

Teacher in the Workplace Evaluation Report



**Philadelphia Education Fund
McKinney Center for STEM Education
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Introduction

A global, knowledge-based, 21st century economy demands a STEM workforce that is prepared to tackle today's challenges and tomorrow's opportunities. An increased number of Pennsylvanians need to hold a post-secondary certificate or degree to meet this future demand, and there must therefore be better alignment between student expectations and the goals of workforce realities. To support this effort, the *Philadelphia Education Fund* (PEF) launched its Teacher in the Workplace (TIW) initiative over the summer and fall of 2018. PEF partnered with *Philadelphia Works*, which provided overall administrative oversight and ensured compliance with reporting and funding requirements; and with *Johnson Controls*, which allowed teachers to interact directly with industry and business leaders.

The TIW program connected in-school teachers, out-of-school staff, and businesses to help prepare students for the STEM workforce. Through the TIW activities, educators learned about industry trends, needs, and opportunities that they could bring back to their students to enhance instruction, learning, and career readiness. PEF's activities included:

- the development of partnerships and initiatives to align business, education and community organizations to implement educational opportunities;
- on-site learning in one or more workplace environments; and
- time for the educators to connect workplace skills into their curriculum, student instruction, and one another.

Program Details

The core activities of this initiative focused on the 4 site visits/externships listed below, through which educators learned about the content knowledge, skillsets, and career trajectories associated with the energy industry. Throughout the program, PEF provided educators with professional development best practices and resources to create and deliver engaging, career-focused STEM instruction; as well as extensive opportunities for online and in-person peer-to-peer sharing. Educators also had the opportunity to engage their students first-hand with Johnson Controls during the school year - through field trips, STEM speakers, and other career exposure activities. Exposing educators to local high-demand careers is particularly important in Philadelphia, which is facing a disconnect between growing STEM industries and employment opportunities.

Participant Eligibility and Recruitment

In partnership with the School District of Philadelphia and additional community partners, PEF recruited educators – including teachers, school counselors, administrators, afterschool program staff and others – to participate in program activities.

Utilizing Survey Monkey, 14 applications were received for the program. However, PEF was able to achieve its numeric goal and serve 25 educators through this initiative. Moreover, PEF invited additional educators to its “reunion” event in September (5 new educators participated in the September workshop) and December workshop. The participants (see attached) represented the diversity of educators teaching in Philadelphia schools and other institutions.

Sessions and Session Topics

The program consisted of 4, full-day externships, with extra time allotted for the welcome and closing sessions. Over the course of 4 days, educators shadowed, interviewed, and learned from Johnson Controls staff across work sites, client sites, departments, and workplace roles - to discover the diverse responsibilities, skillsets, and educational qualifications of local career opportunities in this growing organization and industry. Educators were then asked to create and deliver new lesson plans and activities in their own classrooms or learning environments during the coming school year, centered around career exposure and career readiness skills learned through the externship.

