Inspire Student Success With Effective Educational Technology: Utilize Research to Shape Instruction
How to Effectively Use Technology for Classroom Instruction

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Inspire Student Success
with Effective Educational Technology

Utilize Research to Shape Instruction

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The Challenge with Technology

It is often difficult to draw conclusions about the effectiveness of technology.
Educational Technology

SOFTWARE

HARDWARE

PROCESS

PRODUCT
Live Audience Poll

When you hear the word “research,” what do you think?

• It’s great! I love research. It helps me find strategies and practices that work.
• It’s okay. Most research doesn’t apply to my specific situation and seems out of touch with everyday classroom realities.
• I might like research if I had more time and it was easier to read and understand.
• I hate research—why does it have to be so hard and complicated?
Twenty-First Century Goals in Education

Primary Goal: Successful students

Secondary Goal: Educational technology that leads to student achievement

Tertiary Goal: Prepare students for twenty-first century jobs
How do we achieve this goal?

Effectively apply EdTech research findings in our classrooms.
Types of Technology Integration

- Online Learning and Blended Learning
- Game-Based Learning and Assessment
- Learning with Mobile and Handheld Devices
- Instructional Tools
- Web-Based Projects, Explorations, and Research
- Student-Created Media
- Collaborative Online Tools
- Social Media
- Project-Based Activities
- Incorporating Technology
Types of Technology Integration: SAMR

Redefinition
Tech allows for the creation of new tasks, previously inconceivable.

Modification
Tech allows for significant task redesign.

Augmentation
Tech acts as a direct tool substitute, with functional improvement.

Substitution
Tech acts as a direct tool substitute, with no functional change.

2012 • Dr. Ruben PuenteDura
Levels of Technology Integration

- Sparse
- Basic
- Comfortable
- Seamless

Mary Beth Hertz, “What Does ‘Technology Integration’ Mean?”
Four Biggest Mistakes with Technology Integration

- Technology before pedagogy
- Technology as a toy
- Technology to fill time
- Not utilizing the technology available

Craig Kemp, “The 4 biggest mistakes that teachers make when integrating technology”
The problem is not a lack of information – we have tons of information and research on educational technology. The problem is how to sift through the massive amount of information and find the genuine knowledge.
Research on Technology

- POPULATION
- CONTEXT
- PURPOSE
- SPECIFIC TECHNOLOGY
Live Audience Poll

When you are researching an educational topic, where do you go first?

• Google
• Trusted colleague or administrator
• Academic research journal (i.e., *Computers & Education, Educational Researcher*)
• Practitioner journal (i.e., *The Reading Teacher, Kappa Delta Pi*)
• Favorite blog, website, or other resource
Reality:
Most teachers don’t use research.
Reason # 1

Time

• Teachers don’t have time to sift through and read research.

• “…there’s a lot of time spent just trying to understand what the research is about before you even get around to thinking about how you can apply that to your classroom” (Source: MacLellan, 2016)

• Many teachers explore and discover research on technology through their colleagues or through social media.
Reason # 2
Language

- Research articles are often dense and difficult to read.

- Academic vocabulary and tone makes the research hard to comprehend.

- “I need a translator just to understand what [the] article is saying!”
  (MacLellan, 2016)
Reason # 3

Relevance

• Research on technology is often theoretical.

• Research often focuses on irrelevant populations or contexts.

• Teachers want and need descriptions and examples of successful implementations of the intervention or technology.
Reason # 4

Accessibility

• Teachers can find research articles on the Internet; however, there is often a paywall or costs associated with accessing the article.

• Academic and trade journal subscriptions can be very expensive.
Reason # 5

Trusted Sources

• Teachers’ and researchers’ criteria for sources are dissimilar.
  • Teachers look for applicability and usability to determine credibility.
  • Researchers look for methods, validity, and reliability to determine credibility.

• Teachers trust research that comes from colleagues, administrators, and researchers with classroom experience.

Source: American Institutes of Research, 2011
Teachers aren’t opposed to using research: rather, they indicated that as long as certain conditions and criteria are met, research is or can be informative to their instructional practice.

— American Institutes for Research
How can leaders inspire teachers to use research on EdTech?
Strategy # 1

Filter the Research

• Find the most relevant and applicable research for your school and population.

• Make sure it’s from a trustworthy source.

