# IR CORNER June 2025 Issue 10

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# Celebrating Impact Stories told through Data

QEP: Recharge

Increasing the percentage of collegeready FTIC students

Math Pathways

A reflection on math policies & practices including HB 2223

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## **Celebrating Impact:**

Stories told through Data

## **Holly Stovall**

As TCC celebrates its 60<sup>th</sup> anniversary, be inspired by TCC's impact on our community. In IR, we have the privilege of trying to quantify it and share a story told through numbers. From the thousands of college for kids or dual enrolled high school students whose early college experience at TCC correlated with higher college completion rates or the thousands of seniors who remained engaged in our county, TCC supported life-long learning.

Meet a Tarrant County resident; don't be too surprised if they attended TCC. Almost 150,000 have graduated from TCC since 1965, and, recently, of the approximately 28,000 graduates in Tarrant County (2023), about one-quarter were from TCC<sup>[1]</sup>. Further, the estimated total impact (2023-2024) of TCC was an added \$2.3 billion in income to the Tarrant County economy, or expressed differently, one out of every 55 jobs in Tarrant County was supported by the activities of TCC and its students<sup>[2]</sup>.

In this issue, we add a few more chapters to the "TCC novel" that's still being written. We examine the results of changes in policies and practices in math education. We present findings from a student survey regarding life factors (such as work, financial anxiety, health anxiety, home environment) and show usage of TCC student services meant to provide resources. We conduct a course sequence analysis and research whether dual enrolled students are starting college earlier. Lastly, we take an early look at TCC's quality enhancement plan.

As IR commemorates its own milestone with the release of this 10<sup>th</sup> issue, we eagerly await enumerating the successes of TCC's next vision, Trailblazing 2030, and boldly blazing new data paths along the way.

[1] Economic Overview – Lightcast Q2 Data Set

[2] Economic Impact Study conducted by Lightcast

# insp**IR**e

*"Live as if you were to die tomorrow. Learn as if you were to live forever."* 

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# **TCC's Impact: By the Numbers**

Since 1965, TCC has served over 1.2 million students and has conferred almost 180,000 degrees and certificates. In 2023-2024, an estimated 1 in 28 Tarrant County residents attended TCC.

## Among the Top in the Nation:

Using the past years of IPEDS data:

- TCC ranks among the 25 largest institutions in the nation based on annual headcount.
- TCC serves more undergraduate students annually than all other Tarrant County area schools combined.
- TCC ranks among the top 10 in the nation based on Associate degrees conferred.



## **Math Pathways**

A reflection on math policies & practices including HB 2223

## **Overview**

Historically considered a "gateway" subject area, the math pathway was affected by several major policies and practices over the last decade or so.

- TCC introduced a non-algebraic math pathway option for students in non-STEM majors who might benefit from quantitative reasoning or statistics.
- The TSI test with associated "college-ready" scores for college algebra was implemented in 2013 and later redesigned with the TSI2 test launching in 2021.
- House Bill 2223 mandated the use of a co-requisite model beginning in Fall 2018. Thus, "stand-alone" (sequential) developmental math courses were phased out over the next couple of years.

The aim of this article is to explore data to assess the impact of the changes.

## **Trends**

The percentage of FTIC students who entered TSI Met in math has markedly decreased over the past decade from about 53% for the 2014FL cohort to 29% for the 2024FL cohort. The recent decline could be a lingering result of the pandemic. Region 11: Fort Worth STAAR test data<sup>[1]</sup> indicated that for *all grades mathematics* about 50% of students tested at *meets grade level or above* from 2017 to 2019. That percentage dropped to 39% in 2021 and has only recovered to near 45% since 2022.

While the percentage of FTIC students who entered TSI met in Math drastically decreased recently, the percentage who entered TSI liable and became TSI met by then end of their first year increased from about 22% for the 2014FL cohort to about 34% for the 2023FL cohort. Thus, TCC has helped a larger portion of FTIC students become "college-ready" in math. Interestingly, the timing of this increase aligns with the phasing in of the co-req model (HB 2223), which could be an indicator that this legislation fostered an accelerated math pathway.

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In addition, the percentage of FTIC students who completed a college level math course by the end of their first year increased from about 30% for the 2014FL cohort to about 48% for the 2023FL cohort. Examination of the first college level math course completed showed the integration of the non-algebraic pathway. Among FTIC students who completed a college level math course in their first year, a larger portion completed quantitative reasoning or statistics. For the 2014FL cohort who completed a college level math in their first year, about 80% completed college algebra as their first year, about 46% completed college level math in their first year, about 46% completed college algebra as their first college level math course.

[1] TEA TAPR reports



#### First College Level Course Completed for FTIC Students who Completed a College Level Math Course in First Year



## **Gateway to College Completion**

FTIC students who completed a college level math course by the end of their first year were over three times more likely to complete a degree/certificate from any higher ed institution in four years than FTIC students who did not complete a college level math by the end of their first year.

Moreover, this substantial gap in graduation rates remained even after five and six years.

Source: Enrollment by Term

#### Graduated with Degree/Certificate from any Higher Ed Institution (2014 to 2022 Fall FTIC Cohorts)

• • • • FTIC Students who Did Not Complete College Level Math by end of First Year FTIC Students who Completed College Level Math by end of First Year 56% 48% 38% 27% 19% 15% 12% 11% 7% 3% 3 Years 6 Years 2 Years 4 Years 5 Years

## College Algebra (MATH-1314) First Attempt

Other research showed that of the 7,351 students who took a **MATH-1332 co req** from 2021FL to 2023FL, 4,000 (54%) successfully completed (A,B,C,CR). Of these 4,000 students, **13% took a MATH-1314 co req within one year**. Of the 1,701 students who took a **MATH-1342 co req** from 2021FL to 2023FL, 828 (49%) successfully completed (A,B,C,CR). Of these 828 students, **8% took a MATH-1314 co req within one year**.

