



Technical Outreach Community Help: Initial Results

Authors:

**Sarah M. Brown
Lauren D. Thomas**

Outline



- Program History & Previous Work
- Current Status
- Mentor Impact
- Next Steps



...positively impacting the community
through Technical Outreach
Community Help

NSBE AND TORCH

NSBE background



- Student-run professional organization
- 6 geographic regions
- Collegiate, Alumni, and Pre-collegiate chapters
- Mission: To increase the number of culturally responsible Black engineers who excel academically, succeed professionally and positively impact the community.

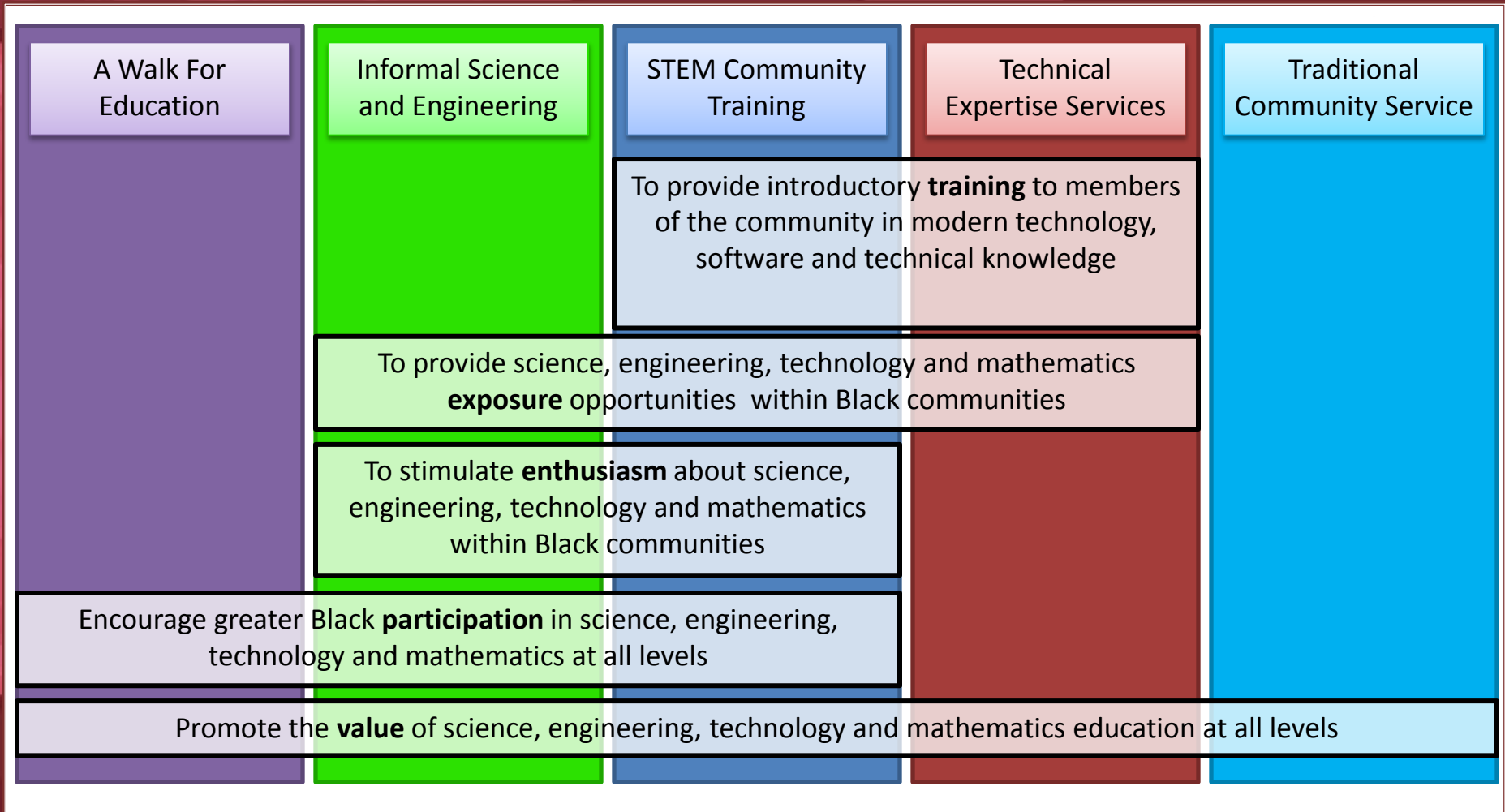
TORCH History



- Response to the Digital Divide
- Minimal structure 2002-2008
- New structure, objectives 2008-2010
- Broader implementation 2010-2011