• Communicate the research effectively.
Strategy # 2

Provide Examples

• Emphasize how teachers can use the technology to meet the needs of their students.

• Provide opportunities to practice the new technology.

• Look for user-friendly technology for easier implementation.
Strategy # 3

Provide Time

• Create structured time for teachers to access research on technology and collaborate with colleagues (i.e., PLC, book study).

• Integrate research into committee meetings, departmental meetings.
Strategy # 4

Professional Development

• Focus on technology research that is specific to your school and population.

• Focus on research that has immediate, practical applications.

• Provide hands-on training.
Strategy # 5

Make Research Accessible

• Devote a section of the school library or the faculty lounge to highlight or share research.

• Make a commitment to financially support journal subscriptions, books, and workshops.

• Send links to research on technology found on trusted sources on social media.
Research on Istation

Istation’s Assessment and Instruction:

• Over 4 million users across the globe

• 4 statewide adoptions

Research Questions

• What effects does the Istation reading program have on the literacy learning of early learners?

• Is this learning significantly different than that of comparable children in classrooms without the Istation program?

Findings

• Istation had a statistically significant effect on the early literacy learning of the participants.

• Istation was particularly effective in instructing young students on letter-sound knowledge and hearing and recording sounds.

• Almost 18% of the variance in group differences between students who used Istation and students who did not use Istation could be attributed to the use of Istation.

Communicating Research to Teachers

• Provide examples of how others have integrated Istation into their classrooms.

• Utilize staff development to explore all aspects of Istation.
Among the 50 largest school districts

Albuquerque Public Schools (NM)
Austin Independent School District (TX)
Brevard Public Schools (FL)
Clark County School District (NV)
Cobb County School District (GA)
Cypress-Fairbanks Independent School District (TX)
Dallas Independent School District (TX)
Dekalb County Schools (GA)
Denver Public Schools (CO)
Duval County Public School (FL)
Fort Worth Independent School District (TX)
Fresno Unified School District (CA)
Houston Independent School District (CA)
Los Angeles Unified School District (CA)
Metropolitan Nashville Public Schools (TN)
Miami-Dade County Public Schools (FL)
Orange County Public Schools (CA)
Pinellas County Schools (FL)
Polk County Public Schools (FL)
Prince George’s County Public Schools (MD)
Prince William County Public Schools (VA)
School District of Hillsborough County (FL)
School District of Palm Beach County (FL)
Wake County Public School System (NC)
Istation’s Super 7 Essentials

Blended Learning for Reading, Math, and Spanish

Formative Assessments
Computer-adaptive assessments include game-like activities

Adaptive Curriculum
Students get the instruction they need when they need it

Personalized Data Profiles
Immediate online reports present accurate results and relevant statistics

Teacher Resources
Flexible resources support diverse instructional approaches

School-to-Home Connection
Home access extends learning beyond the classroom

Professional Development
Experienced educators and technical experts deliver results

Proven Results
Research shows that Istation helps students grow
Over 25,000 K-5 students used *Istation Reading* across 66 district campuses.
Over 25,000 K-5 students used Istation Reading across 66 district campuses.

District-wide growth rate of students assessed* reading at grade level

*Assessed using Istation’s Indicators of Progress (ISIP™)
Over 25,000 K-5 students used Istation Reading across 66 district campuses.

46% more students reading at grade level
(B.O.Y. – E.O.Y.)

35% more students reading at grade level
B.O.Y. – M.O.Y.

6% more students reading at grade level
M.O.Y. – E.O.Y.

District-wide growth rate of students assessed* reading at grade level

*Assessed using Istation’s Indicators of Progress (ISIP™)
Over 5,000 K-3 students used Istation Español.
**Over 5,000 K-3 students used Istation Español.**

District-wide growth rate of students assessed* reading at grade level

*Assessed using Istation’s Indicators of Progress (ISIP™)
29% more students reading Spanish at grade level (B.O.Y. – E.O.Y.)

- 8% more students reading at grade level (B.O.Y. – M.O.Y.)
- 19% more students reading at grade level (M.O.Y. – E.O.Y.)

District-wide growth rate of students assessed* reading at grade level

*Assessed using Istation’s Indicators of Progress (ISIP™)
Blended Learning
For Reading, Math, and Spanish