## Based on students whose first attempt in MATH-1314 was between 2021FL and 2024FL:

Students who took MATH-1314 as a stand-alone section and had not completed (A, B, C, D) a dev ed course prior had the highest success rate (65%). Since these students started college ready, there still seems to be an association to initial college readiness (TSI score).



#### Success Rate (A,B,C,CR) on First MATH-1314 Attempt

Prior completion of dev ed includes older courses such as MATH-0362

Lastly, about **12%** of students who took **MATH-1314** for the first time as a **stand-alone** section later **repeated** the course and had about a **51% success rate** (A,B,C,CR) on their second attempt. Comparatively, about **15%** of students who took **MATH-1314** for the first time as a **co-req** section later **repeated** the course and had about a **44% success rate** (A,B,C,CR) on their second attempt.

# **QEP: RECHARGE**

Increasing the percentage of college-ready FTIC students



## **Overview**

The purpose of the Quality Enhancement Plan (QEP) for Tarrant County College is to improve the percentage of First Time In College (FTIC) students who enter TSI-liable and become TSI met within their first year of college.

One strategy to achieve this goal is Career Pathway Presentations in STSC-0111 courses. As part of the course, students take a pre-assessment and a postassessment to measure their understanding of Career Pathways.

The aim of this article is to explore the 2024FL FTIC STSC-0111 pre and post data to assess the impact of these presentations.

## **Pre and Post Assessments**

Students in STSC-0111 courses took an assessment at the start of the course to assess their understanding of the role of Career Pathways and the resources available to them and another assessment at the end of the course. A total of 497 FTIC students enrolled in an STSC-0111 course completed both the pre and post assessments during the 2024FL term with valid IDs.

Knowledge of Career Pathways increased from the pre-assessment to the post-assessment, as did confidence in their chosen Career Pathway. (N=497)

|  | Pre-<br>Assessment | Post-<br>Assessment |
|--|--------------------|---------------------|
| Do you know what<br>Career Pathways are at<br>TCC? (Yes)                       | 53%                | 88%                 |
| How confident are you in<br>your chosen Career<br>Pathway? (Very<br>confident) | 54%                | 63%                 |

Overall, there were high levels of agreement for each statement about Career Pathways. Additionally, the percentage of respondents who *strongly agreed* or *agreed* increased for each statement from the pre-assessment to the post assessment. (N=497)

|  | Pre-<br>Assessment | Post-<br>Assessment |
|--|--------------------|---------------------|
| I understand the<br>purpose of selecting a<br>Career Pathway.  | 95%                | 95%                 |
| I know what TCC<br>resources are available<br>to support me along my<br>Career Pathway.                | 82%                | 93%                 |
| I know how to access<br>the available resources<br>at TCC to support me<br>along my Career<br>Pathway. | 71%                | 89%                 |

An index was created using the maximum score of the three assessment items to examine differences in success, retention, and TSI status.

- Low knowledge bottom 25% of max scores
- Some knowledge 26%-50% of max scores
- High knowledge top 50% of max scores

All 2024FL FTIC were also included as a comparison group to the index groups.

#### **Course Success**

Course success rates were similar across groups but did trend upward across the knowledge index groupings. Success rates were higher for STSC-0111 respondents compared to all 2024FL FTIC.



Note: Respondents may have been enrolled in STSC-0111 for several weeks (i.e., 4-8 weeks) to complete both the pre and post assessments. This sub group could have higher success than the overall FTIC cohort since they continued in their coursework (e.g., didn't withdraw). Excludes credit type N and missing grades.

## Retention

There were no substantial differences in retention across the knowledge index with overall FL to SP retention for respondents being 88%. (N=497) FL to SP retention for all 2024FL FTIC was 79%.

## **TSI Status**

Most respondents were TSI-Liable at the start of the term, which is why the QEP chose to focus on STSC-0111 courses as part of their strategy for improvement. While there were improvements for all groups across the knowledge index, a larger percentage of Some knowledge index and High knowledge index were TSI Met at the end of the term compared to Low knowledge index. (N=497)

## **Future Research**

As we are less than one year into the QEP, there is a lot to still learn about the impact of the strategies that are being implemented. In addition to the STSC-0111 pre and post assessments, QEP strategies also include TSI intervention through pre-orientation workshops, faculty panels at New Student Trailblazer Orientation, as well as faculty mentoring. Data collection from these efforts can be integrated with STSC-0111 pre and post assessments to create a fuller picture of the FTIC TSI-Liable Student journey.



## **Student Success Outcomes**

The QEP metrics include FL to FL retention, early registration for Spring term, and TSI compliance by end of the first year for those who entered TSI Liable. The 2024FL FTIC cohort is Year 1 of the QEP, and data collection for that cohort is ongoing. In addition to the QEP metrics identified, Institutional Research has also examined some potential early indicators including TSI compliance by end of the first term for those who entered TSI Liable and FL to SP retention. The current trends show movement in the right direction for Year 1.

|            |                        |                             |                       | Degree Seeking FTIC                                  |                    |             |   |                       |  |
|------------|------------------------|-----------------------------|-----------------------|--|--------------------|-------------|---|-----------------------|--|
|            |                        |                             |                       |  | <b>QEP</b> Metrics |             | Early Indicators                                    |                       |  |
|            | FTIC<br>Cohort<br>Year | DS<br>FTIC<br>Head<br>Count | FTIC<br>Head<br>Count | FL to FL<br>Registration<br>for Spring<br>First Year |                    |             | TSI<br>Compliant<br>by End of<br>First Fall<br>Term | FL to SP<br>Retention |  |
|            | GOAL 202               | 26 FL FTIC                  | Cohort                | <b>60</b> %  | 54%                | <b>32</b> % |   |                       |  |
| HISTORICAL | 2021FL                 | 2,798                       | 5,228                 | 61%  | 50%                | 27%         | 12%   | 78%                   |  |
| HISTORICAL | 2022FL                 | 3,549                       | 6,520                 | 57%  | 49%                | 25%         | 12%   | 74%                   |  |
| BASELINE   | 2023FL                 | 3,746                       | 6,622                 | 58%  | 52%                | 30%         | 15%   | 75%                   |  |
| YEAR 1     | 2024FL                 | 3,773                       | 6,682                 | -  | 62%                | -           | 22%   | 76%                   |  |

## Looking Beyond TCC:

Life Factors and Career Advising Survey

## **Overview**

Before enrolling in an online course at TCC, a student must take the Online Readiness Assessment. One section, called Life Factors, is comprised of questions regarding non-academic factors such as work, financial anxiety, health anxiety, home environment, etc. The 20 questions in this section are mapped to 5 sub-scales: time, place, reason, resources, and skills.

