall 2015 cohort students in each, see **Appendix E**. See **Appendix F** for a list of TTP degrees awarded to the fall 2015 cohort.

Figure 21: Degrees Earned, Fall 2015 Cohort TTP Students by First Two Transfer Pattern



- No award
- Bachelor's
- Associate
- Associate and Bachelor's
- Certificate/Diploma
- Certificate/Diploma and Associate
- Certificate/Diploma and Bachelor's
- Certificate/Diploma, Associate, and Bachelor's

Note: Diplomas are a small portion of awards; in the fall 2015 cohort of TTP participants, 29 students obtained a diploma within six years of initial enrollment. Diplomas are presented here with certificates. A very small number of students (n=12) obtained both a diploma and a certificate; these students are counted only once in the "certificate/diploma" category. Additionally, NSC data shows students who have obtained an award with no additional details. Where possible, these students were matched with THECSIS data to fill in award information. The remaining students whose award details were unknown (n=21) were considered as "no award" in this figure and graduation rate calculations. Associate degrees earned are not necessarily Tennessee Transfer Pathways degrees (See **Appendix F** for TTP Awards). The "44" transfer group is suppressed here, in accordance with FERPA regulations.

Conclusion

This report continues the work of previous Articulation and Transfer reports by examining the demographics, transfer patterns, and degree outcomes of the fall 2015 first-time freshman cohort and presenting an update on the work of the Articulation and Transfer Council. The details shared in this report highlight important successes and areas for improvement in the transfer space for Tennessee students.

One such success is the work of the Articulation and Transfer Council, which is crucial to fostering transfer student success in our state. Increasing numbers of students are completing transfers between two-year and four-year institutions (**Figure 8**), highlighting the importance of credit articulation and the facilitation of reverse transfer degrees to ensure students get the degrees they have earned along their higher education journey. Additionally, the work of the tnAchieves Transfer Pilot Program (**pg. 26**) provides crucial support for students intending to transfer, which can impact the graduation rates of community college students at both the two-year and four-year level (**Figures 7 and 13**) and impact students' ability to meet their aspirations to transfer.

Recent research by Mesa and Soliz (2022) finds that students who successfully transfer from a public two-year institution to a public four-year institution in Tennessee are likely to have met with advisors, including advisors at the receiving institution, and show significant resilience in working through administrative barriers, misinformation, and other challenges associated with the transfer process. These challenges can include financing transfer to a four-year institution, navigating low-quality information about transfer policies, and persisting in self-advocacy to clear administrative hurdles.¹³ More needs to be done to support students who aspire to transfer and do not, as evidenced in aspiration and actual transfer gaps found by tnAchieves and echoed in Mesa and Soliz (2022) and the reality of transfer likelihood (**Figure 1**). Moreover, opportunities remain to improve degree completion for all students who transfer (**Figure 7**).

This report shows that the many paths Tennessee students take through higher education and the variation in terms of both the demographic makeup of students on that path and the outcomes those students achieve (**Figures 11, 12, and 13**). The fall 2015 cohort represents a larger cohort than previous years, thanks in part to the statewide implementation of Tennessee Promise. Enrolling more students is just the first step, though, to transfer student success. Future cohorts will be impacted by these statewide efforts, as well as by recent changes to the higher education environment created and necessitated by the COVID-19 pandemic. Nationally, research from the National Student Clearinghouse shows that transfer student enrollment¹⁴ declined by 13.5% from the 2019 academic year to the 2021 academic year. Transfer student enrollment at two-year institutions declined even more sharply, by 19.9%, echoing the overall

¹³ Mesa, H.F. & Soliz, A. (2022). How do students leverage resources and support networks to achieve transfer goals? Unpublished Manuscript, Vanderbilt University.

¹⁴ National Student Clearinghouse defines transfer students as that portion of all enrollments where students “previously were enrolled at a Title IV, degree-granting institution and subsequently enrolled in a different Title IV, degree-granting institution.”

declines in community college enrollment seen nationwide in recent years.¹⁵ These declines signal a lasting impact on the transfer pipeline; fewer students enrolled at community colleges mean fewer students who will be ready to transfer and earn additional credentials in the coming years. Increasing efforts to facilitate transfer student success is key to meeting Tennessee’s postsecondary educational goals as students become more mobile, face greater obstacles, and need quality credentials to succeed.

¹⁵ Causey, J., Gardner, A., Kim, H., Lee, S., Pevitz, A., Ryu, M., Scheetz, A., and Shapiro, D. (September 2022), COVID-19 Transfer, Mobility, and Progress, the 9th in the series, Herndon, VA: National Student Clearinghouse Research Center.

Appendix A: Tennessee Code Annotated § 49-7-202(r)

(r)

(1) The commission shall require all state institutions of higher education to collaborate and develop a transfer pathway for at least the fifty (50) undergraduate majors for which the demand from students is the highest and in those fields of study for which the development of a transfer pathway is feasible based on the nature of the field of study.

