

STEM Education Case Story

The Best Buy Foundation's *Time for Tech*

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Where did the program originate?

Through a grant from the Best Buy Foundation, The National Theatre for Children (NTC) presented *Time for Tech*, a novel educational programming module, to Minnesota students in Minneapolis and St. Paul, in grades 6 through 8. It is crucial that all students – regardless of gender, race, ethnicity and economic background – are encouraged in STEM subjects from an early age. This is where the Best Buy Foundation's *Time for Tech* enters the picture. A charitable branch of the well-known, Minnesota-based Best Buy, the Best Buy Foundation is dedicated to nurturing STEM education among Minnesota students, with a focus on technology, coding and gadgetry.

The vital importance of STEM education for younger generations is well-known. The U.S. Department of Commerce reports that STEM occupations are growing at 17%, while other occupations are growing at an average of 9.8%.¹ STEM education creates critical thinkers, increases science literacy and empowers the next generation of innovators, who will help develop new products and processes that sustain our economy. Despite the significant role that STEM industries will play in the near-future, mathematics and science scores on average among U.S. students are lagging behind other developing countries, ranking 29th in math and 22nd in science.²

What approach was used in implementing this program?

Students and their teachers were provided in-school education in the form of a live theatrical performance. The program also included supporting classroom instruction focusing on the importance of science, technology, engineering and math, with a particular emphasis on technology and coding. The 45-minute live performance engaged middle school students through a series of improvisational comedy sketches incorporating student volunteers to help convey important lessons in STEM education.

¹As of February 2016. engineeringforkids.com/article/02-02-2016_importanceofstem

²According to the US Department of Education. www.ed.gov/stem



Taking suggestions from the audience, two professional presenters encouraged students to help create the show that they saw, forming a unique program with each presentation. In addition to the live in-school assemblies, *Time for Tech* featured student playbooks, teacher guides, classroom posters, and digital games and activities that aligned with the show's messaging. The program armed students with valuable information, encouraging them to achieve a high level of scientific and technological proficiency, while engaging their parents and families in the process through take-home assignments. In addition, teacher guides provided educators with innovative solutions for delivering STEM education in stimulating ways.

What distinguishes this program from others?

Exciting live events delivered directly into schools impact students in ways that traditional methods cannot. These assemblies, involving audience participation and improvisational elements based on student suggestions, spark the imagination and present STEM education in an appealing way, adding a dynamic arts element to create a robust STEAM program. *Time for Tech*, customized to demonstrate the Best Buy Foundation's support of STEM education while

aligning with the foundation's outreach objectives, is measured both qualitatively and quantitatively through teacher evaluations and detailed metrics.

The *Time for Tech* campaign features live, educational theatre performances powered by NTC's professional, theatrically-trained staff. No two children learn in the exact same way, and *Time for Tech* addresses a variety of learning styles. The theatre component excites, engages and stimulates discussion, in many cases introducing young students to live theatre for the first time. By including audience participation in the program, the students are directly involved and become a part of not only the learning process, but the creative process as well. In this way, the "Four Cs" of 21st century learning skills – collaboration, communication, critical



thinking and creativity – are incorporated. The program also addresses STEM-related careers and the importance of coding and emerging technology in a matter-of-fact way. Given the growing prevalence of STEM careers on a global scale, *Time for Tech* seeks to prepare young minds for a future in the skilled workforce.

What were the significant and measurable impacts of this program?

In the spring of 2017, *Time for Tech* reached a reported 4,456 students and 251 teachers in 31 Minnesota schools, receiving rave reviews from the students involved, their parents and teachers, school administrators, and community leaders. The program was able to achieve consistency at scale by delivering educational messages to the largest possible audience while retaining a high level of quality. Teacher evaluations allowed NTC to quantitatively measure the value of the program. Based on a scale of 1 (lowest) to 7 (highest), teachers and educators rated *Time for Tech* an average of 6.2 on overall educational value, and 100% reported they would like to see the program return to their school.

See Table 1 for additional responses to the teacher survey.

In addition, educator comments proved that *Time for Tech* successfully engaged middle school students and increased their enthusiasm for STEM disciplines. See below for just one example of the dozens of positive comments provided by educators.

TABLE 1: TIME FOR TECH TEACHER EVALUATIONS*	
QUESTION	SPRING 2017
Overall educational value	6.2
Likelihood students will retain the material covered	5.8
Ability to stimulate classroom discussion	6.15
Ability of live theatre to increase capacity for retaining information	6.5
Overall value of printed materials	5.63

*Ratings are on a scale of 1 to 7

Great enthusiasm and entertainment for the kids. The content was relatable as they took student input throughout the performance. The content was laid out in an organized fashion and increased student awareness of technology.

– Chelsea Savino
Zanewood Community School, Brooklyn Park, MN



Can this model be replicated and scaled by other organizations?

NTC has 40 years of experience creating and deploying successful in-school educational theatre programs. They are replicable and scalable for use by many different organizations using varying models. Our unique and proven engagement programs have delivered notable results for organizations across the country that are involved in STEM education.