This article presents the results of the Life Factors survey for over **41,500 students** who took the assessment between January 2024 and May 2025.

Note that since students took this survey as part of the process to enroll in an online course, online students were likely more represented in the results, so findings might not generalize to all students.

#### Time

Almost two-thirds of respondents reported working some hours with 15% working full-time (40 or more hours per week), and about one-half reported spending time on required, non-work responsibilities (e.g. caring for a sick parent or coaching a child's team). Only about one in five respondents reported spending no time working and no time on non-work responsibilities.

Average Weekly Time Spent (in Hours)



Overall, about **7%** were **somewhat or very concerned** about **not having enough time for school**. Interestingly, the average time spent on school for those with work or non-work responsibilities was only two hours less than those without work or non-work responsibilities; however, they were about twice as likely to be *somewhat* or *very concerned* about not having enough time for school.

#### Place

About 94% of respondents were *not concerned* or *definitely not concerned* about having a specific place to work on course work.



Roughly 8 in 10 indicated primarily working on school activities at their home.



Roughly 2 in 10 indicated primarily working on school activities on a school's campus.

While few reported concern about a place for working on course work, almost 60% reported distractions in the space where they would primarily be working on schoolwork.

#### Level of Distraction in Space for Schoolwork



- No distractions: 38%
- Few Distractions: 47%
- Some distractions: 10%
- Many distractions: 1%
- Undecided: 3%

Those with work or non-work responsibilities were about 1.2 times as likely to report distractions.

#### Reason

Overwhelmingly, respondents had a strong commitment to going to college.

- 98% had a good or very strong reason for going to school.
  92% were fairly sure or confident that going to school will benefit them.
  98% was somewhat true or completely true that they were committed to their educational goals and would do what it took to attain them agreed or strongly agreed that of all things that
- **95%** they could be doing in this phase of their life, going to college was one of the top priorities.

These sentiments did not seem to differ between those who had work or non-work responsibilities and those who didn't.

## Resources

Respondents seemed most concerned about their financial ability to go to school.



## Skills

Almost 60% of respondents believed that in relation to the general population they were *considerably above average* (in the top 20%) or *extremely above average* (in the top 5%). This belief did not differ markedly between those who had work or non-work responsibilities and those who didn't. However, respondents with work or non-work responsibilities reported lower grades in prior schoolwork and were about twice as likely to have withdrawn in the past.

## **Correlation with Mean GPA**

About 14,000 respondents who completed the life factors survey in 2024 were enrolled in Fall 2024. There was a strong correlation between reported past grades and mean Fall 2024 GPA. In addition, those with high concern regarding time commitments, finances, health, or support had a lower mean GPA, and those who didn't have a reason to go to school or were not committed had a lower mean GPA.





## Conclusion

Most respondents (roughly 80%) had work or non-work responsibilities; however, these respondents still devoted a similar number of hours to school, on average, as those who were solely students even though they were more concerned about not having enough time for school. Overwhelming, respondents were not concerned about having a place to work on school activities, but about one in five would do so on a school campus. Respondents placed a high value on college and had a strong commitment to their educational goals. In terms of resources, respondents were most anxious about their financial ability to go to school with those who had work or non-work responsibilities about twice as anxious. Lastly. respondents with work or non-work responsibilities reported lower grades and more withdrawals in prior schoolwork.



## **Course Sequences**

Do students continue with same faculty, same campus?

## **Overview**

Tarrant County College offers a variety of courses which require *pre-requisite* conditions be met before students can enroll in a subsequent course. As examples, in TCC's core curriculum, there are *six* sequences in higher enrollment courses that require another course, or multiple courses, to be completed before students can enroll in the subsequent course within the same subject:

| First<br>Course(s)     | Pre-requisite<br>Condition    | Second<br>Course |
|------------------------|-------------------------------|------------------|
| ENGL-1301              | Complete<br>(A,B,C, D, or CR) | ENGL-1302        |
| ENGL-1301<br>ENGL-1302 | Complete<br>(A,B,C, D, or CR) | ENGL-2322        |
| MATH-1314              | Success<br>(A,B,C, or CR)     | MATH-1316        |
| MATH-2412              | Success<br>(A,B,C, or CR)     | MATH-2413        |
| BIOL-1406              | Complete<br>(A,B,C, D, or CR) | BIOL-1407        |
| BIOL-2401              | Complete<br>(A,B,C, D, or CR) | BIOL-2402        |

This article examines students who enrolled in all courses of a given sequence above between 2016FL and 2025SP at TCC. Results presented show the time between courses and whether students changed campus/faculty for the second course in the sequence, and the respective success rates across these groups.

## Considerations

Note that this analysis **does not** take into consideration <u>transfer courses</u> or any <u>credit by exam</u> exemptions that students may have completed and applied to their official transcript at TCC. These factors and others could lead to instances where students are completing courses **Out of Sequence**.

| 2016FL-2025SP / Total UG Headcount: 275,726 |        |     |  |  |  |  |  |  |
|---|--------|-----|--|--|--|--|--|--|
| Course Sequence Headcount % of Total        |        |     |  |  |  |  |  |  |
| ENGL-1301 to ENGL-1302                      | 76,123 | 28% |  |  |  |  |  |  |
| ENGL-1301/02 to ENGL-2322                   | 13,492 | 5%  |  |  |  |  |  |  |
| MATH-1314 to MATH-1316                      | 2,508  | 1%  |  |  |  |  |  |  |
| MATH-2412 to MATH-2413                      | 7,336  | 3%  |  |  |  |  |  |  |
| BIOL-1406 to BIOL-1407                      | 4,676  | 2%  |  |  |  |  |  |  |
| BIOL-2401 to BIOL-2402                      | 17,925 | 7%  |  |  |  |  |  |  |

Headcount excludes missing grades.