Session 1 [July 27]- Welcome Session & JCI Office Visit

Session 2 [August 2]- Philadelphia Art Museum Visit

Session 3 [August 14]- ECA Pathways, Solar States Visit

Session 4 [August 16]- UPenn Health Systems- Jefferson Hospital Visit

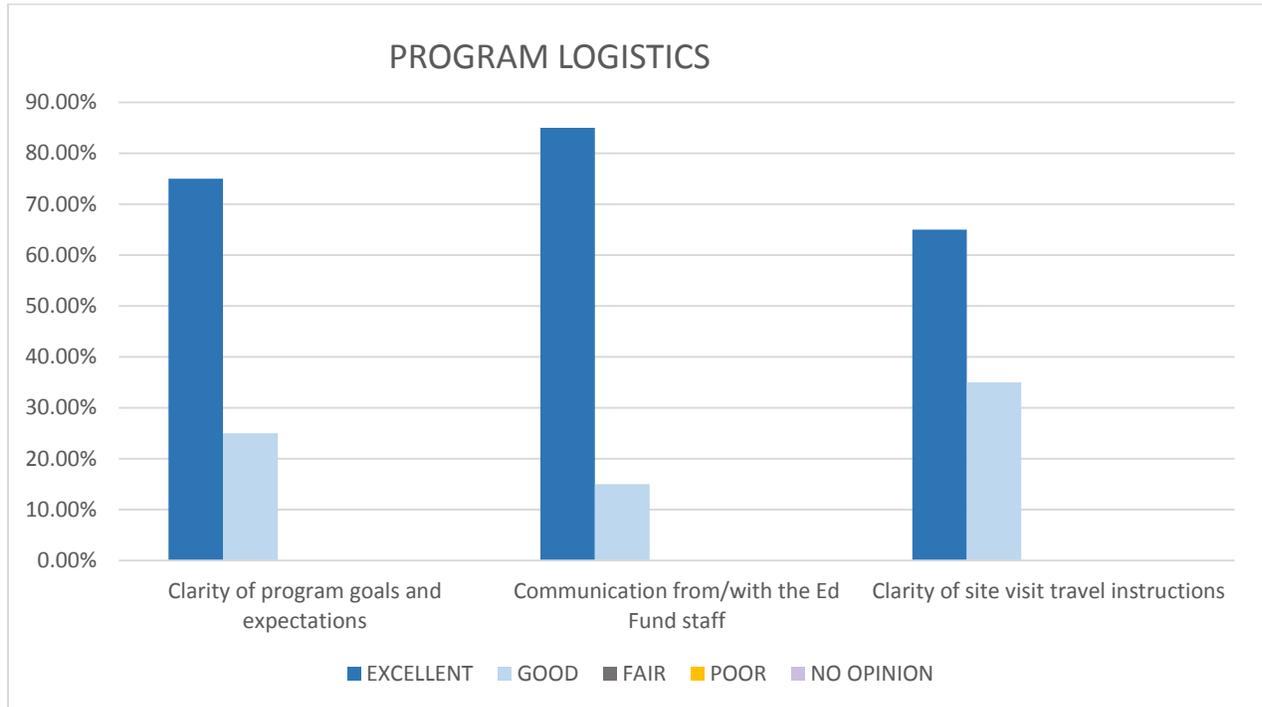
Session 5 [September 21]- Reunion

Session 6 [December 4]- Final Peer-Sharing and Evaluation Dinner

Program Evaluation

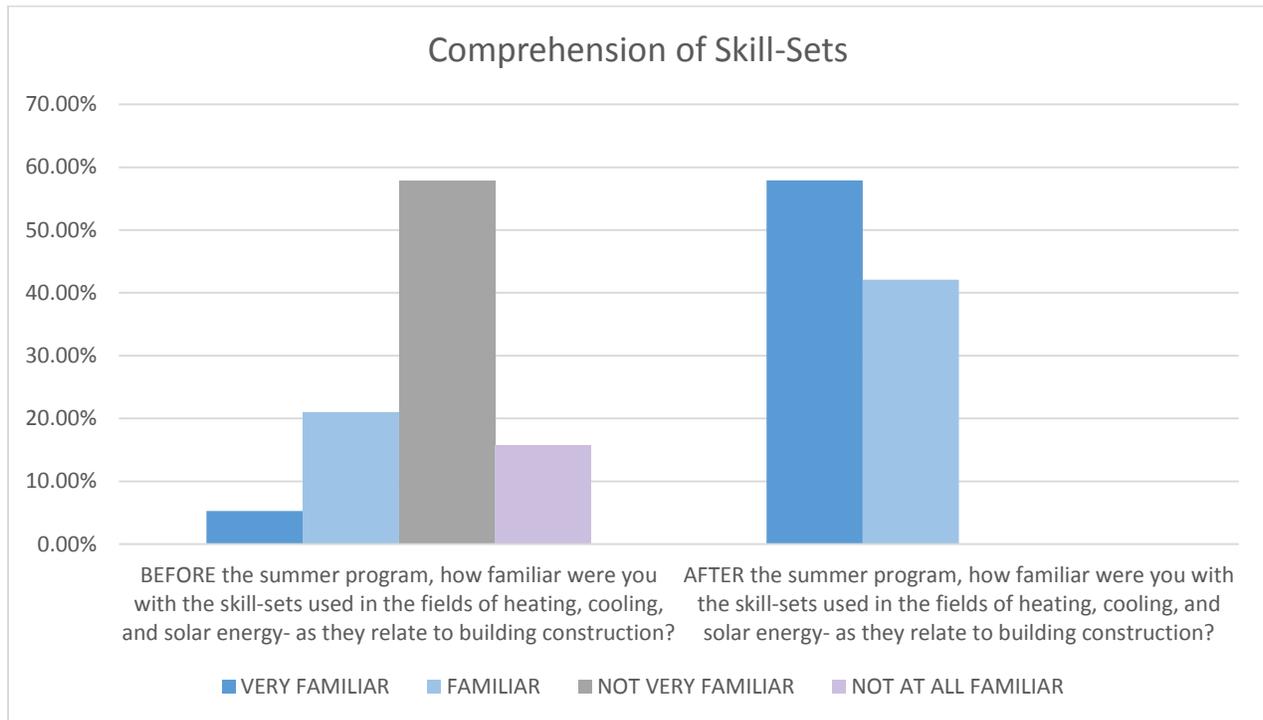
Of the 25 participants that completed the program, 21 completed the online evaluation (see attached survey). The following results, in addition to feedback from our December focus group, indicate that the teachers found the experience to be beneficial, a valuable use of their time, and important to their students' understanding of STEM careers.