(2)

(A) A transfer pathway shall consist of sixty (60) hours of instruction that a student can transfer and apply toward the requirements for a bachelor's degree at a public institution that offers the transfer pathway. The sixty (60) hours of instruction in a transfer pathway shall consist of forty-one (41) hours of general education courses instruction and nineteen (19) hours of pre-major courses instruction, or elective courses instruction that count toward a major, as prescribed by the commission, which shall consider the views of chief academic officers and faculty senates of the respective campuses. Courses in a transfer pathway shall transfer and apply toward the requirements for graduation with a bachelor's degree at all public universities.

(B) An associate of science or associate of arts degree graduate from a Tennessee community college shall be deemed to have met all general education and university parallel core requirements for transfer to a Tennessee public university as a junior. Notwithstanding this subdivision (r)(2)(B), admission into a particular program, school, or college within a university, or into the University of Tennessee, Knoxville, shall remain competitive in accordance with generally applicable policies.

(C) The forty-one-hour lower division general education core common to all state colleges and universities shall be fully transferable as a block to, and satisfy the general education core of, any public community college or university. A completed subject category, for example, natural sciences or mathematics, within the forty-one-hour general education core shall also be fully transferable and satisfy that subject category of the general education core at any public community college or university.

(D) The nineteen-hour lower division AA/AS area of emphasis articulated to a baccalaureate major shall be universally transferable as a block satisfying lower division major requirements to any public university offering that degree program major.

(3) It is the legislative intent that community college students who wish to earn baccalaureate degrees in the state's public higher education system be provided with clear and effective information and directions that specify curricular paths to a degree. To meet the intent of this section, the commission, in consultation with the governing boards of all state institutions of higher education, shall develop, and the governing boards of all state institutions of higher education shall implement, the following:

(A) A common course numbering system, taking into consideration efforts already undertaken, within the community colleges to address the requirements of subdivision (r)(1); and

(B) Listings of course offerings that clearly identify courses that are not university parallel courses and therefore not designed to be transferable under subdivision (r)(1).

(4) This subsection (r) shall be fully implemented no later than the fall 2015 semester. Until this subsection (r) is fully implemented, prior to the beginning of each semester, the commission shall report to the chairs of the education and finance, ways and means committees of the senate and the chairs of the education administration and planning and finance, ways and means committees of the house of representatives on the progress made toward completion of the nineteen (19) pre-major course blocks provided in subdivision (r)(2)(D).

(5) The commission shall have ongoing responsibility to update and revise the plans implemented pursuant to this subsection (r) and report to the chairs of the education and finance, ways and means committees of the senate and the chairs of the education and finance, ways and means committees of the house of representatives no later than October 1 of each year on the progress made toward full articulation between all public institutions.

For full text of Tennessee Code Annotated, see <https://www.tncourts.gov/Tennessee%20Code>.

Appendix B: Articulation and Transfer Council 2020-2025 Membership

Name	Title	Affiliation
Maria Conley	Provost and Vice President for Academic Affairs	Austin Peay State University
Kimberly D. McCorkle	Provost and Senior Vice President for Academic Affairs	East Tennessee State University
Mark Byrnes	University Provost	Middle Tennessee State University
Robbie Melton	Interim Vice President for Academic Affairs	Tennessee State University
Lori Bruce	Provost and Vice President for Academic Affairs	Tennessee Technological University
Abby Parrill-Baker	Interim Provost	University of Memphis
Bernie Savarese	Acting Vice President for Academic Affairs and Student Success and Associate Vice President for Student Success	University of Tennessee System
Jerold L. Hale	Provost and Senior Vice Chancellor for Academic Affairs	University of Tennessee, Chattanooga
Cindy Russell	Vice Chancellor, Academic, Faculty and Student Affairs	University of Tennessee, Health Science Center
John Zomchick	Provost and Senior Vice Chancellor	University of Tennessee, Knoxville
Philip Acree Cavalier	Provost and Vice Chancellor for Academic Affairs	University of Tennessee, Martin
Judy Cheatham	Provost and Vice President for Academic Affairs	University of Tennessee, Southern
Jothany Reed	Vice Chancellor for Academic Affairs	Tennessee Board of Regents
Laura Cornick	Vice President	Tennessee Independent Colleges and Universities Association
Julie A. Roberts	Chief Academic Officer	Tennessee Higher Education Commission

Appendix C: "24" Students by Sending and Receiving Institutions, Fall 2015 Cohort