- Around **28%** of all UG students who enrolled in courses between 2016FL and 2025SP enrolled in **both** ENGL-1301 and ENGL-1302. (*N=275,726*)
- Only 1% of all UG students enrolled in both MATH-1314 and MATH-1316 despite 18% of all students successfully completing (A, B, C or CR) MATH-1314 during the same period. (N=275,726)

## **Time between Courses**

Time between courses was calculated based on the completion of the first pre-requisite course and initial enrollment in the second course of each sequence:

First Course <u>First</u> <u>Completion/Success</u> For the first course in a sequence, the term used was the first attempt where a student completed the course

## **Second Course**

## First Attempt

For the second course in a sequence, the term used was the very first attempt.

While students could complete a course sequence in the same term due to back-to-back enrollments across two shorter sessions offered in either 8-week or summer sessions, it was most common for students to attempt the second course within one to three terms (about a year) after completing the first course.



#### More than 3 terms

**NOTE:** For the ENGL-1301/1302 to ENGL-2322 sequence, the ENGL-1302 first <u>completed</u> term was used.

- At least **two out of three** students enrolled in the second course *within 1 to 3 terms*, or one Academic Year (AY), across all six course sequences.
- Around **11%** of students completed both ENGL-1301 and ENGL-1302 in the same term.
- Nearly **25%** of students who completed MATH-1314 enrolled in MATH-1316 more than *three terms later*.

Students who completed any course sequence in the *Same Term* had a second course success rate (A, B, C, CR) of **90%**, compared to **80%** of those that completed the second course *Between 1 to 3 Terms*, and **70%** for those completing the second course *More Than 3 Terms* after the first. This result could be related to the student profile of those who choose to take a sequence in the same term; for example, they could be students returning from a fouryear school to take courses in the summer.

## **Campus Change**

For the English sequences, it was **uncommon** for students to change campuses for the second course. For the math and biology sequences, about 30% or more changed campuses.

| ENGL-1301 to | ENGL-1302 | *ENGL-1301/02 t | o ENGL-2322 |
|--------------|-----------|-----------------|-------------|
| % Changed    | % Same    | % Changed       | % Same      |
| Campus       | Campus    | Campus          | Campus      |
| 15%          | 85%       | 8%              | 92%         |

| MATH-1314 to     | MATH-1316   | MATH-2412 to I | MATH-2413   |
|------------------|-------------|----------------|-------------|
| % Changed % Same |             | % Changed      | % Same      |
| Campus           | Campus      | Campus         | Campus      |
| 39%              | <b>61</b> % | <b>30</b> %    | <b>70</b> % |

| BIOL-1406 to | BIOL-1407   | BIOL-2401 to | BIOL-2402   |
|--------------|-------------|--------------|-------------|
| % Changed    | % Same      | % Changed    | % Same      |
| Campus       | Campus      | Campus       | Campus      |
| 27%          | <b>73</b> % | <b>30</b> %  | <b>70</b> % |

**\*NOTE:** For the ENGL-1301/1302 to ENGL-2322 sequence, the ENGL-1302 first <u>completed</u> campus was used.

**Please Note:** Campus was likely heavily impacted during COVID-19 pandemic (2020SU and 2021SU) when nearly all instruction was remote, so campus was not same factor in course selection.

Students who completed any sequence and *Changed Campus* had a second course success rate (A, B, C, CR) of **69%**, compared to **82%** for those who completed the second course on the *Same Campus*.

## **Faculty Change**

Regardless of sequence, around **two out of three** students or more *Changed Faculty* when enrolling in the second course of a sequence:



\***NOTE:** For the ENGL-1301/1302 to ENGL-2322 sequence, the ENGL-1302 first <u>completed</u> course faculty member was used.

- Switching to a different faculty member was **more common** for the Math sequences and **less common** for the English sequences examined.
- For students who took both MATH-2412 and MATH-2413, only around **8%** enrolled with the same faculty member.

Students who completed any sequence and *Changed Faculty* had an average second course success rate (A, B, C, CR) of **75%**, compared to **90%** of those that completed the second course with the *Same Faculty*.

## Conclusion

Among students who completed one of the six sequences examined, most completed within 1 to 3 terms, or one academic year (AY). Additionally, success rates were higher in the second course when it was taken more quickly after completing the first course. Again, the results may relate to the profile of students who took the course sequence more quickly (e.g. summer students) and/or the recentness of learning the material from the first course when enrolled in the second course.

A notable observation is that students frequently stayed on the *same campus* yet *changed faculty* more often across all sequences. Across all six sequences examined, between 8% to 39% of However, students who remained on the same campus had a **higher likelihood** of success in their second course, and students who enrolled with the same faculty member also had a **higher likelihood** of success in their second course.

This relationship suggests that students may prioritize staying on the same campus higher than staying with the same instructor. Results from recent student surveys also align with these results as students rated **campus** as a higher consideration when selecting their schedule than **course instructor**.