1. Please rate the overall program logistics:



While respondents had 5 options to rate their experience with program logistics, only “Good” and “Excellent” were selected. The other options included “Fair”, “Poor” and “No Opinion.” Anecdotally, teachers reported that they appreciated the consistent email communication and reminders about sessions.

2. How valuable were the skill sets of the program?



The most valuable aspect of the program was gaining comprehension about the skill-sets used in the fields of heating, cooling, and solar-energy. The majority of the participants became “Very Familiar” or “Familiar” with the skill-sets by the completion of the program.

3. Please provide an example of how this program (and your participation) directly impacted your students.

The following are a sample of educator responses to this question:

- “This allows me to expose the students to people that work in stem and allowing them to learn experiences that may spark interest in the field.”
- “It’s so cool when I get the opportunity to see the next steps my students can possibly take. It inspires me and challenges me to add something more to my lessons if I can.”
- “The ‘Teacher in the Workplace’ has given me the ability to enhance my lessons for my students.”
- “My students now know some of the other things they can do after they leave school.”

4. What were the best aspects of this program?

The following are a sample of educator responses to this question:

- “Getting to know more about job opportunities in energy technology fields and meeting other educators from the Philadelphia area.”
- “The collaboration around teacher learning and implementation.”
- “Meeting and networking with teachers and people in the hoax field.”
- “Networking with other STEM programs. Learning about new career pathways.”

- “The interaction with HVAC/Building professionals as well as the opportunity to see them in action at their respective meetings.”

5. How could this program be improved?

The following are a sample of responses to this question:

- “Small interactive workshops engaging teachers with models of some of the programs and equipment used in the field.
- “Make the site visits a bit more hands on (less sitting and listening to other people talk)”
- “Field trip with our students and get feedback from the students to see what they would like in the classroom.”
- “Just more opportunities to see more employers in and around Philadelphia.”

Summary

The participants overwhelmingly found value in their Teacher in the Workplace participation. Benefits of the program included opportunities to network with other teachers, to develop comprehensive STEM lessons, and to receive Act 48 Continuing Education Credits - but most importantly, to establish and cultivate meaningful relationships with their students through the world of STEM. In the future, feedback indicated that the program may benefit from a more formalized student component - by providing more follow-up guest speakers and field trips. Participants explained that these latter activities might allow their students to have more hands-on experiences to connect back to the lesson plans. Additional feedback included that participant stipends should be increased, and that activities should conclude before the beginning of the school year.