



## Paint Landscapes, Not Portraits.

Americans love stories about people succeeding against the odds. They resonate with our deeply held belief in individuals' power to triumph over adversity through hard work and perseverance, by pulling themselves up by their "bootstraps."

But FrameWorks' research shows that individual stories tend to limit—rather than expand—people's understanding of the larger systemic factors that contribute to or block an individual's success. And because they tend to attribute a person's success to that person's actions, choices, or character alone, these "hero stories" do not build support for system-level solutions like afterschool science, technology, engineering, and math (STEM) programs. They can also backfire by reinforcing the common belief that people's negative outcomes are usually due to their poor choices, lack of hard work, or weak character.

If your goal is to increase children's access to quality afterschool and summer STEM programs, you can do better than a hero story.

Instead of close-up portraits of an individual, try telling "landscape" stories that help your audience see how social contexts and environments shape people's experiences and life outcomes:

- **Shed light on systems.** In the case of STEM, this means describing the factors that create disparities in access to learning opportunities and educational outcomes, as well as the system-level solutions (like quality STEM programs) that your organization is advancing.
- **Think "plural."** Whenever possible, include multiple people, places, and experiences in your stories. For example, highlighting the successes of several program participants puts the power of afterschool STEM programs at the center of the story.
- **Foster understanding by using tested values and metaphors.** Use FrameWorks' evidence-based communications tools—like the value Fairness Across Places or the metaphor STEM Ecosystem—to reinforce that access to afterschool STEM programs is a matter of public concern and system-level solutions are needed.

<sup>1</sup>The story is based on media coverage of the PantherBots of Pleasant Run Elementary School in Indianapolis. It has been adapted for instructional purposes and does not reflect the actual names or stories of individuals affiliated with the team.

- **Prep storytellers.** When building story banks or gathering information to support your STEM program, prompt participants to consider the systemic factors that contributed to their success. Build questionnaires that ask them to consider the supports outside their families that helped them achieve their goals, such as afterschool program staff, the school system, and community resources.

Compare the two versions of the story below<sup>1</sup> and note how the second incorporates more “landscape” features. The annotations identify many of the changes.

Alejandro Hernandez couldn't speak English at the beginning of the year. He struggled to make friends in his fourth grade classroom. His family, who had just arrived in Ohio from Mexico, couldn't even afford his school lunch.

These opening details frame Alejandro's experience as a hero story, which leads people to focus on the success or failure of Alejandro as an individual but not the broad social challenges he confronts.

But last week, the Sycamore Elementary School student, age 9, led his team, the ProtoBots, to victory at the Ohio Robotics State Championship in Dayton, beating out nine other schools.

This statement signals that this story is about willpower and character, which doesn't help people understand that expanding STEM opportunities benefits our entire society.

“We have the most heart of everybody,” he said of his teammates, two African-American and three Latino students, ages 9 and 10, from the school, where 85 percent of students live at or below the poverty line.

Sycamore Elementary teachers formed the robotics team in September thanks to a grant for low-income schools, which allows more students like Alejandro to connect with STEM.

This section leaves the audience to draw their own conclusions about why robotics is “kind of a white world.” It misses the opportunity to explain the causes and consequences of this disparity. Also, it doesn't spell out the STEM acronym, leaving audiences to guess what it means or default to the assumption that it is “just” about science.

“For the most part, the robotics world is kind of a white world,” says Lisa Henderson, the ProtoBots coach who also teaches third grade at the school. “Competing at the state level was a big deal. They're not used to seeing a team like our kids.”

Henderson said she worked with school administrators to identify students who excelled in the school's math program to form the inaugural ProtoBots team. Hernandez, a top student in her class, immediately came to mind.

“Alejandro was always very quiet, especially at the beginning of the year when he was still struggling with the language,” she said. “But he didn't need to know English to know how to work with numbers. He seemed to be hardwired for math. He was a natural fit for the team.”

The idea that Alejandro is “hardwired” for success downplays the importance of immersion in STEM skills and reinforces the idea that STEM programs are best suited for “gifted” children.

Robotics clicked with Alejandro. He was “always engaged” in the two hours that the team would meet after school, according to Henderson. About two months after he started with the team, he approached his coach to ask permission to take a set of HexaBlocks, the robotics system the school purchased with grant money, home with him to practice.

Showing how Alejandro benefitted from numerous opportunities to practice STEM skills is a good framing strategy. Cite more examples to build on this strategy.

“Of course I told him yes,” said Henderson. “Alejandro lives and breathes STEM. He told me that he would practice with the HexaBots between the time he ate dinner and the time his mom would tell him to go to bed.”

This story reinforces the idea that Alejandro’s success was due to his personal characteristics. It misses the opportunity to discuss systemic challenges—and supports—influence his outcomes.

