



PLANNING & ASSESSMENT

TEXAS TECH
Office of the Provost
Institutional Effectiveness

TechQuest – 2023-2024
Texas Tech University Report

Introduction

TechQuest is a locally developed instrument created by the Office of the Provost, Core Curriculum Steering Committee, and the Office of Planning and Assessment (OPA) at Texas Tech University (TTU). TechQuest is designed to measure student learning in Foundational Component Areas (FCA) and general Student Learning Outcome objectives between a student's first year in college and upon graduation as a senior. The FCAs under the current Texas Core Curriculum are Communication; Mathematics; Life and Physical Sciences; Language, Philosophy, and Culture; Creative Arts; American History; Government/Political Sciences; and Social and Behavioral Sciences. OPA has also identified six student learning outcomes to assess, which are as follows:

- *Texas Tech will prepare/has prepared me to be a good problem solver.*
- *Texas Tech will prepare/has prepared me to be a better communicator, specifically as it relates to my major.*
- *Texas Tech will prepare/has prepared me to have the quantitative skills needed for after graduation.*
- *Texas Tech will prepare/has prepared me to work in teams, specifically as it relates to my major.*
- *Texas Tech will prepare/has prepared me to have a greater sense of social responsibility.*
- *Texas Tech will prepare/has prepared me to have a greater sense of personal responsibility.*

In addition to demographic questions, there are 5 questions in each of the 8 Foundational Component Areas. Of those questions, one addresses a student's perceived competency in that area and the remaining four questions are knowledge-based. Additionally, first-year students will answer based on their expectations of learning upon graduation whereas senior students will answer based on their perceptions of learning upon graduation.

Instrumentation and Administration

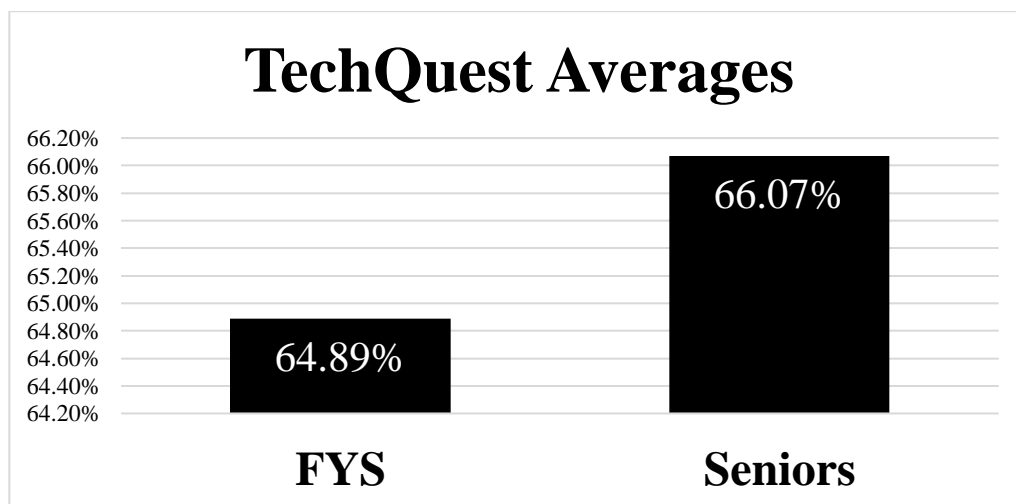
TechQuest was administered to first year and senior students during the 2023-2024 academic year. TTU Institutional Research provided OPA with a list of eligible students, a total of 21,298 students. OPA contacted 7,220 first-year students and 14,078 senior students to offer the assessment and incentive opportunity. First year students were selected based on the criteria that they were enrolling in a university setting for the first time in the fall of 2023. Senior students were selected based on their classification as a senior in spring 2024. This administration juniors who would exceed the 90-hour threshold based on the number of hours they were attempting in spring 2024 were also included in the senior survey group. OPA

sent students a Qualtrics email invitation to participate in the assessment followed by weekly reminders throughout the month-long testing period. Of the 21,298 students contacted to complete the TechQuest, 800 first-year students and 1,011 seniors completed TechQuest for a total of 1,811 completions, an 8.5% response rate. The response rate was slightly lower than in the 2021-2022 TechQuest administration which had a 9.5% response rate. However, the slightly lower response rate was likely due to a larger original pool of students to whom the survey was sent, namely the inclusion of the juniors who would surpass the 90-hour threshold during the spring administration, this administration compared to prior administrations.

