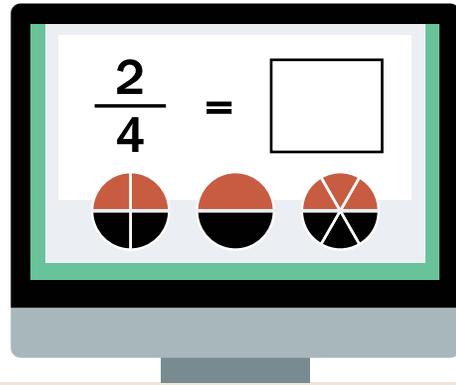


Successful integration of educational technology to improve student achievement requires more than a commitment to buy and share resources

The United States invests billions of dollars into education technology annually, with the goal of increasing student engagement and achievement.^{1,2}



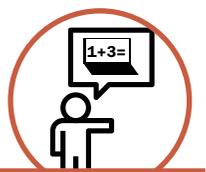
Integration takes time and involves sustained efforts from individuals and organizations at multiple levels (for example, education service agency, district, school, or classroom).

It can take districts implementing new technology programs **several years** to achieve teacher practice changes and technology goals.³

Some challenges include⁴



Knowledge and skills for effective technology integration.



Teachers' and school leaders' lack of vision about how to use it.

To successfully integrate technology, schools should focus on the following about the role technology can play in improving student learning.⁵



Professional learning opportunities.



Organizational support.



Shift in school culture.

References

¹ Argueta, R., Huff, D. J., Tingen, J., & Corn, J. O. (2011). *Laptop initiatives: Summary of research across six states*. Raleigh, NC: North Carolina State University, Friday Institute for Educational Innovation. Retrieved from <https://www.fi.ncsu.edu/wp-content/uploads/2013/05/laptop-initiatives-summary-of-research-across-seven-states.pdf>

² Schacter, J. (1999). *The impact of education technology on student achievement: What the most current research has to say*. Santa Monica, CA: Milken Exchange on Education Technology. <https://www.fi.ncsu.edu>

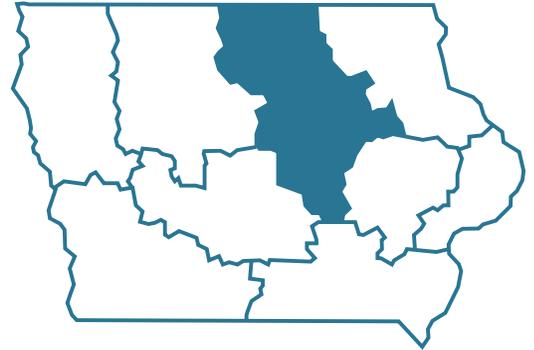
³ Shapley, K. S., Sheehan, D., Maloney, C., & Caranikas-Walker, F. (2010). Evaluating the implementation fidelity of technology immersion and its relationship with student achievement. *Journal of Technology, Learning, and Assessment*, 9(4). <https://www.fi.ncsu.edu>

⁴ Vatanartiran, S., & Karadeniz, S. (2015). A need analysis for technology integration plan: Challenges and needs of teachers. *Contemporary Educational Technology*, 6(3), 206–220. <https://eric.ed.gov/?id=EJ1105647>

⁵ Staples, A., Pugach, M. C., & Himes, D. J. (2005). Rethinking the technology integration challenge: Cases from three urban elementary schools. *Journal of Research on Technology in Education*, 37(3), 285–311. <https://eric.ed.gov/?id=EJ690973>

The goal of the Iowa NIC is

To bring together rural districts in Iowa to engage in continuous improvement research activities and identify effective ways of integrating technology into teacher practice.



Participants in the NIC include staff from rural Iowa high schools and the Central Rivers Area Education Agency (AEA).

Projects

For more information about the NIC and associated projects, please visit <https://ies.ed.gov/ncee/edlabs/regions/midwest>.

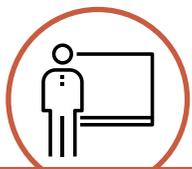
Regional Educational Laboratory (REL) Midwest researchers and NIC members collaborate on research, training and coaching, and communications projects to support the goals of the NIC and add evidence to the field.



Research

Analyzing surveys of technology use in rural high schools.

The purpose of this study is to describe the current technology integration practices and perceptions in rural high schools in Iowa, and to identify problems of practice related to technology use. It draws upon survey data collected from teachers and students in high schools in the region served by the Central Rivers AEA. The study addresses the following research questions: What benefits do teachers see in their use of technology? And what factors do teachers most frequently cite as impeding technology integration into instruction? NIC members will use the survey findings to inform technology integration policies and efforts to support technology-based instruction in rural schools.



Coaching

Providing in-depth coaching to support the Iowa NIC.

The Iowa NIC is interested in increasing the level of technology integration in high school instructional practice. In response to this need, REL Midwest is coaching the Iowa NIC through a continuous improvement research cycle and building its capacity to collect and analyze data to inform changes in practice. Coaching sessions focus on conducting a root-cause analysis, developing a theory of action, identifying drivers and interventions, determining outcome measures and baseline data, and interpreting the outcome data from two Plan-Do-Study-Act cycles. The NIC will use these coaching sessions to identify, test, and refine strategies that are designed to result in increased technology integration.



Engaging our region.

Connecting and sharing research, training, and coaching projects with stakeholders and practitioners is critical to the Iowa NIC's goal of integrating technology into instructional practice.

Some of our engagement efforts include an [e-newsletter](#) highlighting NIC work and a partnership with Iowa Public Television to produce a [documentary-style program](#) focused on the research on technology use in schools, with examples from Iowa.

For more information

visit us at
<https://ies.ed.gov/ncee/edlabs/regions/midwest>

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