Sending Institution	APSU	ETSU	MTSU	TSU	TTU	UM	UTC	UTK	UTM	Total
Chattanooga State	<10	12	30	<10	17	<10	219	13	<10	304
Cleveland State	<10	13	16	-	14	-	62	20	<10	127
Columbia State	13	<10	136	<10	28	<10	27	22	18	257
Dyersburg State	<10	<10	<10	-	<10	41	<10	<10	44	111
Jackson State	<10	<10	17	<10	<10	78	<10	<10	81	208
Motlow State	11	<10	369	<10	90	<10	23	24	11	546
Nashville State	76	<10	77	45	32	<10	11	11	25	283
Northeast State	<10	316	<10	-	12	-	<10	15	<10	354
Pellissippi State	<10	64	36	-	41	<10	27	344	<10	523
Roane State	<10	36	17	-	126	-	<10	64	<10	254
Southwest	12	<10	23	<10	<10	302	<10	10	<10	372
Volunteer State	57	<10	103	19	96	<10	27	34	12	354
Walters State	<10	154	<10	-	18	-	<10	72	<10	264
Total	208	619	843	95	484	436	424	641	207	3,957

Note: Individual cells containing fewer than ten observations are suppressed, in accordance with FERPA requirements. University of Tennessee Southern and University of Tennessee Health Science Center are not included here. Martin Methodist College merged with the University of Tennessee System as UT Southern on July 1, 2021.

Appendix D: “42” Students by Sending and Receiving Institutions, Fall 2015 Cohort

Receiving Institution	APSU	ETSU	MTSU	TSU	TTU	UM	UTC	UTK	UTM	Total
Chattanooga State	<10	22	17	<10	10	<10	158	23	<10	253
Cleveland State	-	<10	-	-	<10	-	11	<10	<10	28
Columbia State	12	<10	27	<10	13	<10	46	77	26	208
Dyersburg State	<10	-	<10	<10	<10	18	<10	<10	15	48
Jackson State	<10	-	<10	<10	<10	<10	10	10	39	85
Motlow State	<10	<10	55	<10	16	<10	15	<10	-	104
Nashville State	45	11	43	33	11	<10	27	21	<10	204
Northeast State	<10	98	<10	-	<10	-	<10	10	-	121
Pellissippi State	<10	36	<10	<10	14	<10	21	182	<10	268
Roane State	-	12	<10	-	18	-	<10	22	-	58
Southwest	16	<10	41	38	<10	131	31	25	12	301
Volunteer State	27	11	21	<10	79	<10	26	21	<10	198
Walters State	<10	46	<10	0	<10	-	<10	31	-	99
Total	125	251	238	100	181	168	362	441	108	1,975

Note: Individual cells containing fewer than ten observations are suppressed, in accordance with FERPA requirements. University of Tennessee Southern and University of Tennessee Health Science Center are not included here. Martin Methodist College merged with the University of Tennessee System as UT Southern on July 1, 2021.

Appendix E: TTP Enrollment by Concentration, Fall 2015 Cohort

TTP Major Name	Count	Percent
Unknown	2,255	27.4%
Business Administration	1,052	12.8%
Psychology	470	5.7%
Criminal Justice	436	5.3%
Pre-Health Professions	412	5.0%
Biology	344	4.2%
Accounting	264	3.2%
Pre-Physical Therapy	209	2.5%
Computer Science	201	2.4%
Social Work	200	2.4%
Mass Communication	184	2.2%
Mechanical Engineering	178	2.2%
Exercise Science	164	2.0%
Art (Studio)	153	1.9%
History	138	1.7%
English	129	1.6%
Music	123	1.5%
Early Childhood Education (Pre K-3)	114	1.4%
Sociology	114	1.4%
Information Systems	107	1.3%
Chemistry	80	1.0%
Theatre Arts	65	0.8%
Economics*	64	0.8%
Pre-Occupational Therapy	58	0.7%
Electrical Engineering	57	0.7%
Marketing	54	0.7%
Political Science	53	0.6%
Civil Engineering	52	0.6%
Foreign Language	48	0.6%
Management	45	0.5%
Communication Studies**	39	0.5%
Math	39	0.5%
Finance	35	0.4%
Pre-Dental Hygiene	35	0.4%
Elementary Education (K-5)	34	0.4%
Special Education	26	0.3%
Physics	24	0.3%
Agriculture - Agricultural Business	21	0.3%
Agriculture - Plant and Soil Science	19	0.2%

TTP Major Name	Count	Percent
Agriculture - Animal Science	18	0.2%
Nutrition and Food Science	15	0.2%
Physical Education	15	0.2%
Sport and Leisure Management	15	0.2%
Kinesiology	14	0.2%
Engineering Technology	11	0.1%
Anthropology	<10	*
Family and Consumer Sciences	<10	*
Geography***	<10	*
Geosciences	<10	*
Imaging Sciences	<10	*
International Affairs	<10	*
Philosophy	<10	*
Pre-Clinical Laboratory Sciences	<10	*
Pre-Nursing****	<10	*
Secondary Education - English	<10	*
Secondary Education - Math	<10	*
Secondary Education - Social Studies	<10	*
Theatre Arts - Design-Tech	<10	*
Art	-	-
Theatre Arts - Performance	-	-
TOTAL	8,224	100%