Future research should continue to delve into the reasons students switch campuses or faculty. Is their decision more related to schedule design or a personal choice or preference? (On the 2024FL student survey, 70% of respondents reported they were able to select their preferred schedule.) In other words, if a student changed campuses, did they switch because they couldn't find the course on their preferred campus or because they wanted to switch campuses, or did the change occur due to modality offerings. In a future article, IR plans to further explore enrollment trends among students that change modality and other scheduling factors between courses in common sequences.

| sti                               | udents changed ca                           | mpuses I           |                                      |                          |                         |                          |                          |                          |                          |  |
|-----------------------------------|---|--------------------|--------------------------------------|--------------------------|-------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--|
| between courses while roughly 64% |   |                    | % Success Rates across all Sequences |                          |                         |                          |                          |                          |                          |  |
|                                   | to 92% of students changed faculty members. |                    | Tim                                  | e Between Co             | urses                   | Campus                   | Campus Change            |                          | Faculty Change           |  |
|                                   |   |                    | Same<br>Term                         | Between 1<br>to 3 Terms  | More than<br>3 Terms    | Changed<br>Campus        | Same<br>Campus           | Changed<br>Faculty       | Same<br>Faculty          |  |
|                                   | ENGL-1301 to ENGL-1302<br>(N=76,123)        | Success Rates<br>N | <b>93%</b><br>(N=8,346)              | <b>82%</b><br>(N=61,540) | <b>72%</b><br>(N=5,815) | <b>72%</b><br>(N=11,649) | <b>84%</b><br>(N=64,474) | <b>77%</b><br>(N=49,004) | <b>92%</b><br>(N=27,104) |  |
|                                   | ENGL-1301/02 to ENGL-2322<br>(N=13,492)     | Success Rates<br>N | <b>91%</b><br>(N=104)                | <b>94%</b><br>(N=12,882) | <b>76%</b><br>(N=493)   | <b>84%</b><br>(N=1,121)  | <b>94%</b><br>(N=12,371) | <b>92%</b><br>(N=8,685)  | <b>96%</b><br>(N=4,807)  |  |
|                                   | MATH-1314 to MATH-1316<br>(N=2,508)         | Success Rates<br>N | <b>72%</b><br>(N=158)                | <b>69%</b><br>(N=1,684)  | <b>59%</b><br>(N=613)   | 61%<br>(N=968)           | <b>70%</b><br>(N=1,540)  | 63%<br>(N=2,083)         | <b>82%</b><br>(N=425)    |  |
|                                   | MATH-2412 to MATH-2413<br>(N=7,336)         | Success Rates<br>N | <b>65%</b><br>(N=291)                | <b>61%</b><br>(N=6,632)  | <b>60%</b><br>(N=377)   | <b>60%</b><br>(N=2,201)  | <b>61%</b><br>(N=5,135)  | <b>60%</b><br>(N=6,735)  | <b>71%</b> (N=601)       |  |
|                                   | BIOL-1406 to BIOL-1407<br>(N=4,676)         | Success Rates<br>N | <b>89%</b><br>(N=212)                | <b>74%</b><br>(N=4,096)  | <b>70%</b><br>(N=339)   | <b>68%</b><br>(N=1,249)  | <b>77%</b><br>(N=3,427)  | <b>71%</b><br>(N=3,087)  | <b>81%</b> (N=1,589)     |  |
|                                   | BIOL-2401 to BIOL-2402<br>(N=17,925)        | Success Rates<br>N | 0070                                 | <b>69%</b><br>(N=15,181) | 63%<br>(N=1,202)        | <b>65%</b><br>(N=5,397)  | <b>72%</b><br>(N=12,528) | <b>66%</b><br>(N=13,730) | <b>81%</b><br>(N=4,195)  |  |

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Source: IR EOT 2025SP Census, IRSECTION

#### **Overview**

When a student visits student support services at TCC, their visit information is recorded through a system called "**Who's Next**". This article explores visit data in an effort to better understand where, when, and how TCC students are being served.

Nearly **40,000 students** utilized services in 2024FL or 2025SP and logged more than **200,000 visits** across both terms. A student had **5 visits**, on average, and the average length of a visit was about **32 minutes**.



Note: Only visits by those with valid Colleague ids and enrolled in the term ids were included in this report. Visits occurred between 9/1/2024 and 4/30/2025.

## **Demographics**

Across both terms (N = 39,925):

- Nearly 60% of students who visited were female.
- About 38% of visitors were Hispanic. About 25% of visitors were White, and about 21% of visitors were Black/African American.
- Over 60% were between the ages of 18 and 25.
- About 20% of visitors were first-generation students.
- Just under 10% were veterans or dependents of veterans.

## **Campus and Department**

Across both 2024FL and 2025SP, the campus with the highest number of visits was **South** campus, while the **Northeast** campus had the highest number visitors who averaged slightly longer visits.

| Campus   | Visits | Visitors | Avg.<br>Number<br>of Visits | Avg.<br>Length of<br>Visit (in<br>minutes) |
|----------|--------|----------|-----------------------------|--|
| District | 5,592  | 2,956    | 2                           | 16   |
| CN       | 23,918 | 5,285    | 5                           | 11   |
| NE       | 41,325 | 9,999    | 4                           | 40   |
| NW       | 27,443 | 6,932    | 4                           | 31   |
| SE       | 29,958 | 7,789    | 4                           | 36   |
| SO       | 47,415 | 9,573    | 5                           | 31   |
| TR       | 29,317 | 8,982    | 3                           | 35   |

District visits were mainly comprised of those to the Student Empowerment Center or the Information Center.

## Day, Month, Time

Analyzing the temporal elements of the Who's Next data reveals some interesting insights into the nature of student visits to TCC services. When considering the day of visit, most students visited **early in the week**, with **Monday** and **Tuesday** seeing the highest number of visits (~45%).



January, April, and October were the most popular months for visits, while December had the lowest number of visits by far. Outside of these months, the number of visits and visitors was relatively stable, with an average of over 23,000 visits occurring in the months of September, November, February, and March.



Students tended to visit in the middle hours of the day. Over **35%** of visits occurred between the hours of **10am and 1pm** and over **90%** of visits took place before **5pm**.



## Services/Centers

Career Advising & Advising accounted for about half of the visits, and Financial Aid & Business Services accounted for an additional 15% of visits.

