

CASE STUDY

TRANSFORMING AP CULTURE AND OUTCOMES IN TEXAS SCHOOL DISTRICTS

Ector County Independent School District and Midland Independent School District both serve diverse student populations and, like many districts across Texas, faced unique challenges. Both districts had established Advanced Placement (AP) programs but struggled with barriers to access, low test scores, and a need for consistent teacher training, particularly following disruptions caused by COVID-19. Recognizing the need for targeted support to strengthen their AP offerings and to build a sustainable culture around advanced coursework, Midland ISD and Ector County ISD partnered with the National Math and Science Initiative.

In 2019, with initial funding from one of our philanthropic partners, NMSI began providing targeted professional development for teachers in both districts. By 2021 both districts had fully integrated NMSI's services, committing to additional support in humanities and STEM courses.



Throughout the partnership, both districts participated in NMSI programming, which provided comprehensive support for educators and students. This included Summer Content Workshop, Back to School Workshop, and both Fall and Spring trainings. Additionally, in the 2023-24 academic year they benefited from the Winter Workshop, which is now known as AP Exam Review Training. These targeted professional development opportunities equipped educators with the strategies and resources needed to enhance STEM instruction and student success.

BUILDING A PATHWAY TO SUCCESS

Both districts encountered **challenges** that NMSI was dedicated to addressing.

Inconsistent Access to AP Coursework

Limited pathways and inconsistent access restricted opportunities for students to engage in AP courses, particularly those furthest from opportunity.

Fluctuating Student Enrollment

Due to economic shifts, student enrollment varied significantly, impacting teacher continuity and program sustainability.


COVID-19 Disruptions

The pandemic hindered in-person training and the district's ability to build momentum within their AP programs.

AP Program Culture

Both districts needed strategies to foster a robust AP culture where students view AP courses as attainable, valuable, and aligned with their college aspirations.

To address these challenges, NMSI implemented [a suite of targeted services](#) under the Teacher and School Leader Training category. The impact of School Leader Coaching was evident in its targeted approach to addressing key challenges. Regular meetings focused on data tracking and analysis, refining recruitment strategies, removing barriers to access, and optimizing course sequencing. Although Ector and Midland did not receive district-level services, both benefited from strong district support. District leaders were actively engaged in school-facing meetings, participated in STEM Leadership workshops, and frequently connected outside of the scheduled sessions to explore additional ways to support their campuses. This collaborative effort reinforced a shared commitment to student success and strengthened the overall implementation of NMSI's initiatives.



Following the launch of this partnership, both districts have seen measurable **improvements** across key areas.

Increased AP Enrollment and Success: AP enrollment and qualifying scores rose substantially in both districts, reflecting the impact of NMSI's training on students' readiness and engagement in rigorous coursework.

Positive Shift in AP Culture: With increased recruitment and support, both students and teachers now view AP as a reachable goal, creating a more inclusive and motivating culture and advanced coursework.

Enhanced Teacher Expertise and Instructional Quality: Teachers gained confidence and effectiveness in using evidence-based instructional strategies, lesson planning, and scaffolding to meet diverse needs.

Strengthen STEM Leadership: District and school leaders emerged as champions for STEM education, leveraging best practices to promote access to AP coursework, particularly for students furthest from opportunity.

MEASURING SUCCESS ACROSS ECTOR COUNTY ISD AND



Photo Credit: Ector

ECTOR COUNTY ISD

Over three years between 2021 and 2023, student engagement with AP exams in Math, English and Science saw a dramatic transformation. In 2021, 528 students took exams; by 2023 that number had surged to 768, a remarkable 45% increase. While overall AP exam enrollment declined slightly from 1,109 in 2021 to 974 in 2023, the number of students achieving qualifying scores grew significantly, rising from 79 to 135, an impressive 71% increase.

This upward trend reflects a culture of academic ambition, with more students challenging themselves in preparation for college and career success. It underscores the dedication of educators, and the resilience of students, and the impact of NMSI's programs in expanding access to rigorous coursework.

With the 2024-25 school year already underway, 1,345 students have taken AP exams; that's a 75% increase from the previous year's 768. Furthermore, 245 students have earned qualifying scores, continuing the positive momentum and demonstrating the growing effectiveness of NMSI's support in fostering student achievement.

MIDLAND ISD

In just two years, AP enrollment in Midland ISD showed steady growth, increasing from 982 students in 2021 to 1,054 in 2022 and 1,055 in 2023. More significantly, the number of students achieving qualifying test scores on AP exams (Math, English, and Science only) has seen a remarkable surge, rising from 187 in 2021 to 333 in 2023, a staggering 78.1% increase. This progress is a testament to the hard work of students, the dedication of teachers, and the impact of targeted support through district and school initiatives.

Midland ISD continues to build on this momentum in the 2024-25 school year, with a 38% increase in exams taken compared to the previous year. This growth is accompanied by a substantial rise in student achievement: 528 students earned qualifying scores, a significant jump from 333 in the previous year. This continued success underscores the district's commitment to expanding access, increasing student readiness, and fostering a culture of academic excellence.



Photo Credit: Midland ISD

From 2021-2024 NMSI partnered with 3 schools within Ector County ISD and 3 schools within Midland ISD.

SCHOOL LEADER TESTIMONIALS

Abel Avila describes his experience with NMSI's Professional Development Services as transformative for his campus's AP pathway development.

"The services provided help me focus on my campus's mission and vision," Avila shared, emphasizing how the support encourages reflection on the school's progress and future goals.

Avila also highlighted the collaborative nature of NMSI's Summer Workshops, which allows educators to network with peers from other schools. This exposure has been instrumental in fostering a sense of shared purpose and innovation.

One notable impact of NMSI's services, according to Avila, has been the data-driven approach.

"NMSI provided me with a template to look at the campus more holistically. Data tracking is one key factor that has helped us progress on our campus," he said.

Ellen Boyd's experience has been equally positive. **"My live experience has been outstanding!"** she shared. The opportunity to learn and exchange ideas with educators nationwide has provided invaluable insights into diverse teaching strategies and practices.

Boyd appreciates the broader perspective gained through NMSI's Professional Development Services, noting that it **"lets us see what the rest of the world is doing."** This exposure has reinforced her ability to bring innovative approaches to her own classroom and department, ultimately enhancing the educational experience for her students.



PREPARING OUR FUTURE LEADERS

The transformation seen in Ector County ISD and Midland ISD school districts exemplifies **NMSI's mission to advance STEM education and expand access to high-quality learning opportunities for all students.** By equipping educators with the tools and training they need to succeed, NMSI empowers districts to build sustainable pathways to student achievement and create a culture where all learners can thrive.

**Discover your classroom's unlimited potential with
National Math and Science Initiative!**

Visit **nms.org** to learn more or contact us at **customerservice@nms.org**