

THE PEER-REVIEWED EVIDENCE OF NTN IMPACT



New Tech Network

Practitioners and stakeholders are increasingly asking for impact research that is tailored to their school contexts, produced quickly, and is cost effective, while also being rigorous enough to meet standards for evidence. This demand for evidence of efficacy not only comes from policy and regulation, but also from parents/guardians and community stakeholders who are increasingly asking for evidence about what will work in their context (NEA, 2008; PACER, 2011; Schneider & Buckley, 2002). Peer-review is the cornerstone of scientific activities, including social sciences, and utilizing the scrutiny of experts to assess the validity and suitability of research drives the field forward and empowers consumers of research with evidence that has undergone quality control review.

PEER REVIEWED EVIDENCE DOCUMENTS THE FOLLOWING:

- » **NTN students outperform on state exams** (Gordon & Bergeron, 2018; Lynch et al., 2018; Bergeron, 2019; Stocks, Odell, & Culclasure, 2019)
- » **NTN students outperform on ACT and SAT** (Gordon & Bergeron, 2018; Stocks, Odell, & Culclasure, 2019)
- » **Higher 4-year high school graduation rates** (Gordon & Bergeron, 2018; Bergeron, 2017)
- » **College and career readiness success in high-poverty communities** (Bergeron, 2017; Gordon & Bergeron, 2018; Lynch et al., 2018; Stocks, Odell, & Culclasure, 2019; Bergeron, 2019)
- » **NTN graduates demonstrate workforce skills** (Stocks, Odell, & Culclasure, 2019)
- » **NTN PBL is a pathway for developing problem solving, critical thinking, grit, and equity pedagogies** (Lynch et al., 2018; Bergeron et al., 2019; Hinnant-Crawford, Virtue, & Bergeron, 2019)
- » **NTN PBL enables increased access and opportunity for underrepresented STEM students** (Lynch et al., 2018)
- » **NTN students report stronger instructional methods than non-NTN students** (Bergeron et al., 2019; Bergeron, Dugan-Knight, Kamdar, Vorse Wilka, Boesche-Taylor, 2019)

Detailed descriptions are available on the NTN website:
newtechnetwork.org/resources/new-tech-school-model-efficacy-and-effectiveness

EXPANDED DETAILS UNDERPINNING THE CLAIMS:

- » NTN PBL is strengthening student problem solving capabilities while enabling equity pedagogy. Equity pedagogy in conjunction with NTN project-based learning is a viable pathway for preparing students to define problems, investigate and determine fact from fiction, as well as formulate and execute solutions (Hinnant-Crawford, Virtue, & Bergeron, 2019).
- » NTN students consistently and significantly outperformed non-NTN students on biology and English Language Arts end of course exams in Texas (Bergeron, 2019).
- » Significantly more NTN students compared to similar non-NTN students met the “approaches performance band” criteria for all subject areas (algebra, biology, English Language Arts) (Bergeron, 2019).
- » NTN schools serving high poverty student populations (40% or more FRL) have higher high school graduation rates (93%) than the national average for similar schools (75%). For every 100 NTN students, 93 graduate and 55 enroll in college. Nationally, for every 100 students, 75 graduate and only 44 enroll in college (Bergeron, 2017).
- » NTN students reported stronger “instructional methods,” the extent the teacher uses techniques that probe for understanding and provide effective supports, than non-NTN students (Bergeron, Dugan-Knight, Kamdar, Vorse Wilka, Boesche-Taylor, 2019, April).
- » NTN schools significantly improved NTN students’ academic achievement, as measured by composite ACT scores (English, mathematics, reading, and science) and significantly improved students’ critical thinking skills, mathematical reasoning skills, and workforce problem solving techniques, as measured by ACT WorkKeys Applied Mathematics scores (Stocks, Odell, & Culclasure, 2019).
- » NTN students exceeded the number of AP exams compared to the national average (Gordon & Bergeron, 2018).
- » NTN schools have success in high poverty communities: outperforming statewide averages in math and English Language Arts, higher on-time graduation rates, enrolling in college at higher rates, and outperforming the national average on both the math and reading components of the SAT (Gordon & Bergeron, 2018).
- » NTN elementary students made significant gains in critical thinking (Bergeron et al., 2019).
- » NTN project-based learning created an instructional environment that positively impacted student learning, relationships, and technology use (Lynch et al., 2018).
- » NTN PBL implementation enabled access for traditionally underrepresented students to high quality STEM curriculum, instruction, and learning environments designed to build STEM social capital, dispositions, knowledge, and skills necessary for success in STEM study and careers (Lynch et al., 2018).

REFERENCES

- Bergeron, L. (2017, February). Examining Student Outcomes in New Tech Network Title 1 Eligible Schools. Paper presentation at the annual conference of the Eastern Educational Research Association, Richmond, VA.
- 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.
- Bergeron, L., Boesche-Taylor, B., Gehrke, A., Dugan-Knight, M., Kamdar, S., Vorse Wilka, J., & Gittens, C. (2019, March). A multifaceted examination of deeper learning in PBL elementary schools: school culture, critical thinking, and access to opportunity. Paper presented at the annual meeting of the Society for Research on Educational Effectiveness, Washington, DC.
- Bergeron, L., Dugan-Knight, M., Kamdar, S., Vorse Wilka, J., Boesche-Taylor, B. (2019, April). An Exploration of the Role of Likert Items in School-Based Survey Analysis. Paper presentation at the annual conference of the American Educational Research Association, Toronto, Canada.
- Gordon, M. & Bergeron, L. (2018, November). Using Different Data Sources to Address the Same Research Questions: Evaluating the Effectiveness of New Curriculum on Student Outcomes. Presentation at the California Education Research Association annual meeting, Anaheim, CA.
- Hinnant-Crawford, B., Virtue, E., & Bergeron, L. (2019, April). Equity Pedagogy and Project-based Learning as Instructional Weapons in a Post-Truth Era. Paper presentation at the annual conference of the American Educational Research Association, Toronto, Canada.
- Lynch, S. J., Peters Burton, E., Behrend, T. House, A., Ford, M. Spillane, N., Matray, S., Han, E., Means, B. (2018). Understanding Inclusive STEM High Schools as Opportunity Structures for Underrepresented Students: Critical Components. *Journal of Research in Science Teaching*, 55, 712-748.
- National Education Association (NEA), NEA Education Policy and Practice Department, Center for Great Public Schools. (2008). NEA Policy Brief: Parent, Family, Community Involvement in Education.
- National Parent Technical Assistance Center (PACER). (2011). *Evidence-Based Practices at School: A Guide for Parents*. Minneapolis, MN: PACER Center.
- Schneider, M. & Buckley, J. (2002). What Do Parents Want from Schools? Evidence from the Internet. *Educational Evaluation and Policy Analysis*, 24, (2), 133-144.
- Stocks, E., Odell, M., & Culclasure, B. (2019, April). The Effect of the New Tech Network Design on Students’ Academic Achievement and Workforce Skills. Paper presentation at the annual conference of the American Educational Research Association, Toronto, Canada.



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