Alejandro’s involvement with the ProtoBots helped him come out of his shell. He formed friendships with students who shared his love of math, and began to demonstrate leadership qualities that surprised even his parents.

Focusing on the benefits of STEM skills—i.e., the possibility of a “good job”—misses the opportunity to discuss the larger, society-wide benefits of STEM programs for all kids.

“We are so thankful that Alejandro became a part of the team,” says Luis Hernandez, Alejandro’s father. “He has learned about the value of hard work, and it helped him gain confidence. I hope he will continue to study math and science to get a good job in the future.”

The discussion of the benefits for Alejandro’s may activate the idea that parents are solely responsible for children’s outcomes. It also reinforces the mistaken assumption that afterschool programs are glorified babysitting, which is seen as the responsibility of parents, not schools.

Alejandro’s participation in the afterschool program also allowed his father, who works an evening shift in custodial services, to trust that he was in a safe place after school.

“The team has been a blessing for our entire family,” he said.

Now here’s the same story, revised to incorporate framing strategies:

Alejandro Hernandez couldn’t build a robot at the beginning of the school year. But last week, the nine-year-old student led the Sycamore Elementary School ProtoBots team to victory at the Ohio Robotics State Championship, beating out nine other schools. “Our students aren’t just building robots, they’re building our future,” Lisa Henderson, a third-grade teacher at Sycamore and the ProtoBots’ coach, said of Alejandro and his teammates.

This version retains the essence of Alejandro’s story but appeals to the value of *Future Preparation*, which “widens the lens” beyond Alejandro as an individual.

The ProtoBots' victory was made possible largely by a grant-funded afterschool program that has given students at Sycamore the opportunity to immerse themselves in STEM—the integrated skills of science, technology, engineering, and math—learning opportunities beyond the school day. More than 85 percent of the school's students live at or below the poverty line, and, until earlier this year, Sycamore, like many low-income schools, did not have resources to offer afterschool programs. But Henderson, who created a STEM curriculum at a school in Michigan before coming to Ohio, was determined to build a program at Sycamore and quickly brought together the school community to make it happen.

"We know that STEM skills help today's learners become tomorrow's leaders and problem-solvers," said Olivia Davis, Sycamore's principal. "When the opportunity came to apply for a grant to build a robotics team that would connect Sycamore students with these skills, we jumped on it."

The grant allowed Sycamore to purchase several sets of Hexablocks, a state-of-the-art learning tool that allows students to experiment with coding to build robots. But the Hexablocks were only one reason for the ProtoBots' success. A short news story about the grant in the local paper caught the attention of an engineering professor at a local college, who was inspired to arrange a meeting between Sycamore and college faculty to discuss how to work together to enrich Sycamore's new STEM curriculum. The result is a popular STEM summer camp for Sycamore students led by STEM majors at the college with their professors' support.

"STEM is all about hands-on learning and continued opportunities to experiment," Henderson said. "All kids have these skills—they just need to be activated in supportive environments where learners are free to make mistakes and build on success."

Alejandro and his teammates soon began asking for ways to continue practicing at home everything they were learning in their afterschool program and at camp.

This revision takes a systemic view of the realities of "patchy" access to quality afterschool programs.

Remember, this is a story about people working together to create better STEM learning conditions for all students, so it needs to feature more people than Alejandro and his teacher.

The value of *Future Preparation* appears again, helping readers understand how investing in STEM programs in a low-income community has larger societal benefits.

This revised version uses the *Activation* metaphor to illustrate that STEM learning can take place in informal environments. It also underscores the importance of trial and error and hands-on learning to develop STEM skills.

“Our learners would ask me how they could practice for the team in the evenings, on the weekends,” said Henderson. “We built a system that allowed them to ‘check out’ the Hexablocks to take them home, and what they’ve learned through all of this exposure after school and on weekends is that the real world is a STEM lab.

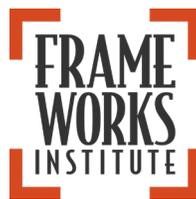
We just need to create enough opportunities for students to plug into that real-world lab so they can super-charge their learning and develop these skills. But you can’t plug in if there aren’t any outlets to let you do that.”

The ProtoBots team has met in the afternoons since the fall. For team members like Alejandro, the lessons learned over the past eight months extend beyond robotics.

“All kids—regardless of where they live—should have the chance to reach their potential and contribute to society. Connecting them with science, technology, engineering, and math skills is an important part of making sure we all have a strong shared future.”

The *Charging Stations* metaphor explained disparities in access to STEM learning opportunities and why remedying them is so crucial to student outcomes.

The story ends with an appeal to *Fairness across Places* to address the need for equitable access to STEM afterschool opportunities, and includes a final reminder of the importance of Future Preparation, the value with which the story began.



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