Career Advising: 64,633; 31.5% Advising: 42,344; 20.7% Financial Aid: 16,411; 8% Business Services: 14,994; 7.3% Registrar: 14,642; 7.1% ISEC: 8,354; 4.1% Testing: 6,902; 3.4% Career Services: 6,563; 3.2% Transfer Center: 5,586; 2.7% Veterans Resource Center: 4,612; 2.3% Student Accessibility Resources: 3,673; 1.8% Student Empowerment Center: 3,372; 1.6% Counseling: 2,017; 1.% Information Center: 1,868; .9% New Student Welcome Center: 1,614; .8%

## Conclusion

The "Who's Next" data provided valuable insights into the volume and nature of student visits to TCC services. With this in mind, a few key takeaways are worth noting:

- Career Advising/Advising was the most popular service, with over 50% of all visits. Financial Aid, Business Services, and the Registrar were the next most visited services.
- Early weekdays were the most popular days for visits, with Monday and Tuesday accounting for about 45% of visits. Mid-day hours were the most popular for visits.
- Future analyses should consider the link between student visits and student outcomes, such as course success, completions, and employment after TCC.

## **Spotlight on Career Advising**

Students who visited a career advisor provided feedback about their visit through survey responses (~January 2024 through May 2025). About 95% agreed or strongly agreed that they received help determining their career pathway or clarifying their courses needed, and similarly almost 95% agreed or strongly agreed that they left feeling more confident about resources to explore career and/or academic options. Over 90% agreed or strongly agreed that their career advisor recommended resources for class and personal life.

My Career Advisor helped me to determine my career pathway or clarify courses needed for my chosen career pathway.

| 13% | 81% |         |
|-----|-----|---------|
|     |     | N=2,560 |

My Career Advisor recommended campus or community resources for class and personal life.

| <b>16</b> % | 76% |         |
|-------------|-----|---------|
|             |     | N=2,442 |

I left this appointment feeling more confident about using online and campus resources to explore my career and/or academic options.

| 14%  | 80%   |         |
|--|---|---------|
| <ul> <li>Strongly disagree</li> <li>Neutral</li> <li>Strongly agree</li> </ul> | <ul> <li>Disagree</li> <li>Agree</li> </ul> | N=2,547 |

The most helpful part of the session:

"When we compared the two degree pathways I can take to accomplish my goals. It helped paint a clear picture of what I can expect in the following years."

"We selected courses for next semester and I am confident I will achieve my academic goals through step by step guidance provided by my career advisor."

"The most helpful aspect of my career advising session today was when my advisor helped me identify and clarify my career goals and values. He listened attentively to my concerns and aspirations, and then provided tailored advice and resources to help me"

# The Enrollment Funnel

## Introduction

Nearly 37,000 prospective students applied to TCC for Fall 2024 within a year prior to the term start date. Out of this group, nearly 13,000 (or about 35%) enrolled in Fall 2024\*. By the end of Spring 2025, about 41% had enrolled (Fall 2024/Spring 2025). This app-to-enroll rate is a mainstay metric when evaluating the health of the college regarding its student body and recruitment efforts, but could there be more to the story? After all, the process of registering for classes involves more than just applying for admission. In this article, we look at some common steps that students at TCC should likely take prior to registering for their classes.

## Steps Considered

The TCC website offers guidance to prospective students by listing steps that need to be taken prior to registration. Due to the complexity that arises from considering each applicant's individualized needs (e.g. TSI waivers, medical exemptions, etc.), presenting this process in its entirety is outside of the scope of this article. Instead, we focus on the following three common pre-registration steps:

- Submission of the FAFSA
- Attempting TSI test
- Visiting an academic advisor

Notes: \*Credit type 'N' excluded FAFSA submission for FA 2024 within year prior to term start date Any TSI test taken prior to term start date Visted advisor within the year prior to term start date

## Individual Factors

Out of the total number of applicants ( $N \approx 37,000$ ), about 29% submitted a FAFSA, around 26% took at least one TSI subject area test, and about 34% visited or consulted with an advisor. Within each of these groups, enrollment rates were evaluated. Findings suggested that the completion of each of these steps was correlated with an applicant deciding to enroll.

## Percent Enrolled in 2024FL



Sources: Orbit (xv\_st\_applicants\_admissions, xv\_st\_student\_tests, xv\_st\_financial\_aid\_3yr); Colleague (terms, xt\_ssp\_adv\_visits) The magnitude to which this is true differs between the different requirements:

- Applicants who submitted the FAFSA for 2024 were about **1.5 times more likely** to have enrolled than applicants who did not.
- Applicants who consulted with an academic advisor were more than twice as likely (about 2.2 times as likely) to have enrolled than those who did not.
- Applicants who attempted at least one TSI subject area test were more than twice as likely (about 2.4 times as likely) to have enrolled than those who did not.

## Number of Steps Taken

We explored these factors further by looking at the enrollment rates for applicants who completed multiple steps. Since each step is an investment of time and energy, applicants who complete each are assumed to be more interested in attending classes at TCC.



#### What is the effect of completing multiple steps?

To check the effect of different levels of investment, each completed step was equally weighted and added for each student such that the minimum number of steps completed was zero, and the maximum number was three (e.g., a student who visited an advisor, attempted the TSI, and submitted a FAFSA would have completed the maximum).

As expected, with each additional step taken (regardless of which step it was), applicants were more likely to



enroll in the fall semester. Further, a student who takes all suggested steps in the application to enrollment process is **nearly four times as likely** to have enrolled in the semester than those who took no steps. While about 76% of applicants who completed three different pre-registration steps enrolled in the fall, the other 24% who did *not* enroll. This outcome begs the question, "If these people exerted this much effort to take classes, then why didn't they all enroll?"

Some applicants who completed each of the preregistration tasks ended up not registering for classes in 2024FL, but **did** register for the following spring semester (shown on the chart above in light blue), suggesting that an application's stated admission term might not align with the term in which they enroll. For those who completed three different pre-registration steps an additional 7% enrolled in 2025SP; thus, in total about 83% of those group enrolled in 2024FL or 2025SP.

## Conclusions

The results of these analyses showed that each of the factors evaluated were correlated with an applicant's enrollment behavior. In other words, for each factor, an applicant's engagement appeared to be linked to whether they registered for classes. Further, each additional step completed appeared to have an additive effect on the applicant's eventual decision to enroll in the term. Additionally, it was shown that the term listed on an applicant's materials does not necessarily reflect their actual start date.

