

EdTech Genome Project: Educator Action Steps

Learn about your context to improve edtech success in your school or district.

Why does this matter?

Context matters deeply when it comes to implementing edtech products and services. Things that work well in some schools often fail to gain traction in other schools. Why? Because our schools and districts (i.e., our contexts) vary from each other.

Recently, a nonprofit organization led by University of Virginia researchers organized a coalition of educators and education stakeholders to reach consensus on which 10 context variables appear to matter most for edtech implementation success or failure. They also developed new measurement instruments that we can all use to better understand our contexts.

Context Variables



What should educators do?

1. Read the [EdTech Genome Report](#) for comprehensive definitions of each variable. Then, initiate important conversations with your district- or school-based team:
 - Which of these variables are our strongest/ weakest? Why?
 - How has our strength/ weakness related to those variables affected our past attempts to implement edtech tools?
 - Which variable would be the easiest to improve? Who can we work with to help us improve on these variables?
2. Visit edtechevidence.org to get involved and access edtech implementation wisdom from schools and districts across the country that are similar to yours in the ways that matter most.

Definitions of Context Variables

- 1. The vision for teaching and learning** unifies stakeholders with clear direction, purpose, and rationale for technology-supported learning. A high-quality vision is forward-thinking and actionable, and to have effect, must be consistently communicated and referenced as a guide for action. Visioning helps schools and districts recognize opportunities for technology to address problems of practice, prioritize equity, and plan for technology integration that promotes student learning opportunities. Visions describe the ideal state of teaching and learning for all students in which digital technologies transform daily life.
- 2. Selection processes** occur prior to procurement and are the presence and quality of consistent methods through which classrooms/schools/districts/states identify, evaluate, and choose education technology to meet established student and teacher needs for learning and instruction. This includes methods for: Identifying technologies; Evaluating technologies; Choosing technologies for procurement.
- 3. Teacher agency** is the extent to which teachers consistently have a voice in shaping their work and the conditions and tools for that work. Regarding education technology implementation, this is the extent to which the conditions for agency are in place and a variety of teachers are consistently involved in decision-making related to shared visioning, selection processes, implementation processes, infrastructure, and professional learning.
- 4. Infrastructure and operations** are the enabling conditions that lower barriers for implementation, facilitate uptake, and support scaling and sustaining new education technology. These conditions include physical resources, broadband Internet connectivity, students' remote devices and connectivity, human resources, system specifications, operational policies, and funding.
- 5. Implementation systems and processes** occur after procurement and are the presence and quality of methods through which school communities put education technology into effect over time to achieve intended outcomes. This includes mechanisms for monitoring ongoing fit with current initiatives, conducting resource inventories, monitoring the ongoing use of the technology as it was designed, making systemic adjustments as needed, and documenting evidence of impact on target outcomes.
- 6. Staff culture** refers to the set of beliefs, values, norms, and assumptions that are shared collectively by the school and/or district staff and that influence the way in which staff members work individually and collaboratively to fulfill the school's shared vision for teaching and learning. Important facets of staff culture include trust, social capital, communication, and equity.
- 7. Teacher beliefs and knowledge** is individual teachers' perceived ability to use education technologies and integrate them into their practice. This variable combines (1) teachers' beliefs about, knowledge about, and experiences using education technology and (2) teachers' understanding of curriculum, instruction, and assessment. Together, these elements interact to enable the comfort and flexibility necessary to use education technologies effectively and appropriately in different learning settings.
- 8. Strategic leadership support** is the extent to which district and school leaders provide explicit encouragement and guidance to staff who are selecting and implementing education technology tools. This support sets and communicates a vision, develops staff, and aligns technology implementation with the district instructional plan.
- 9. Professional learning** is the presence, duration, and quality of a range of intentional, adult learning activities that support the effective integration of education technology to advance student learning and outcomes. This includes both formal and informal opportunities that lead to shifts in beliefs, knowledge, skills, and practices related to technology integration.
- 10. Competing priorities** are the extent to which a school or district has other prioritized initiatives that impact the available time and attention for new technology implementations. The presence of competing priorities is influenced by limited instructional time, limited preparation time, overlapping initiatives, and inconsistent prioritization.