EVIDENCE OF NEW TECH NETWORK IMPACT: SUMMARY REPORT

NEW TECH NETWORK STUDENTS HAVE A RIGOROUS ACADEMIC EXPERIENCE AND OUTPERFORM NON-NTN STUDENTS

NEW TECH NETWORK (NTN) STUDENTS

NTN students outperform non-NTN students and demonstrate workforce readiness skills.1 New Tech Network students:

- outperformed on SAT/ACT,2 and state exams3 in English, Math, Biology, English Language Arts, and Algebra
- made statistically significant gains in critical thinking4
- report stronger instructional methods5 than non-NTN students

Middle school is pivotal in establishing a strong academic pipeline because disengagement from school that leads to dropping out often begins in middle school. Increased student engagement has been demonstrated to increase the likelihood of graduating high school and enrolling in college.7

Statistically significant survey results demonstrate that NTN students are more engaged in:

- innovative technology use in their classrooms
- investigations of real-world problems
- communicating to external audiences
- peer feedback and collaboration
- data analysis
“While learning may represent the acquisition of new knowledge, growth implies the transformation of knowledge into the development of the individual. Growth is qualitative change, movement to a new level of understanding, the realization of a sense of efficacy not previously enjoyed.”

NEW TECH NETWORK SCHOOLS

NTN schools have higher 4-year high school graduation rates, and students demonstrate college and career readiness success.

New Tech Network PBL enables increased access and opportunity for underrepresented STEM students.

NEW TECH NETWORK PROFESSIONAL DEVELOPMENT AND COACHING

New Tech Network professional development and coaching enables professional growth that challenges the established “rhythm” of schooling, and requires reflection on beliefs, values, identity, and mindsets.

New Tech Network professional development and coaching:

- enables authentic elementary student learning environments
- supports and sustains adult shifts over time
- provides consistent high quality virtual and in-person adult learning experiences
- provides specific benefits, including:
  - Project creation
  - Tools and resources
  - Application to practice
REFERENCES AND STUDY NOTES


- NTN elementary case study


- Mixed methods study using an extensive literature review, interviews, surveys, observations of events, and document analysis


- Quantitative analysis using National Student Clearinghouse data for ten NTN schools


- Percentage of students who met standard in each of the three performance bands were compared using chi-squared testing.


- A chi-square test of independence was performed to examine the relationship between the intervention and EOC performance.


- Change over time was evaluated for statistical significance using the GLM function in SPSS for Repeated Measures comparing pre- and post-test scores.


- Explanatory quantitative case study research design using the Insight Assessment Educate Series (formerly the California Critically Thinking Skills Test) for 4th grade with testing for statistical significance in the change scores and the Youth Truth Student Experience Survey for grades 3–5 with comparative analysis using ordinal regression.


- Mixed methods survey research study


- Quantitative case study


- Multisite nested case study approach using exemplar cases


- Secondary data analysis with OLS Regression and multi-level modeling

(9 NTN, 53 non-NTN schools) was used to estimate the impact of New Tech Network on academic student outcomes.


- 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).


- Multiple instrumental case study with subsequent cross case analysis


- Mixed methods and comparative multi-case study design


- Quasi-experimental design (QED)


1 Stocks, Odell, and Culclasure, 2019
2 Gordon and Bergeron, 2018, Stocks, Odell, and Culclasure, 2019
3 Bergeron, 2019; Gordon and Bergeron, 2018; Lynch et al, 2018; Bergeron, 2019; Bergeron and Bogdan, 2019a; Stocks, Odell, and Culclasure, 2019; Hinnant-Crawford, 2020
4 Bergeron and Bogdan, 2019b; Bergeron, et al, 2019
5 Bergeron, Boesche-Taylor, Gehrke, Dugan-Knight, Kamdar, Vorise Wilka, and Gittens, 2019
6 Muller and Hiller, 2020
8 Hinnant-Crawford and Virtue, 2019
9 Gordon and Bergeron, 2018; Bergeron, 2017
10 Bergeron, 2017; Gordon and Bergeron, 2018; Lynch, Peters Burton, Behrend, House, Ford, Spillane, Matray, Han, Means, 2018; Stocks, Odell, and Culclasure, 2019, Bergeron, 2019
11 Hernandez, Darling-Hammond, Adams, and Bradley, 2019
12 Barnett and Kim, 2020
13 Ancess and Kafka, 2020
14 Bergeron, 2019; Bergeron, Boesche-Taylor, and Bogdan, 2021
15 Duke, 1993