As an incentive for participating in the assessment, two first-year students and two seniors were randomly selected to win a \$500 scholarship toward tuition and fees for the respective semester in which they completed the assessment. As part of the data vetting process, entries which were submitted in less than eight minutes of starting the assessment were removed from the final data pool as this indicated students simply clicking through the assessment. Due to changes in questions for the 2023-2024 administration, OPA re-evaluated the average testing time and adjusted it to be eight minutes based on the average time it took OPA staff to complete the assessment. There was also a 1-hour time limit imposed this administration to further vet responses from students. Incomplete assessments were also removed from the final data. In total 22 assessments were removed from the first-year administration for a total of 778 surveys analyzed and 49 survey responses were removed from the senior administration for a total of 962 analyzed.

Total Average Scores

Overall, the 778 first-year students (FYS) averaged 64.89 points (out of 100), while the 962 seniors averaged 66.07 points, a difference of 1.18 points.



In addition to mean differences, first year students also had a standard deviation of 13.70, a maximum score of 100, and a minimum score of 12.5, while seniors had a standard deviation of 14.24, a maximum score of 100, and a minimum score of 18.75.

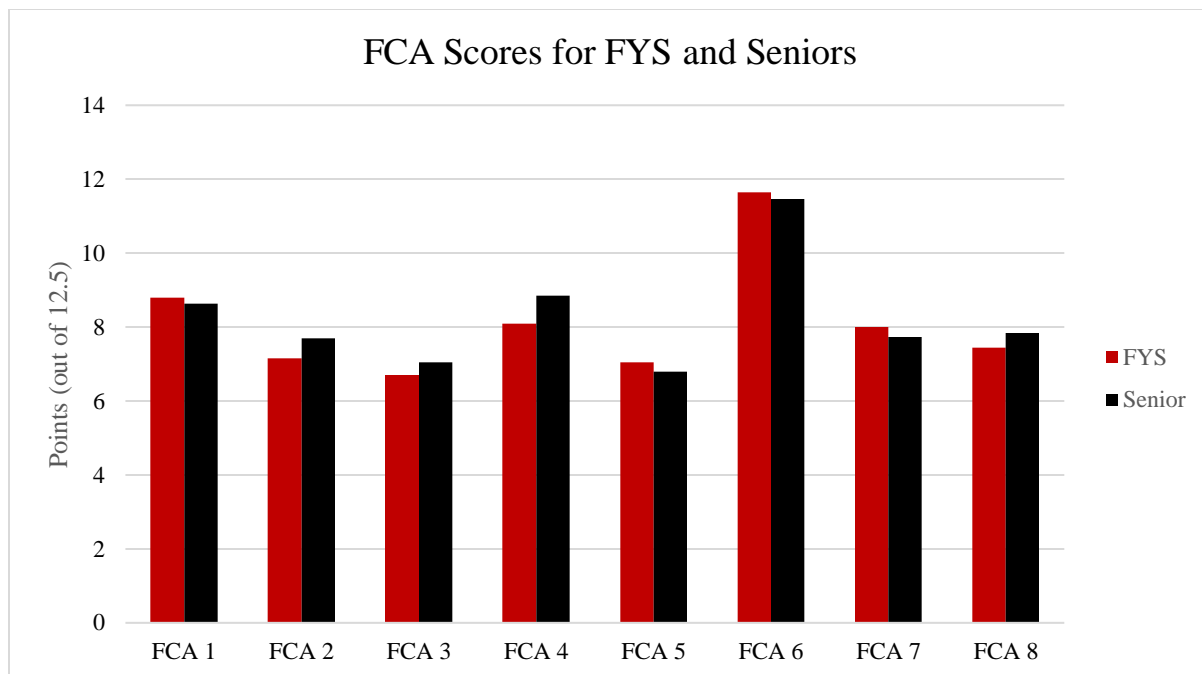
Descriptive Statistics		
	FYS	Seniors
Mean	64.89	66.07
SD	13.70	14.24
Max	100	100
Min	12.5	18.75

