

CURRENT REALITIES OF EDTECH USE



Schools analyzed their classroom technology. They learned a lot.

65 percent of student licenses were not used enough to meet any goals set by the product companies or school districts.

Only 5% were fully used.



product licenses never activated



activated, but met zero usage goals



met either 1/4 or 1/2 of usage goals



fully met all usage goals

WHAT DOES THIS MEAN FOR SCHOOL BUDGETS?

If an average district (3,700 students) pays \$25 per student for a single product...



Of \$92,500 Spent,

Only \$4,625 Fully Used

WHAT SHOULD ADMINISTRATORS CONSIDER?



Achievement

We found products impact student learning in various ways depending on usage and local context.



Analyzing impact of product usage on achievement, districts see various relationships across usage clusters.



Implementation

Educators use products differently, but understanding local context improves impact.



Budget

In addition to direct savings, achievement, implementation, educator experience, and indirect costs impact the overall cost of ownership and return on investment.

FINDINGS BASED ON:



49 schools in various states and districts



Product Usage and Achievement of **17,000+ students**



Six well-known K-12 math and literacy **products**



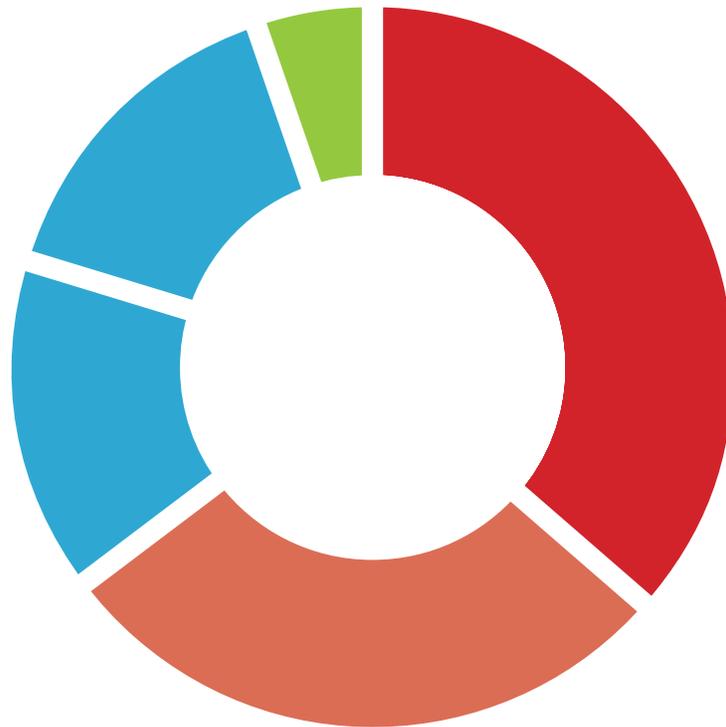
DISCOVER AND MANAGE THE BEST EDTECH FOR YOUR STUDENTS, TEACHERS, AND BUDGETS

LearnTrials.com

Current Realities of EdTech Use

Summer 2015

Based on analysis of actual product implementations, pilots, and short-cycle efficacy efforts.



Daniel Stanhope, PhD, and Karl Rectanus



Lea(R)n and the LearnTrials™ platform help educators and their organizations know which products are best for their classrooms.

Current Realities of EdTech Use: Research Brief

by Daniel Stanhope, PhD & Karl Rectanus

Executive Summary: Educators across the country know the importance of improving the impacts of technology resources on implementation, achievement, and budgeting. Dozens of schools and districts have worked with LearnTrials™ to conduct efficient, systematic research—including experimental studies and trend analyses—in order to examine the usage and efficacy of educational technology products (herein, EdTechs).

Although single studies have produced localized and context-specific insights, meta-analysis uncovered trends in the distribution of usage for paid curricular software, across all products and schools. Most notably, 36.6% of student licenses were never activated! Further, an additional 28.2% of these purchased licenses were used negligibly, failing to meet any usage goals set by the product company or district. This startling lack of use suggests a vast amount of time and money is being squandered or misallocated. These results, combined with analysis of how product usage impacts student achievement, provide compelling evidence that schools and districts can harness multiple data streams to improve implementation, achievement, resource allocation, and budgeting.¹

Lea(R)n helps educators and their schools, districts, and states know which technology is best for their classrooms. Thousands of educators trust LearnTrials.com, the complete edtech management system for data-driven insights that inform instructional and budgetary decisions.