## **COLLEGE PREPARDNESS** *The impact of dual enrollment on the percentage of TSI met students*

The percentage of first time in college students (FTIC) who enter TSI met <u>decreased</u> from about **45%** for the 2014FL cohort to about **25%** for the 2024FL cohort. The question becomes what potential explanations for this decline might be. First, the TSI test was introduced in 2013, and adjustments were later made in 2017 to English cut scores. The TSI was then fully redesigned in 2021 (TSI2). Thus, changes in "college-ready" cut scores could be a potential factor contributing to the declining TSI met percentages. Second, STAAR/ECO test data for high school students in Tarrant County showed a sharp decline during the pandemic (*Learning Loss in High Schools During the Pandemic, IR Corner June 2022*).



2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 Fall FTIC Cohort

One factor that may not have been considered is when local ISD students first attend TCC – either as a <u>dual</u> <u>enrolled</u> student or an <u>FTIC</u> student – and how it impacts the overall TSI met percentage.

## **Starting College Earlier**

Past research suggested that an estimated **one in three** students attended TCC as a dual credit/ECHS student by the end of their senior year or as a student in the summer or fall following their senior year (*From a Tarrant County ISD to TCC, IR Corner June 2023*). Interestingly, while that estimate has remained consistent over that past decade, Tarrant ISD students seem to be starting at TCC earlier. For Tarrant ISD students who attended TCC by the first fall term after high school graduation, about **52%** of the Class of 2014 first attended TCC as a <u>dual enrolled</u>



student, whereas, about **62%** of the Class of 2024 first attended TCC as <u>dual enrolled</u> students.

First Attendance at TCC - Tarrant ISD Students

Dual Enrolled FTIC



## Becoming TSI met

Moreover, these students who are starting earlier may become TSI met while in high school. The percentage of Tarrant ISD students who started their dual enrollment program TSI <u>liable</u> but ended their academic program TSI met increased from about **20%** for the Class of 2014 to about **28%** for the Class of 2024.



Thus, while there are likely multiple factors that contributed to the decline in the percentage of FTIC students who entered TSI met, expanding dual enrollment may be one explanation. High school students who are academically prepared may now be more likely to start at TCC as dual enrolled instead of an FTIC student. Additionally, some high school students may start TSI liable but become TSI met by the time they complete TCC's dual enrollment program.

Source: Enrollment by Term, Student Programs

Since TCC data does not contain "Class of" designation for each student, a birthdate range of September 1<sup>st</sup> to August 31<sup>st</sup> of the following year was used to define "Class of" (senior year). For example, any student enrolled at TCC with a birthdate between September 1, 1997, and August 31, 1998, was defined as Class of 2016. Students who attended in the spring term of their senior year or prior were considered dual enrolled.

# The Higher Ed Journey: Predicting Graduation

In a previous analysis presented in the June 2024 issue of *IR Corner*, the 2007 to 2013 Fall first time in college (FTIC) cohorts were tracked for **10 years** using data from almost all institutions in the U.S. to better understand patterns in stopping out behavior.

In this follow-up article a predictive model is presented to examine the probability of students graduating within 10 years based on the number of credit hours an FTIC student completed prior to leaving/stopping out.

#### Key findings from prior analysis

On average, each cohort had about **8,000** students, and roughly **one in three** of the students graduated within ten years. Overall, **about 45%** of students stopped out, meaning they left for at least <u>one</u> term but later reenrolled.

In sum, **roughly 20%** of FTIC students leave higher ed one or two terms after they start and do not return to higher ed. **About 10%** of FTIC students stop out for the first time two terms after they start. In other words, it was common for FTIC students to leave or stop-out the fall term one year after they started, which has implications on TCC's progression rate.

#### **Predictive model**

The number of hours (non-developmental) the FTIC student completed prior to first leaving/stopping out (x) was used to predict the probability of graduating from higher ed within 10 years (p(x)) using a logistic regression model. This model provided a succinct method for summarizing the relationship between hours completed and the likelihood of graduating.

$$p(x) = \frac{1}{1 + e^{2.159 - 0.034x}}$$

Roughly, for every 10 hours completed prior to the student first leaving/stopping out, the probability of graduating <u>increased</u> by about 5%.



## Probability of Graduating within 10 years Based on Hours Complete (Non Dev) at Time Student Left/Stopped Out (first time)

# **Student Debt**

The cost associated with graduating



## **Overview**

In multiple surveys across multiple terms, finances was rated as a top barrier or cause for anxiety. Results suggested that a marked portion of students would have trouble acquiring even \$500 for an unexpected expense; thus, they worry about having enough money to pay for school.

The aim of this article is to provide a financial profile of the TCC graduate.

## Tuition

For a TCC student taking 30 semester credit hours, the average cost of tuition and fees is about \$2,000, which is about \$1,000 less than the average cost among community colleges statewide and about \$8,000 less than the average cost among public universities statewide. Among Texas' ten largest community colleges, TCC was the second most affordable, and was within \$100 of Collin College, the most affordable.

## Debt

While TCC ranks among the best options for higher education in terms of affordability, almost one-quarter of graduates complete with debt, with the average debt being about \$16,000. While not perfectly comparable due to differing degree types, this debt is substantially less than the graduates from public universities. About half of graduates from public universities complete with debt, with the average being about \$25,000.

For TCC graduates the median student load debt as a percentage of first year wage was less than 40% - for graduates of public universities it was over 50%.

## **Return on Investment**

In considering the expense of college, it's important to understand the benefit-to-cost ratio from a student perspective. Based on a recent economic impact study conducted by *Lightcast*, an industry leader for labor market data, this ratio was estimated to be 7.2 for TCC. In other words, for every dollar students invest in TCC in the form of out-of-pocket expenses and forgone time and money, they will receive a cumulative value of \$7.20 in higher future earnings.

