



The Broadband Student Performance Gap:

Merit Partners with Quello Center on Research Study

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When it comes to K12 students, disparities in broadband Internet access have often been referred to as the “homework gap.” This lack of access diminishes the capacity of students to succeed in the increasingly knowledge and information-based economy of the twenty-first century. Research and education networks (R&Es) are ideal catalysts to convene collaborations surrounding the innovative technologies required for expanding broadband accessibility. Many R&Es have decades of experience in network operations and have built long standing relationships with a broad landscape of community anchor institutions. In addition, R&Es play a critical role in spreading education and awareness of the digital divide to state and federal policy makers, support strong relationships with vendors in a centralized capacity and foster public-private partnerships through the lens of a nonprofit.

The Quello Center at Michigan State University, in partnership with Merit Network and M-Lab, studied the consequences of poor and absent home broadband access for the academic achievement of students in rural Michigan school districts. Many students in rural areas do not have Internet or depend on cell phones for Internet access because they live in small towns, rural areas, and on farms that do not have an infrastructure for broadband. The aim of this study, which began in 2019, was to understand how home Internet access is

related to students’ homework completion, digital skills, grades, standardized test scores, interest in postsecondary education, and career goals. This groundbreaking study reveals that the “homework gap” is part of a much broader “performance gap” with repercussions not only for school achievement but lifelong opportunities.

Findings show that a lack of broadband and dependence on cell phones for home Internet is leaving rural Michigan students behind. Students who do not have home Internet access perform lower on a range of metrics. These differences exist regardless of gender, race and ethnicity, parental income and education, and whether the student has an individualized education plan (IEP). **Middle and high school students with high-speed Internet access at home have more digital skills, higher grades, and perform better on standardized tests like the SAT.**

Students who rely on a cell phone for Internet access outside of school experience gaps in performance that are as large or larger than those with no home Internet access. Unlike their peers, students who are dependent on a cell phone for Internet access outside of school, rely on smaller screens with slower devices, have access to content with fewer features, and need to monitor data caps and recharge prepaid phone plans.

This research substantiates that a lack of Internet access impedes the development of critical skills needed to competently participate in the digital economy. Consequently, entire regions that lack Internet access, either as a result of unaffordability, not knowing the benefits of connectivity, or missing infrastructure, may be lastingly disadvantaged.

To learn more about the study or to access broadband-related resources, visit Merit.edu/Moonshot.

For the complete Quello Center K12 Findings Report, visit:

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