FCA Scores

Disaggregating the data provides a closer look at first year students' and seniors' scores in each of the eight Foundational Component Areas. For simplicity, the labels for each FCA are as follows: **FCA 1:** Communication; **FCA 2:** Mathematics; **FCA 3:** Life and Physical Sciences; **FCA 4:** Language, Philosophy, and Culture; **FCA 5:** Creative Arts; **FCA 6:** American History; **FCA 7:** Government/Political Science; **FCA 8:** Social and Behaviors Sciences.

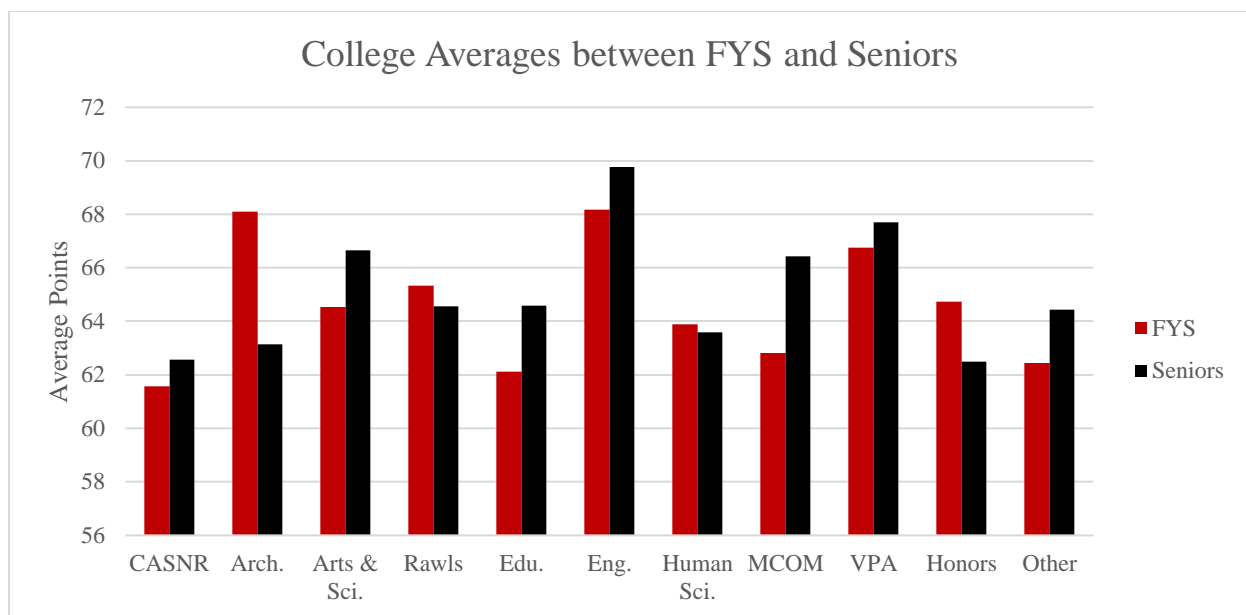
FCA Means by Classification		
FCA	FYS	Seniors
FCA 1: Communication	8.8	8.63
FCA 2: Mathematics	7.16	7.7
FCA 3: Life and Physical Sciences	6.7	7.05
FCA 4: Language, Philosophy, and Culture	8.09	8.84
FCA 5: Creative Arts	7.05	6.8
FCA 6: American History	11.64	11.46
FCA 7: Government/Political Science	8.01	7.74
FCA 8: Social and Behavioral Sciences	7.45	7.84

Seniors outscored First Year students in every category except for **FCA 1:** Communication, **FCA 5:** Creative Arts, **FCA 6:** American History, and **FCA 7:** Government/Political Science. Below is a chart visualizing the differences in score based on the possible 12.5 points per FCA section in the assessment.



