



Evidence of Positive Impact of NTN on Agency, Engagement, and Rigorous Learning in Middle School

RESEARCH METHODS

Data Collection

Mixed methods are used to explore the impact of NTN on student non-academic outcomes using a comparative, multi-case study design.

The study included two primary data collection methods: administration of the Middle Grades Survey of Student Engagement (MGSSE) to both NTN schools and demographically similar students in matched comparison non-NTN schools; and site visits to each NTN middle school, including interviews with teachers and school administrators, and classroom observations. Qualitative site visit data was used to triangulate findings from the quantitative analyses, and to provide a deeper understanding of the ways NTN impacts students' middle grade education.

Data Analysis

To examine the differences between NTN middle grade students and non-NTN middle grade students in student engagement and student agency, multiple regression models were examined for these four constructs (i.e., 3 dimensions of student engagement, and student agency).

Center for Evaluation, Policy, & Research at Indiana University (CEPR)

Research was conducted by CEPR, led by Patricia Muller, PhD and Stephen Hiller. CEPR at Indiana University conducts rigorous, high-quality, and non-partisan evaluation, policy analyses, and research.

THE SURVEY

Dimensions of student engagement and agency were measured using the Middle Grades Survey of Student Engagement (MGSSE) developed by the Center for Evaluation and Education Policy at Indiana University.



Cognitive Engagement: cognitive growth, level of effort in academic pursuits, and attitude toward learning



Social Engagement: students' involvement in non-academic school activities and interactions with other students



Emotional Engagement: motivation for learning, positive relationships with adults in school, and positive relationships with other students



Student Agency: student ownership, autonomy in their own learning, growth mindset

RESULTS

Multiple regression controlling for differences among students¹ for each of the three dimensions of student engagement indicate that **attending a NTN school is significantly related to higher student engagement** in all three dimensions and higher student agency.

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.²

¹ Gender, race-ethnicity, grade level, students' self-reported grades, and their parent or guardians' highest level of education

² see Trobst, S., Kleickmann, T., Lange-Schubert, K., Rothkopf, A., Moller, K., Trobst, S., & Moeller, T. (2016). Instruction and Students' Declining Interest in Science: An Analysis of German Fourth- and Sixth-Grade Classrooms. *American Educational Research Journal*, 53(1), 162-193. * Orthner, D. K., Cook, P., Rose, R., & Randolph, K. A. (2002). Welfare reform, poverty, and children's performance in school: Challenges for the school community. *Children & Schools*, 24, 105-121. * Blafanz, R., Fox, J., Bridgeland, J., & McNaught, M. (2009). *Grad nation: A guidebook to help communities tackle the dropout crisis*. * Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, 74, 59-109.

NTN MS students report more frequent authentic and rigorous learning

NTN students reported more frequent engagement in authentic learning activities:

- » projects requiring them to interact with people outside their school
- » connecting ideas across classes and subjects
- » applying school-based knowledge to everyday life
- » understanding why what they are learning in school will be important in life
- » more class presentations
- » collaboration
- » creative writing

NTN students were more likely to report a more rigorous learning environment in which they:

- » are challenged in their classes
- » give their maximum effort
- » enjoy working on tasks that require a lot of thinking
- » use technology to gather and communicate information
- » are curious to learn more through their school work
- » felt good about being in their school
- » cared about their school
- » felt safe in their school
- » believe their school's rules are fair

The NTN model is credited with fundamental shifts to authentic learning and problem solving

The vast majority of NTN MS teachers and school administrators noted the shift to authentic learning:

“It [the NTN model] lets students see how school and the real world actually come together and that what they are learning really is relevant.” - NTN Teacher

“A major benefit is having authentic things that they are working towards...They use each of them together and the subjects are not independent silos.” - NTN Teacher

NTN teachers also noted that the NTN model allowed for creativity in problem-solving, noting, for example that students “come up with ideas I never would have thought of for products...”

“Problem solving is critical because in PBL it's about figuring it out, and that deeper questioning happens easier, and then that helps them, no matter what career field they go into, or even just life beyond...” - NTN School Director



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