## Students see a high rate of return for their investment in TCCD



Average annual return for TCCD students 22.5%

|             |   |   |   | ٦ |
|-------------|---|---|---|---|
| ~           |   |   | / | L |
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|             |   |   |   |   |

Stock market 30-year average annual return

10.1%



Interest earned on savings account (national deposit rate)

0.5%

Source: Forbes' S&P 500, 1994-2023; FDIC.gov, March 2023

| Average Cost of Tuition and Fees for 30 Semester Credit Hours | 2023     | 2024     | 2025     |
|---|----------|----------|----------|
| Tarrant County College  | \$1,920  | \$1,920  | \$2,070  |
| Statewide Community Colleges                                  | \$2,877  | \$3,003  | \$3,071  |
| Statewide Public Universities                                 | \$10,129 | \$10,323 | \$10,261 |

| Percent of Undergraduates Completing with Debt | 2022 | 2023 | 2024 |
|--|------|------|------|
| Tarrant County College                         | 26%  | 25%  | 23%  |
| Statewide Community Colleges                   | 26%  | 24%  | 23%  |
| Statewide Public Universities                  | 52%  | 51%  | 50%  |

| Median of undergraduate student loan debt as a percentage of first year<br>wage for graduates | 2017 | 2018 | 2019 |
|---|------|------|------|
| Tarrant County College  | 36%  | 39%  | 36%  |
| Statewide Community Colleges  | 38%  | 37%  | 36%  |
| Statewide Public Universities   | 61%  | 58%  | 56%  |

| Average Debt of Graduates with Loans | 2022     | 2023     | 2024     |
|--------------------------------------|----------|----------|----------|
| Tarrant County College               | \$16,305 | \$15,685 | \$16,313 |
| Statewide Community Colleges         | \$15,797 | \$15,920 | \$15,653 |
| Statewide Public Universities        | \$24,644 | \$24,714 | \$24,710 |

Source: THECB Accountability System & Lightcast Economic Impact Study

## Average earnings by education level at career midpoint



## **Students' Course Evaluations** *What are they saying?*

## **Overview**

In the December 2023 issue of IR Corner, an analysis of open-ended responses on course evaluations showed themes related to factors that benefit students in learning the course material. In this article, an item analysis was conducted using the responses to Likertscale\* questions from 2023FL and 2024SP course evaluations.

#### **Response Rates**

Students provided over 75,000 course evaluations. Some sections did not receive an evaluation from any student. In total, about 55% of sections had at least one evaluation.

#### **Item Analysis**

Students tended to agree the most that instructors were available, maintained a positive learning environment, and were organized, prepared, and on time for class. While still overwhelmingly positive, students agreed the least regarding the instructor's use of effective teaching methods.

## **Connections to Success**

Success rates were not associated with course evaluation scores. Some courses such as ENGL-1302 and ECON-2301 had higher success rates but lower average course evaluations scores while others such as BIOL-2401 had a lower success rate but a higher average course evaluations score.

| Item  | Total  | 1    | 2    | 3     | 4     |
|---|--------|------|------|-------|-------|
| I have learned in this class.   | 75,614 | 2.1% | 2.4% | 20.9% | 74.6% |
| The assignments add value to this course.   | 75,354 | 2.1% | 3.6% | 24.1% | 70.1% |
| The course materials are utilized well in this course.                            | 75,012 | 2.1% | 3.7% | 23.4% | 70.8% |
| The feedback I received on<br>my work improved my<br>learning.                    | 73,739 | 2.8% | 4.8% | 22.8% | 69.5% |
| The feedback I received on my work was timely.                                    | 74,049 | 2.4% | 3.7% | 23.5% | 70.4% |
| The instructor<br>communicates at a level<br>appropriate for me.                  | 75,720 | 2.0% | 3.2% | 21.4% | 73.4% |
| The instructor is available during posted office hours and appointments.          | 70,439 | 1.2% | 1.2% | 22.2% | 75.4% |
| The instructor is organized,<br>prepared and on time to<br>class.                 | 74,908 | 1.7% | 2.3% | 20.0% | 75.9% |
| The instructor maintains a<br>positive learning<br>environment.                   | 75,411 | 1.5% | 2.1% | 19.3% | 77.1% |
| The instructor provides<br>clear expectations for my<br>learning.                 | 75,806 | 1.9% | 2.7% | 21.3% | 74.0% |
| The instructor uses<br>effective teaching<br>methods that enhance my<br>learning. | 75,407 | 3.0% | 5.3% | 22.8% | 68.9% |

\*Likert-scale: a four-point scale was used with four representing the highest agreement

Source: Enrollment by Term (exclude NSOR), Student Evaluations

Average Course Evaluation Scores & Success Rates (A, B, C, CR)

100.0% ENGL-2322 90.0% SOCI-1301 HIST-1302 GOVT-2306 GEOL-1401 CON-2301 80.0% PSYC-2314 Success Rate ENGL-1302 BIOL-2420 COSC-1301 ENGL-1301 70.0% BIOL-2402 MATH-1342 MATH-2412 60.0% BIOL-1406 BIOL-2401 MATH-1324 MATH-1314 CHEM-1411 50.0% MATH-0214 40.0% 3.5 3.55 3.6 3.65 3.7 3.75 3.8 3.85 3.45 Averge Course Evaluation Score

(Courses with over 5,000 scores)



Have you found an article interesting or used some research from IR Corner? Let us know!



"...Great *insight* comes from seeing something as odd and finding out why."



- Philip Kotler

As Tarrant County College celebrates its 60th anniversary, we reflect on the impact the college has had on students and the community. Sometimes understanding it feels very much like untangling a ball of yarn. Each thread we pull reveals new connections and deeper insights. Through data analysis, we uncover questions that spark further research, strengthen institutional effectiveness, and drive continuous improvement. These discoveries often evolve into the stories and findings shared in these IR Corner articles.

As we head into the next 60 years, IR remains committed to supporting and promoting the college in its mission of being the guiding star for accessible, high-quality educational experiences that drive lasting impact.

-Team IR