College Scores

Overall score averages were also disaggregated by college. While students from every college performed differently on the assessment, seniors scored a higher average in seven of the eleven colleges compared to first year students. The colleges where seniors scored lower than first year students were in the College of Architecture, Rawls College of Business, College of Human Sciences, and the Honors College. This indicates an overall growth of knowledge in most colleges from the time students begin their studies at TTU to right before they graduate. There could be several reasons why some of the colleges had lower averages for seniors compared to first year students, including but not limited to: fewer seniors in several colleges taking the assessment overall which brings the sample pool down, the college having more strict degree flows for students to immerse them more fully in their area of study compared to general degree requirements, or senior students having taken some of these courses where they learn this information in toward the beginning of their degree or even only in high school. The “Other” category could be undecided or unsure and was self-reported by each student during the assessment.



Below is a table listing all the average scores by college for both first year students and seniors. Again, the “Other” category could be undecided or unsure and was self-reported by each student during the assessment.

College Averages by Classification		
College	FYS	Seniors
Agriculture and Natural Resources	61.56	62.57
Architecture	68.11	63.15
Arts and Sciences	64.54	66.65
Rawls Business	65.34	64.55
Education	62.13	64.58
Engineering	68.17	69.77
Human Sciences	63.89	63.60
Media and Communication	62.81	66.44
Visual and Performing Arts	66.76	67.71
Honors College	64.73	62.5
Other	62.45	64.44

Student Demographics

Students also self-reported a variety of demographic information during the TechQuest assessment. Below are frequency tables for classification and college enrollment for all first year and senior students.

Classification		
	FYS	Seniors
Freshman	646	0
Sophomore	89	0
Junior	42	238
Senior	1	724

College Enrollment		
College	FYS	Seniors
Agriculture and Natural Resources	80	88
Architecture	33	29
Arts and Sciences	208	319
Rawls Business	89	102
Education	17	48
Engineering	139	168
Human Sciences	88	99
Media and Communication	30	42
Visual and Performing Arts	22	36
Honors College	7	2
Other	57	21

First Year Expectations and Senior Perceptions

In addition to questions about their knowledge of general education requirements, participants were asked a series of indirect questions to measure how they perceived they were prepared by Texas Tech in different FCAs.

Student Confidence in FCA by Classification		
Problem Solving		
Rating	FYS	Seniors
Strongly Agree	186	254
Agree	374	480
Somewhat Agree	198	194
Disagree	12	23
Strongly Disagree	7	11
Communication		
Rating	FYS	Seniors
Strongly Agree	254	350
Agree	335	429
Somewhat Agree	159	147
Disagree	25	26
Strongly Disagree	5	10
Quantitative Skills		
Rating	FYS	Seniors
Strongly Agree	223	259
Agree	362	463
Somewhat Agree	170	191
Disagree	19	34
Strongly Disagree	4	14
Teamwork		
Rating	FYS	Seniors
Strongly Agree	238	371
Agree	333	386
Somewhat Agree	154	139
Disagree	45	50
Strongly Disagree	7	15
Social Responsibility		
Rating	FYS	Seniors
Strongly Agree	271	294
Agree	318	388
Somewhat Agree	144	200
Disagree	30	59
Strongly Disagree	10	21
Personal Responsibility		

Rating	FYS	Seniors
Strongly Agree	398	398
Agree	271	380
Somewhat Agree	80	137
Disagree	14	29
Strongly Disagree	9	18

Conclusion

Seniors scored slightly higher in total point average than first year students, indicating an increase in learning during the 2023-2024 academic year. The increase of 1.18 points could be seen as minimal or could be an indication that improvements could be made to FCA courses or timings of such courses during the academic careers of students. These concerns grow when considering the decrease in average score for students from first year to senior in the **FCA 1: Communication**, **FCA 5: Creative Arts**, **FCA 6: American History**, and **FCA 7: Government/Political Science** sections. The Office of Planning and Assessment will continue to evaluate TechQuest results and make recommendations based on data analysis from the assessment.