

TECHQUEST

Introduction

TechQuest is a locally developed instrument by the Provost's Office, 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. TechQuest is an adaptation of the Online Senior Assessment (OSA) which addressed areas under the previous Texas Core Curriculum. 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; Social and Behavioral Sciences.

TechQuest consists of 47 total questions. 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 (summarized in Chart 5) and the remaining four questions were knowledge-based. Finally, six questions address student learning outcomes identified by OPA staff.

When creating the new instrument, OPA staff recycled any relevant questions from the OSA and updated the content to be more relatable to today's students. OPA also reached out to department chairs in the current core areas for assistance in creating appropriate questions on information that is currently being taught at TTU. The ultimate goal was to create questions that first year students would not necessarily know upon entrance to TTU but would be able to answer upon graduation and being exposed to core material.

Instrumentation

TechQuest was launched via Qualtrics on October 11, 2017 and remained open through October 31, 2017. For the pre-test, only first-year students were invited to participate. TTU Institutional Research provided OPA with a list of eligible students, a total of 5,884 individuals. OPA then sent students a Qualtrics email invitation to participate in the assessment followed by periodic reminders throughout the testing period. As an incentive for participating in the survey, one participant was randomly selected to win a \$500 scholarship toward tuition and fees for the Spring 2018 semester. As part of the data vetting process, entries which were submitted within ten minutes or less of starting the assessment were removed from the final data pool as this indicated students simply clicking through the assessment. Of the targeted population and after data vetting, we received an 11.24% response rate, a total sample of 661 students.

The following graphs summarize the sample demographics by gender, college, and ethnicity. The sample consisted of 61% female students and 39% male students. This represents a slightly larger number of female students and fewer male students than would be expected from the population size, but the sample was representative in terms of college and ethnicity.

Chart 1. Sample and Population by Gender

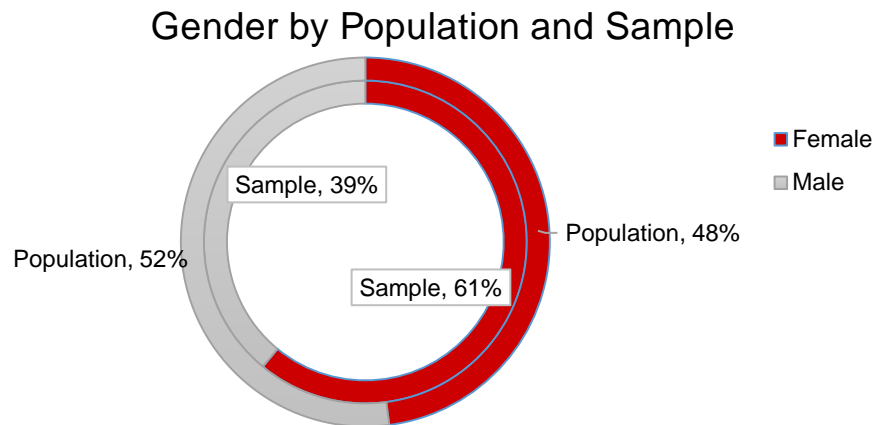
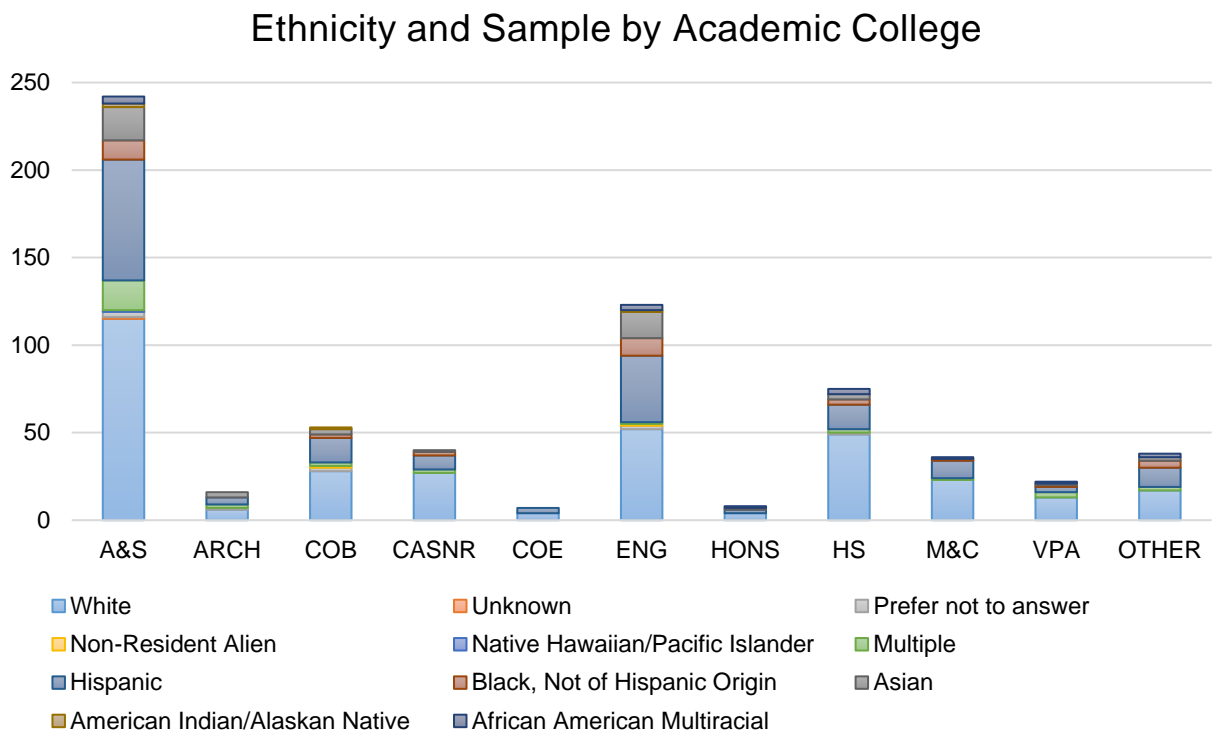


