

Evidence of NTN impact in Texas: September 2020



2019 End of Course high school and middle school data¹

NTN high school students outperform non-NTN students in 97% of statistically significant comparisons made between NTN and non-NTN students on academic year (AY) 2018-19 Texas end of course (EOC) exams.

NTN middle school students outperform non-NTN students in 94% of statistically significant comparisons made between NTN and non-NTN students on academic year (AY) 2018-19 Texas end of course (EOC) exams across all performance bands.

APPROACHES:

100%

In 13/13 comparisons, NTN consistently outperformed in: English 1, English 2, Biology

APPROACHES:

96%

In 24/25 comparisons, NTN consistently outperformed in: Reading, Writing, Math, and Science

MEETS:

100%

In 14/14 comparisons, NTN consistently outperformed in: Biology, English 1, English 2

MEETS:

92%

In 23/25 comparisons, NTN consistently outperformed in: Reading, Writing, Math, and Science

MASTERS:

85%

In 6/7 comparisons, NTN consistently outperformed in: Biology

MASTERS:

94%

In 16/17 comparisons, NTN consistently outperformed in: Reading, Math, and Science

2018 End of Course high school data²

New Tech students outperform non-NTN students in 95% of the statistically significant comparisons across the 3 performance bands (approaches, meets, and masters). Significantly more New Tech students are achieving at each level of performance across subjects.

APPROACHES:

100%

In 15/15 comparisons, NTN consistently outperformed in: Algebra 1, Biology, English 1, and English 2

MEETS:

93%

In 14/15 comparisons, NTN consistently outperformed in: Biology, English 1, English 2

MASTERS:

90%

In 10/11 comparisons, NTN consistently outperformed in: Biology, English 1, English 2

2018-19 critical thinking testing data³

New Tech Network elementary and high school students in Texas made statistically significant gains in critical thinking as measured by the Insight Assessment Educate Series (formerly the California Critical Thinking Skills Test) developed by Facione.



The overall average **gain from pretest to posttest** was statistically significant for elementary and high school students.



The sub topics of **Analysis**, **Induction**, **Deduction**, and **Numeracy** at the elementary school level showed **statistically significant gains**.



The sub topics of **Evaluation** and **Interpretation** at the high school level showed **statistically significant gains**.



2017–18 Academic Year data from surveys, focus groups, and site visits⁵





SKILL DEVELOPMENT



New Tech Network **project-based learning enables 21st century skill development and work force readiness**. Findings from student focus groups and surveys in Texas, Michigan, and North Carolina indicate (with statistical significance) that students report engaging in project-based learning (PBL) and having technology integrated through the curriculum more than their Non-New Tech peers.






HIGH QUALITY PROJECT-BASED LEARNING

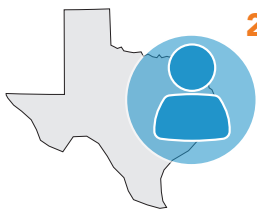
Project-based learning was a positive and significant predictor of

-  problem solving
-  active and engaged citizenship
-  grit
-  self-regulation

ACADEMIC AND NON-ACADEMIC COMPETENCIES

Student focus group responses provide evidence that NTN PBL experiences are aligned to the five research-based features of PBL (Thomas, 2000):

-  projects are central to the curriculum
-  focused on a particular question
-  real world relevant
-  have students engaged in inquiry
-  driven by student autonomy



2016, 2017, and 2018 English II End of Course exam data⁴

NTN Students in Texas scored **statistically significantly higher** on English II exams, controlling for ethnicity, disability, income, giftedness, English language learner status, and the overall poverty levels within the school building.

References and Study Notes

- Bergeron, L. & Bogdan, C. (2019). End of course outcomes in Texas. Internal Report. New Tech Network, Napa, CA.
 - Percentage of students who met standard were compared (school within school/main campus) using chi-squared testing in 7 schools.
- Bergeron, L. (2019, February). Reconsidering research paradigms: using Texas End of Course performance to evaluate innovation in EPISD. Paper presented at the annual meeting of the Southwest Educational Research Association, San Antonio, TX.
 - Percentage of students who met standard in each of the performance bands for each subject in 2017-18 were compared (school within school/main campus) using chi-squared testing in 4 schools.
- Bergeron, L. & Bogdan, C. (2019). Critical thinking and end of course findings: An exploration of practical significance and statistical significance. Internal Report. New Tech Network, Napa, CA.
 - Statistical significance was evaluated using the GLM function for Repeated Measures comparing pre- and post-test scores (68 10th grade students and 49 4th grade students).
- Hinnant-Crawford, B. (2020). New Tech Network Comparative Analysis: Academic Outcomes in Texas Addendum. Cullowhee, NC: Western Carolina University.
 - OLS Regression and multi-level modeling (9 NTN, 53 non-NTN schools) was used to evaluate the impact on English II performance.
- Hinnant-Crawford, B. & Virtue, E. (2019). New Tech Network Comparative Analysis: Non-Academic Outcomes in Three States. Cullowhee, NC: Western Carolina University.
 - Concurrent triangulation mixed method design collected site visit and survey data from nine schools (5 NTN/4 non-NTN) and 253 students (NTN =149/Non-NTN 105).

