

Connecting Low-Income Communities to STEM through STEM



Nights and the Neighborhood Camp Fair

Celina Rodriguez, Isabella Balmer, Ilya Litvak, and Malathy Elumalai

Authorship Statement: Authorship order follows alphabetical arrangement by first name. Authors whose names are underlined contributed equally to this work.



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Abstract

The involvement of elementary and middle school students in STEAM programs increases students' GPAs, likelihood of attending college, and interest in STEAM topics. While this correlation is well-known, underrepresented students are often provided far less STEM experiences and opportunities. In light of this, the Neighborhood Camp Fair aims to connect Title I school students with local STEAM summer camp and after school opportunities around Tallahassee.

Throughout this past year, we aimed to connect more kids to these programs through hosting STEAM nights. These took place at a total of nine schools in which we were able to assist in bringing students to the Neighborhood Camp Fair. Some ways we did this were by creating and passing out colorful flyers around town, engaging with vendors, and coordinating information on email.

We also look at the effectiveness of these efforts in actually getting kids involved for free in camps around town. Research we are doing for this event can help its effectiveness and attendance increase, which can in turn be duplicated in similar events, and ultimately impact children's lives for the better.



This photo features students at the Bond Elementary STEAM Night interacting with demos hosted by the Society of Physics Students.



This photo features students at the Pineview Elementary STEAM Night



This year's Neighborhood Camp Fair flyer was distributed to families and local community members

Methods

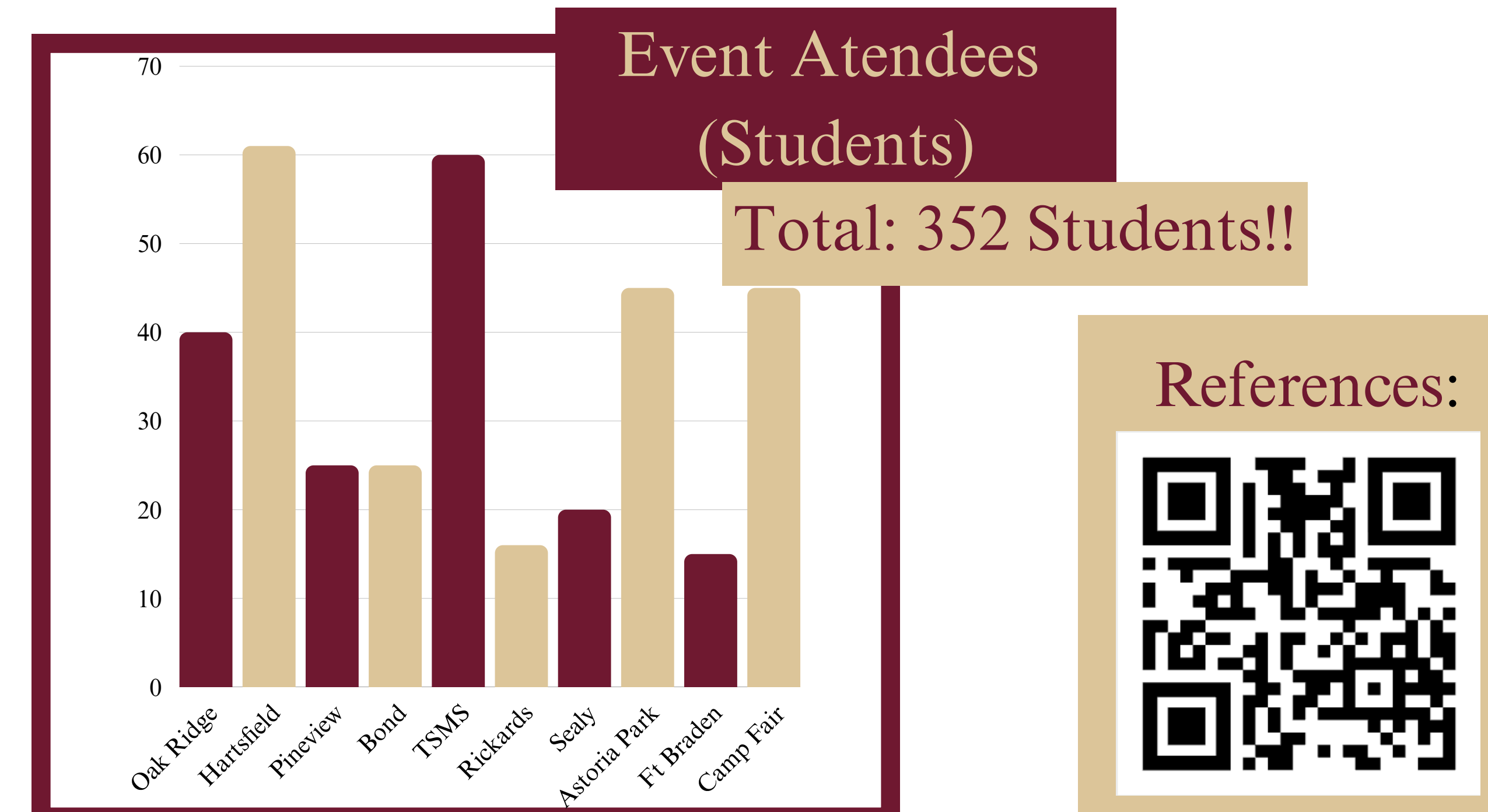
- To increase engagement with the Neighborhood Camp Fair, we partnered with local Title I elementary schools in Tallahassee to participate in STEAM Night events hosted by the schools.
- During these events, families and students attended interactive STEAM demonstrations led by local vendors and Florida State University clubs/organizations.
- To track participation and outreach effectiveness, we used several tools. We utilized Qualtrics to monitor vendor and student organization participation and created a Facebook Event to gauge parent interest and engagement.
- Additionally, we printed unique tracking codes on the back of select flyers to identify which locations generated the most responses and to incentivize participation.