Notes: All current TTPs are listed here, including those with no enrollments by students in the fall 2015 cohort. "Unknown" is a high share of TTP majors due to historical issues in TTP data tracking. Some TBR institutions do not collect data on the specific TTP in which a student is enrolled; TBR and THEC are making efforts to improve collection of this data. Individual cells containing fewer than ten observations are suppressed, in accordance with FERPA requirements. Due to discrepancies in student matching methodologies between THECSIS, TBR, and the Student Tracker, National Student Clearinghouse, fifty-eight students were identified as having participated in a TTP despite no Student Tracker record of enrollment at a two-year institution. These students are included in the table above.

* Includes students enrolled in Economics concentrations for specific institutions, which were phased out in November 2017.

** Renamed "Communication Studies" effective Fall 2020; includes "Speech Communication" students prior to Fall 2020.

*** Phased out by August 2019.

**** Phased out by November 2018.

Appendix F: TTP Awards by Concentration, Fall 2015 Cohort

TTP Award Name	Count	Percent
Business Administration	335	20.6%
Criminal Justice	159	9.8%
Accounting	130	8.0%
Psychology	126	7.8%
Mass Communication	93	5.7%
Social Work	79	4.9%
History	64	3.9%
Pre-Health Professions	49	3.0%
Sociology	45	2.8%
Exercise Science	42	2.6%
Biology	36	2.2%
Information Systems	36	2.2%
Mechanical Engineering	36	2.2%
Art (Studio)	33	2.0%
Computer Science	30	1.8%
English	30	1.8%
Music	27	1.7%
Political Science	24	1.5%
Foreign Language	20	1.2%
Pre-Physical Therapy	20	1.2%
Theatre Arts	19	1.2%
Unknown	17	1.0%
Marketing	15	0.9%
Finance	14	0.9%
Early Childhood Education (Pre K-3)	13	0.8%
Management	13	0.8%
Civil Engineering	12	0.7%
Chemistry	11	0.7%
Math	11	0.7%
Agriculture - Animal Science	10	0.6%
Agriculture - Plant and Soil Science	10	0.6%
Communication Studies*	10	0.6%
Agriculture - Agricultural Business	<10	*
Anthropology	<10	*
Economics**	<10	*
Electrical Engineering	<10	*
Elementary Education (K-5)	<10	*
Kinesiology	<10	*
Nutrition and Food Science	<10	*
Philosophy	<10	*

TTP Major Name	Count	Percent
Physical Education	<10	*
Physics	<10	*
Pre-Dental Hygiene	<10	*
Pre-Occupational Therapy	<10	*
Special Education	<10	*
Sport and Leisure Management	<10	*
Total	1,624	100.0%

Notes: Only TTPs with awards in the fall 2015 cohort are shown here. Individual cells containing fewer than ten observations are suppressed, in accordance with FERPA requirements. For some students (n=36), we do not have a record of their TTP enrollment, but do have record that they received a TTP award. Students identified as having earned a TTP award despite no Student Tracker record of enrollment at a two-year institution (n=4) are included in this table.

* Renamed "Communication Studies" effective Fall 2020; includes "Speech Communication" students prior to Fall 2020.

** Includes students enrolled in Economics concentrations for specific institutions, which were phased out in November 2017.

Institutional and System Abbreviations

APSU:	Austin Peay State University
CHSCC:	Chattanooga State Community College
CLSCC:	Cleveland State Community College
COSCC:	Columbia State Community College
DSCC:	Dyersburg State Community College
ETSU:	East Tennessee State University
JSCC:	Jackson State Community College
LGI:	Locally Governed Institution
MSCC:	Motlow State Community College
MTSU:	Middle Tennessee State University
NASCC:	Nashville State Community College
NESCC:	Northeast State Community College
PSCC:	Pellissippi State Community College
RSCC:	Roane State Community College
STCC:	Southwest Tennessee Community College
TSU:	Tennessee State University
TTU:	Tennessee Technological University
UM:	University of Memphis
UTC:	The University of Tennessee at Chattanooga
UTK:	The University of Tennessee, Knoxville
UTM:	The University of Tennessee at Martin
UTS:	The University of Tennessee Southern
UTHSC:	The University of Tennessee Health Science Center
VSCC:	Volunteer State Community College
WSCC:	Walters State Community College
TBR:	Tennessee Board of Regents
THEC:	Tennessee Higher Education Commission
TICUA:	Tennessee Independent Colleges and Universities Association
TCAT:	Tennessee College of Applied Technology
UT:	The University of Tennessee