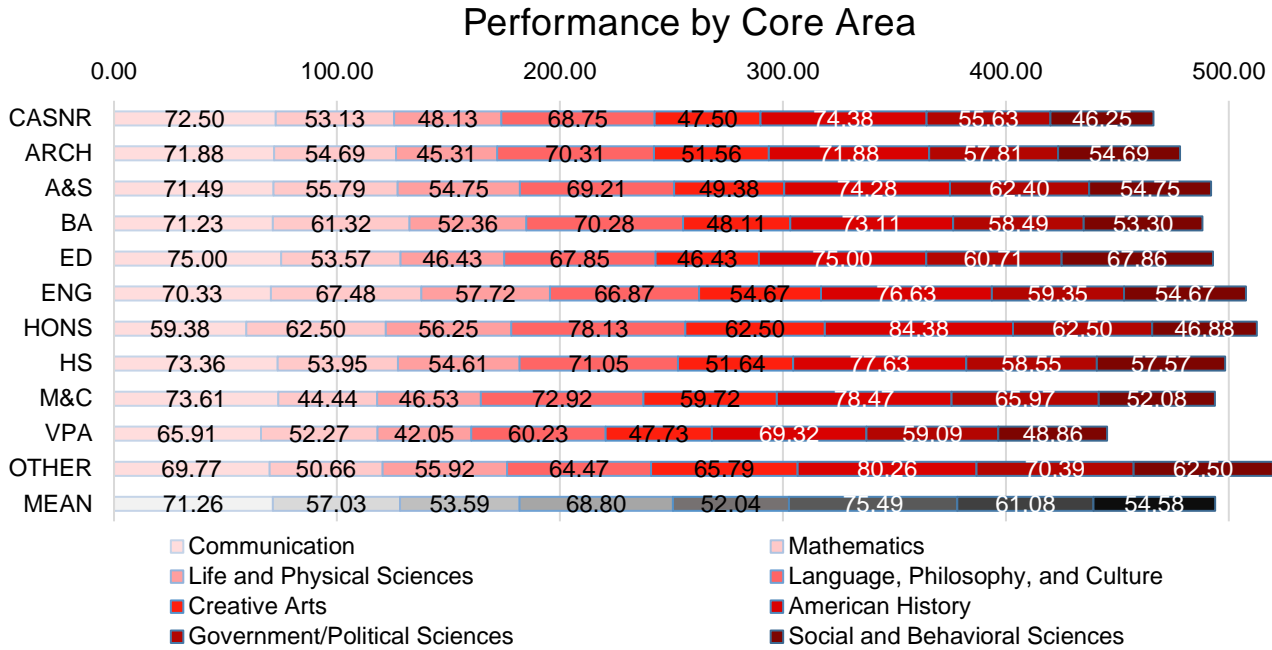
Chart 2. Sample Ethnicity and College



Preliminary Analysis

This summary will provide preliminary findings from the first-year pre-test. A final analysis cannot be conducted until senior students participate in the post-test in late spring 2018. The FCAs with the highest overall mean score were American History (75.49) and Communication (71.26). The FCAs with the lowest overall performance were Creative Arts (51.04) and Life and Physical Sciences (53.59). The chart below summarizes student performance in each core area along with the mean score for each component.

Chart 3. Overall Performance by Core Area



Before each section, students were also asked to self-report their perceived ability to answer questions in each Foundational Component Area (FCA). At the end of the assessment, students were then asked to self-report their perceived ability for TTU to prepare them in six learning outcomes. The graphs below summarize the mean responses on a 5-point Likert scale.