INTRODUCTION

Learning technologies present both opportunities and challenges for educators and their organizations. Common challenges include spending resources effectively, implementing products with fidelity, and ensuring product efficacy. Previously, these challenges were addressed in isolation because districts did not have valid, reliable, and efficient systems to collect, compare, and analyze multiple data streams quickly enough to impact budgetary or instructional decisions. However, dozens of schools in multiple districts use the LearnTrials™ platform and Lea(R)n services to measure an integrated system of variables, enabling them to generate key insights and rapidly make informed decisions. In this paper, we report a specific set of early findings from our meta-analysis of systematic research focusing on EdTech usage patterns, and we discuss their implications for product implementation, student achievement, and budgeting.

U.S. schools and districts spend over \$8 billion on technology to promote important educational outcomes for students. Both producers and consumers of EdTech worry about using these products with fidelity—that is, giving students the “recommended dosage.” Although there has been limited rapid-cycle research examining fidelity of EdTech usage, many agree that implementation and its impacts on budget and achievement are interrelated and worthy of treatment as a system. This has led schools, districts and states to collaborate with Lea(R)n to conduct rapid, cost-effective evaluation of multiple products used by dozens of schools, analyzing both usage and efficacy of their education technology.

The findings were startling!

¹ We are sharing these early findings to improve market understanding and to help educators make decisions about EdTech. In the interest of privacy, regulatory compliance, and ongoing research, we identify neither products nor participating schools, districts, and states. This meta-analysis is for informational purposes only. Schools and districts who wish to identify opportunities to improve implementation, budget, and product decisions should perform local and comparative product evaluations within their specific context.

METHODOLOGY

Sample: The sample for this meta-analysis involved 49 K-12 schools in multiple districts and states. Overall, the sample included over 17,000 students from a diverse set of schools. For each school, we examined data on product usage collected during the 2014-2015 academic year. Specifically, we tracked the extent to which students used their licenses for six (6) well-known digital math and literacy tools. Each of these products was well-established in the marketplace, used for primary instruction (rather than merely supplemental), and license fees ranged from \$16 to \$100+ per student, per year.

Analysis: The main analysis for this study comprised descriptive statistics, which conveyed the extent to which students used their product licenses. Each of the six products prescribe a specific amount of student usage, often called the recommended dosage. In other words, these products have predetermined metrics for usage goals (e.g., time logged in, progress through syllabus, number of lessons passed) intended to promote marketed outcomes. Based on these measures, we analyzed the extent to which students met certain expectations. Specifically, we examined whether students **(a)** never used the product, **(b)** used the product but failed to meet even 25% of the goal, **(c)** met 25% of the usage goal, **(d)** met 50% of the usage goal, or **(e)** fully met the usage goal.

RESULTS

We found consistent patterns of usage across the schools and across the products. The main finding: 36.6% of purchased product licenses were never activated. An additional 28.2% of students activated their license, but did not use the product enough to meet even 25% of the established goal. Thus, approximately 64.8% of students exhibited zero or trivial use. Moreover, only 5.2% of students actually received the full recommended dosage. In summary, schools are paying significant amounts of money for products that students are not using.