Results

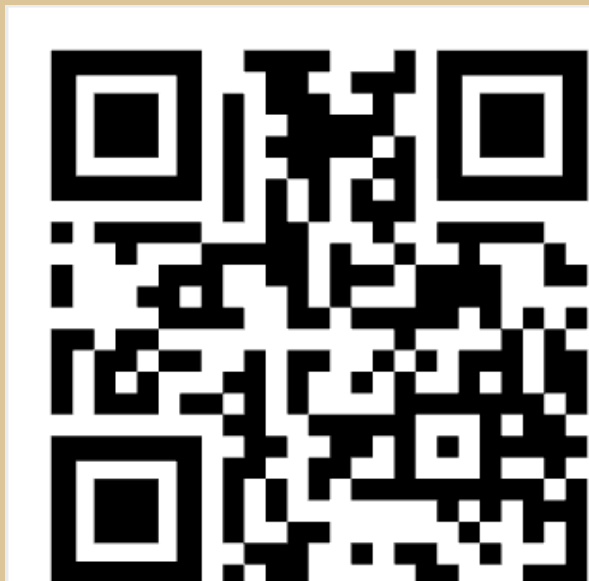
- 45 students were connected to STEM camp opportunities in 2026.
- 31 of these students attended Title I schools (~69%).
- Outreach through STEAM Nights and community flyers helped reach families from multiple schools across Tallahassee, including: Apalachee Elementary, Bond Elementary, Ft. Braden K-8, Hartsfield Elementary, Nims Middle School, Oak Ridge Elementary, Pineview Elementary, Sealey Elementary, Tallahassee School of Math and Science (TSMS)
- These results suggest the Neighborhood Camp Fair is an effective strategy for connecting underserved students to STEM enrichment opportunities.

Background and Introduction

- Our project worked primarily to provide science-based resources and experiences to students of Leon County Title I schools. According to the US Department of Education, a Title I school can be classified as one that receives "supplemental financial assistance to school districts for children from low-income families," (US Department of Education).
- According to research in the past decade, less than half, of low-income schools do hands-on science, and 43% of low-income schools as compared to 90% of other schools provide high school physics. These are small examples of how low-income schools need outside STEAM experiences they are not getting in schools. (Sawchuk, 2017).
- Through communication with Title I School teachers and principals, we are learning that many Title I students are behind in the essential skill of reading. As the teachers devote more time to basic skills, many of the STEAM areas that are typically a part of school curriculums are reduced. This leads children to having limited exposure to experiences common to their more fortunate peers.



References:



Acknowledgments

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