

Chapter 8

Transform Learning With EdTech in the Elementary Classroom

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ABSTRACT

Transformative educational technology (EdTech) is a practice in education that improves student learning by implementing real-world, authentic tasks and activities that would not be achievable without the use of technology. Over the past decade, there has been a rapid increase in EdTech in the classroom, yet teachers still lack clarity and uncertainty around creating engaging and meaningful technology-integrated lessons. The focus of this chapter is on the practice of creating real-world, authentic lessons with the use of technology for elementary teachers. This chapter provides an overview of EdTech in the current educational system, technology integration frameworks to support teacher growth towards transformation with technology, and suggestions to guide educators in implementing research-based strategies for lessons and assessments.

TECHNOLOGY DRIVEN SHIFTS

The question around technology usage in elementary schools has shifted from “What are the benefits of technology in the classroom?” to “How can we transform learning in our classroom with technology?”. Elementary educators have more access to educational technology (EdTech) than in previous decades. With more access comes a greater demand for ensuring that students are prepared for tech-driven futures. Educators are finding that EdTech can individualize instruction, increase student inquiry, promote complex problem solving, nurture artistic expression, increase global awareness, and create additional opportunities for meaningful work (Peck & Dorricott, 1994). The need for meaningful EdTech starts in the early primary grades.

65 percent of students entering elementary school will end up in technology-rich jobs that do not yet exist (Krueger, 2019). Students should graduate from K-12 school systems prepared to be critical

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thinkers, problem solvers, and collaborators. This will ensure that students are career and college ready. Educators are tasked with igniting student curiosity to promote lifelong learners. Technology is a driver of curiosity and opens up professional, academic, and personal opportunities.

As educators grow in their practice, technology shifts from being a replacement tool to a transformative tool. Transformative EdTech redefines a lesson to provide opportunities and tasks that would not have been achievable without the use of technology (Hamilton et al., 2016). EdTech opens up opportunities for students to travel virtually overseas, connect with field experts, collaborate with peers near and far, and engage in simulations. Students can be transported into space or the bottom of the ocean without leaving their seats. The four walls of the physical classroom are no longer boundaries to student learning. Transformative EdTech, when properly implemented, pushes boundaries and enhances learning.

Educators need to equip themselves with the framework, tools, and strategies necessary to promote inquiry and active learning for students. Transformative EdTech is a practice, not a goal. This practice is similar to that of implementing content standards in meaningful ways or restructuring how English language development is taught. The overall goal is to prepare students for their future, while educators' immediate goal is to redefine lessons through the implementation of technology.

Technology is constantly being developed and adapted to better meet the needs of the user. With this in mind, educators need to focus on implementing practices over tools to best support students for tech-driven futures. Though there is not a one size fits all strategy to incorporating transformative technology, there are steps that educators can take to better prepare themselves for this shift in practice. The objective of this chapter is to support the integration of transformative EdTech in the elementary classroom by providing technology frameworks, best practices, and pragmatic strategies.

BACKGROUND BEHIND NEW TECHNOLOGY DEMANDS

Educators continue to struggle with providing transformative, innovative, and creative lessons that incorporate Educational Technology (EdTech) in their daily lessons. The current educational system is going through a shift from pushing minimal EdTech requirements in the classroom to overhauling the learning environment and finding benefits in hybrid, concurrent, blended, and fully digital classrooms. This shift for educators, especially elementary educators, is happening with minimal scaffolds for teachers and even less time for building a new understanding for EdTech. It is also important to note that most educators have received minimal (if any) formal training in the area of EdTech. The reality of incorporating technology is a struggle for elementary teachers, especially those who previously had minimal devices in their physical classroom.

In 1992, researcher and professor in education at Stanford University, Larry Cuban (1992), set out to predict what the computer era of education would look like in the early 2000s. It was noted that there was a technological shift in the workplace and homes through the 1980s and 1990s but was unclear how this would integrate into classrooms (Cuban, 1992). Many educational conferences in the 1990s, including the EdTech '90 Conference of the Australian Society for Educational Technology, set out to begin uncovering models and practices for implementing technology into the elementary classroom (Hedberg et al., 1990). At the time, John Hedberg, University of New South Wales, stated that "educational technology is more of a movement than a field" (Hedberg et al., 1990). With the emphasis on EdTech by researchers, at conferences, and throughout all education sectors, it is still an anomaly that 30 years later EdTech is just beginning to find its way into many elementary classrooms.

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