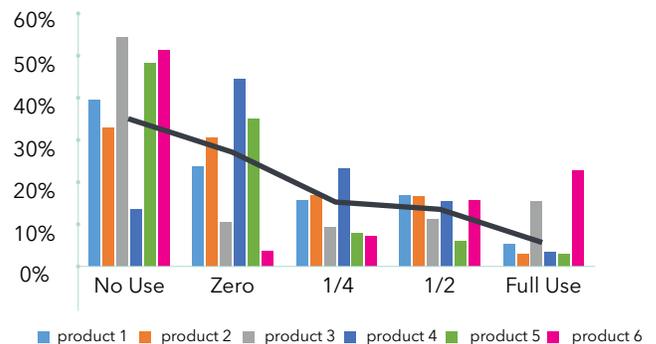
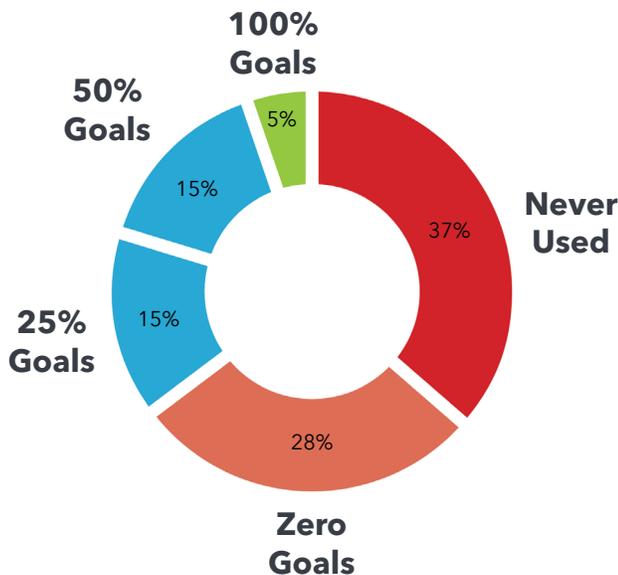


Figure 1. Usage clusters (averaged across all six products).

Figure 2. Usage clusters by product (anonymized).

What does this mean for Achievement? It depends...

The individual evaluations of student outcomes for each of the products were varied, and results suggest the impact of EdTech on student achievement is unique for each product depending on implementation, local context and product usage.

Linear Growth



Figure 3A shows a linear relationship, meaning more usage relates to higher achievement. While our findings suggested usage and achievement are not typically linear, districts experiencing such relationships may focus on increasing or expanding usage through implementation adjustments and investments.

Diminishing Returns

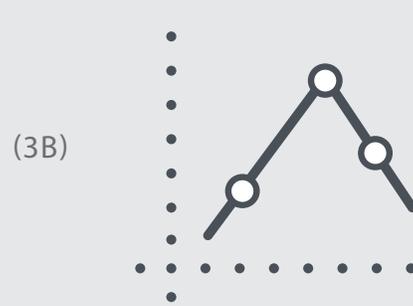
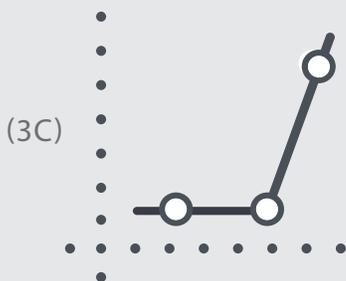


Figure 3B suggests diminishing returns, meaning the relationship between usage and achievement becomes negative beyond a certain level of usage. In this case, districts can reconsider dosage recommendations, review engagement options, or diversify products.

Exponential



Figures 3C and 3D suggest certain dosages are required before the product begins to positively impact achievement. Districts who experience these results can consider implementation decisions that increase usage, or they can consider more targeted distribution (e.g., reserve licenses for those who will use the product at full dosage).

Threshold



Interestingly, for some products, students who never activated their licenses actually outperformed students who used products infrequently, which begs understanding of the learning paradigms in those classrooms and suggests that **limited use or the opportunity cost of misallocated implementation can have deleterious effects on student learning**. In each case, insights from the professional educators involved can be leveraged to understand and improve implementation based on the achievement findings.

DISCUSSION AND IMPLICATIONS

To be clear, the startling lack of product usage across dozens of schools is not an indictment of learning technology or the schools that use them—classroom technologies are valuable, modern tools that can amplify the learning process, both now and in the future. And while these are early findings, they have numerous implications for schools and districts.