Chart 4. Mean Response by FCA Questions

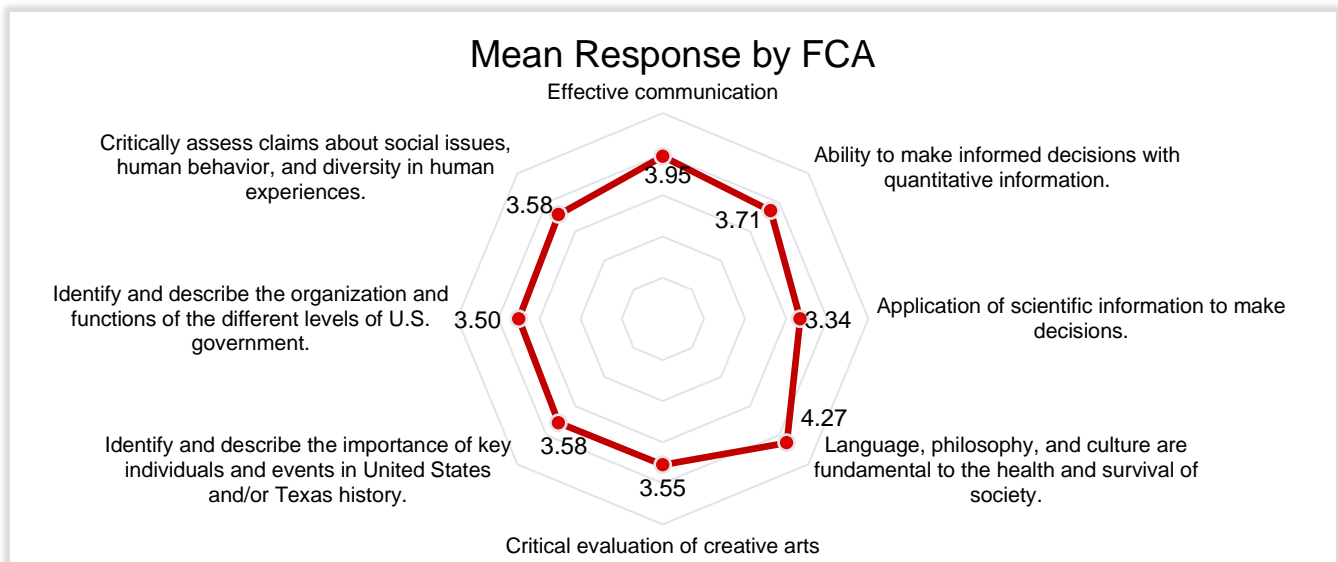
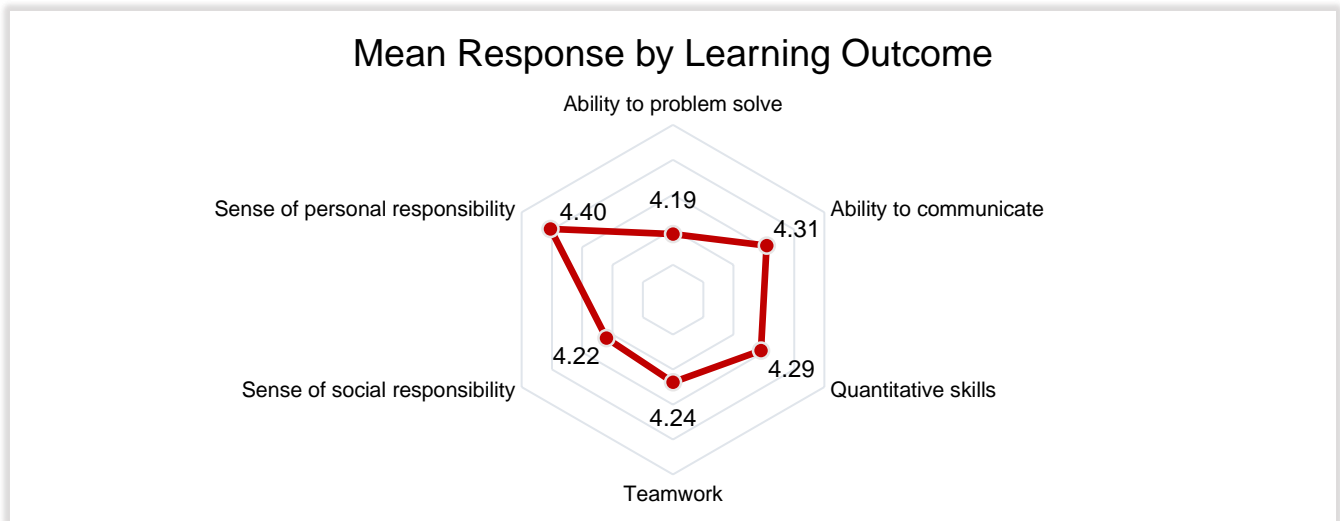


Chart 5. Mean Response by Learning Outcomes Questions



Conclusion

In summary, OPA is pleased with the success of the pre-test and will provide a final report of the full data set once post-test data is available. While we can currently provide overall performance data from the pre-test, we are unable to draw conclusions about student performance in core curricular subjects until graduating seniors participate in the post-test. At that point, a comparative analysis will be conducted on student learning gains. OPA will also analyze the results of individual questions to ensure validity and discuss any questions that need to be removed. A final report is expected to be complete in mid-2018.

If you have any questions about TechQuest or the data, please contact Libby Spradlin at libby.spradlin@ttu.edu.