Any school-based STEM education program can be successful when it:

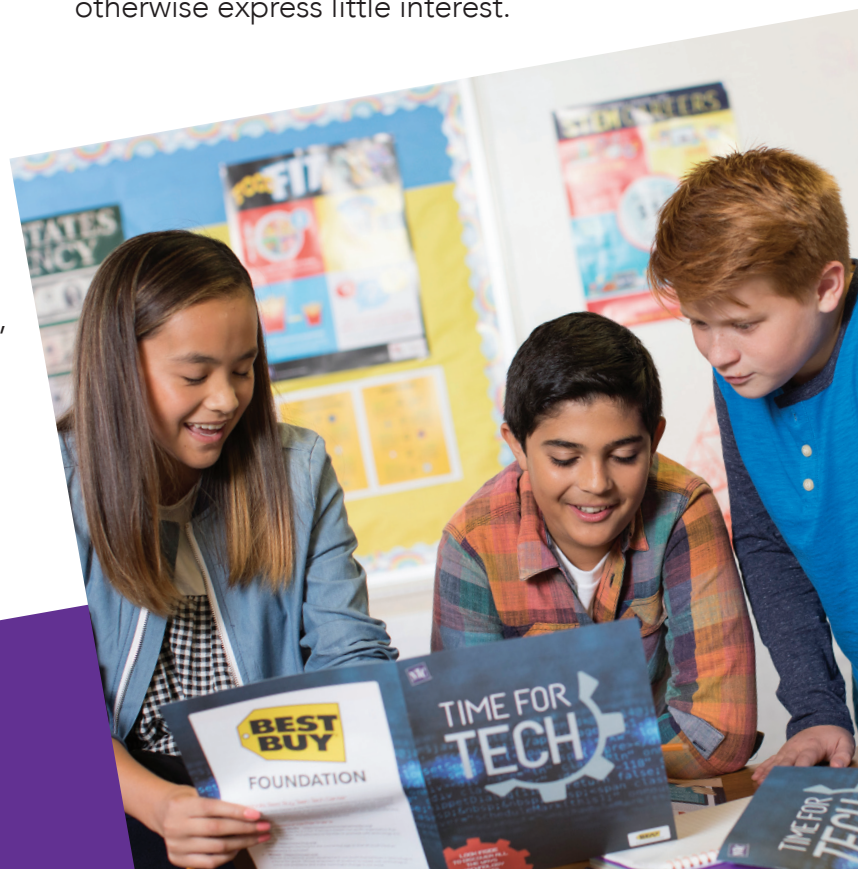
- Offers something to schools that they can't get elsewhere (like live theatre)
- Aligns program materials with state educational standards
- Adds proper motivation for schools, teachers and students to influence parents

In addition to the *Time for Tech* program, NTC provides a scalable alternative for elementary schools entitled *The Knights of Stemalot*, with its own unique set of supplemental materials (including a brand new graphic novel) designed to inspire passion in students for STEM disciplines as early as possible.

What lessons did we learn from the implementation of this program?

NTC learned that with the right approach, it really is possible to reach middle school students, get them excited about STEM education and help prepare them for a rapidly changing future.

Time for Tech provided an opportunity for Minnesota students to experience professional theatre – many of them for the first time. Teacher evaluations, photos and videos of the performances, and social media postings by the schools illustrated that dynamic and innovative teaching methods can stimulate young minds about subjects in which they might otherwise express little interest.



With NTC's approach to education, a consistent barrier is convincing schools to accept and pursue this type of enrichment programming. Schools have oftentimes already embraced the science curriculum that's been set in place, so NTC is challenged to enlighten teachers and administrators on the benefits of educating students in a new form, such as live in-school theatre. These types of issues may be reflected in the students' home lives as well. It can often be a challenge to motivate middle school-aged children to talk openly with their parents. NTC's programs give students and their parents a topic and activities to engage with one another in a productive way. The unique structure of this "Trickle Up" system is what makes it so effective, as it grants students the opportunity to share knowledge with their families and inspire real change in their communities.

What NTC refers to as "the School Channel" is an invaluable tool when providing community outreach and education. The School Channel is made up of 111,465 schools in the United States, totaling 53,727,000 students and 3,219,400 teachers. Organizations with a focus on STEM education, through programs such as *Time for Tech*, have the opportunity to connect with the students and educators who play a vital role in preparing for the future. As the fields of science, technology, engineering and math evolve and expand at a rapid pace, the ability for programs like *Time for Tech* to inspire young minds becomes increasingly important.

NTC is a premium provider of educational programming with operations in the U.S., Australia and New Zealand. We work directly between schools and clients to promote beneficial behaviors and life skills to students in grades K-12 on a local, regional and national level.

Since 1978, we have formed connections and helped develop relationships between thousands of schools and corporations, nonprofits and governmental organizations. Our value is not just in the impact we create; our turnkey services also change the lives and trajectories of students, mobilize parents and entire families with beneficial messages, and cultivate community-wide goodwill for clients.

Our award-winning educational programs are provided free for schools and are customizable to accommodate specific messages and goals for clients. Through formats including live performance, in-class discussion, graphic novels, print curriculum, and digital games and activities, we present topics such as energy conservation, safety, financial literacy, STEM, water and environmental stewardship, and health and social responsibility in ways that engage and empower students. In doing so, we are helping our clients to be forces of change for students, parents and communities.

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6305 Sandburg Road, Suite 100
Minneapolis, MN 55427
www.ntccorporate.com