Data Without Context is Hearsay

Implementing learning technologies in schools and districts presents many opportunities and challenges; one way to maximize the former and minimize the latter is context. Recognizing the specific factors that impact use within local contexts can uncover opportunities for growth. Structured pilots, rapid feedback cycles, and scaled roll-outs do not have to be cumbersome. In fact, Lea(R)n provides a rapid system for data-rich product pilots that address the six common challenges schools identified in last year's [Digital Promise "More Effective Pilots" report](#). In fact, schools and districts report running data-rich pilots 90% faster when using LearnTrials. By using research-backed, standardized management systems in their local contexts, districts can lower opportunity costs, reduce negative impacts on teaching and learning, and mitigate political consequences of "all-in, all-at-once" implementations.

Which Product is Best for Us?

Educators do not ask, "Which product is best?" Instead, they ask, "Which product is best for my situation (for my students, for this subject, etc.) right now?" Understanding product efficacy—the extent to which a product impacts intended educational outcomes—is complex, but not impossible. And it is critical for determining the utility of learning technologies. This fall, the U.S. Dept. of Education's Office of Education Technology is releasing [contracts to hasten the rigorous and realistic evaluation of products at every stage](#). If students do not use a product, they cannot capitalize on its potential benefits. Discovering that EdTech is

consistently underused (or never used) is a first step. Providing schools and districts insights into situational variables (e.g., student characteristics, school types, demographics, or pedagogical styles) helps educators and product companies understand the contexts in which products had positive, negative, or negligible impact. Our research has shown times when minimal (and even significant) usage had deleterious effects on student achievement. In other cases, specific student groups using certain EdTechs saw greater gains than did their peers. These context-specific insights help schools and districts identify the best tools for local situations.

Understanding Efficacy Improves Purchasing

A final implication is the obvious impact on budget. If we extrapolate the findings reported herein, it is likely that last year, schools spent nearly \$3 billion on product licenses that were never activated (that's 37% of the \$8 billion spent across U.S. schools). However, EdTech purchasing decisions do not exist in a vacuum; rather, they are richly contextualized and made based on budgetary constraints, merit of competing products, politics, and precedent. Furthermore, EdTech purchasing has rapidly decentralized, meaning individual educators and schools are making more decisions, which creates organizational challenges for district and state leaders.

Considering 66% of product licenses might go unused, a solution seems necessary. Lea(R)n offers a systematic approach for rapidly understanding organization-wide product usage and overall impact, which helps save time and money. Implementing EdTech management systems, service level agreements, and performance contracts (based on successful usage or other measurable milestones) are not only possible, but also capable of improving instruction and finances.

⁵ LearnTrials™ aggregates and quantifies educator insights along with other data sets in a rapid, research-backed method that improves educator capacity and provides LearnGrades™, a set of easy-to-understand measures based on the 8 most important criteria for educators. The result is an ability to harness and quickly guide actionable implementation decisions.

CONCLUSION

The consistent patterns of usage—specifically the limited use of paid licenses—across EdTech products in education environments offers a massive opportunity to improve a complex system. Until recently, EdTech decisions lacked a systematic approach for measuring and collecting evidence on the most important variables. However, dozens of schools and districts are working with Lea(R)n to begin cost-effectively analyzing their own situations, so they can make evidence-based decisions that enhance the fidelity of implementation, boost product impact on student achievement, and maximize each dollar spent on education technology.

Systems that allow for rapid understanding and improvement of these decisions at every level of an organization can have significant impact on the bottom line, as well as student achievement. LearnTrials™ is the complete EdTech management platform, designed by educators to improve instructional, operational, and budgetary decision making, from classroom to boardroom. Lea(R)n's research-backed framework, rapid data analysis, and actionable insights save teachers and administrators time and money.

In 2014-2015, schools spent \$8 billion on digital learning technologies (not including hardware and infrastructure), and that amount will rise 20% annually.⁶ This trend is further supported by a pronounced “funding frenzy” – over \$2.5 billion (nearly \$400 million in K-12) was invested in EdTech companies during the first half of 2015.

⁶ Richards, J. & Struminger, R. (2013). 2013 U.S. Education Technology Industry Market: PreK-12. Washington, D.C.: Software & Information Industry Assn.



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