Components and Objectives



Foundation Research



- Motivations & niche
- Developed research questions and metrics
 - Mentor impact
 - Student motivation to STEM
 - Interaction between mentors & students



Implementation
Data collection

CURRENT STATUS

Data Collection



- Documented participation increased from 2-12 chapters
 - Hours reporting only
- AWFE
 - Funded 14
 - Evaluations from 8

2010-2011 Reported Activities



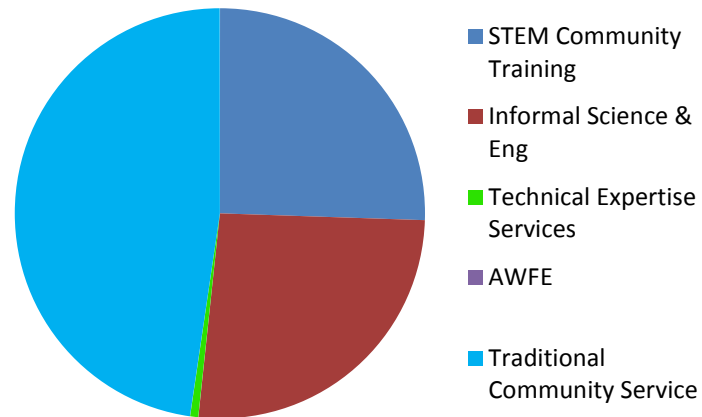
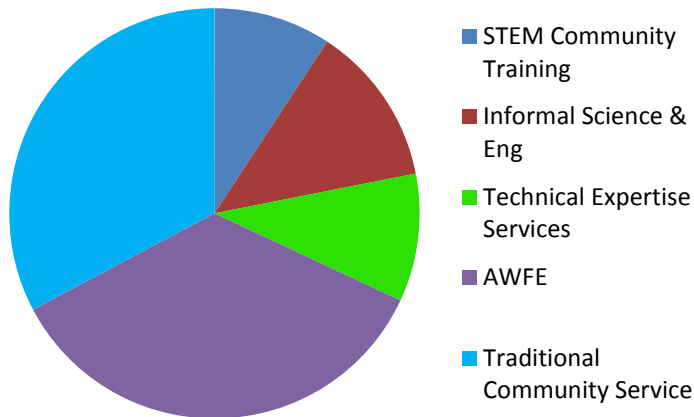
- 8 Collegiate chapter volunteer hours reports
- 8 collegiate chapter AWFE reports
- 1 alumni chapter volunteer hours report
- 2 alumni chapter AWFE reports
- No participant/community surveys returned
- Volunteer impact surveys from annual convention



Reported Activities

Fall Semester (total: 1045)

Spring Semester (total:279)



*January & February, late spring hours not submitted

Northeastern University



- Weekly program ~10 weeks/semester
 - Since Fall 2008
 - Adult course
 - Youth course
- STEM Community Training
- Informal Science & Engineering
- Technical Expertise Services
- AWFE used to market courses

UCF: Spooky Science Day



Spooky Science Day 

Hosted By: National Society of Black Engineers - **UCF Chapter**

Date: **Friday, October 29th**

GAMES

Location: J.B. Callahan
Neighborhood Center

Address: 101 N Parramore Avenue
Orlando, FL 32805

Time: 3:00 pm - 6:00pm

Carpool: at 2:30pm
@ Millican Hall

PRIZES

ENGINEERING ACTIVITIES





Modified AWFE

University of Illinois - Chicago

- Visited schools instead of door to door
- Safer access to communities most in need
- Week-day participation accommodates commuter students

University of Delaware

- Intervention style, in community center
- Informal Science & Engineering for youth
- Resume/ MS office support for adults
- College prep advice/ info distribution
- Previous volunteering in the neighborhood



How does technical community service impact college and graduate level mentors who serve k-12 students?

MENTOR IMPACT

Literature



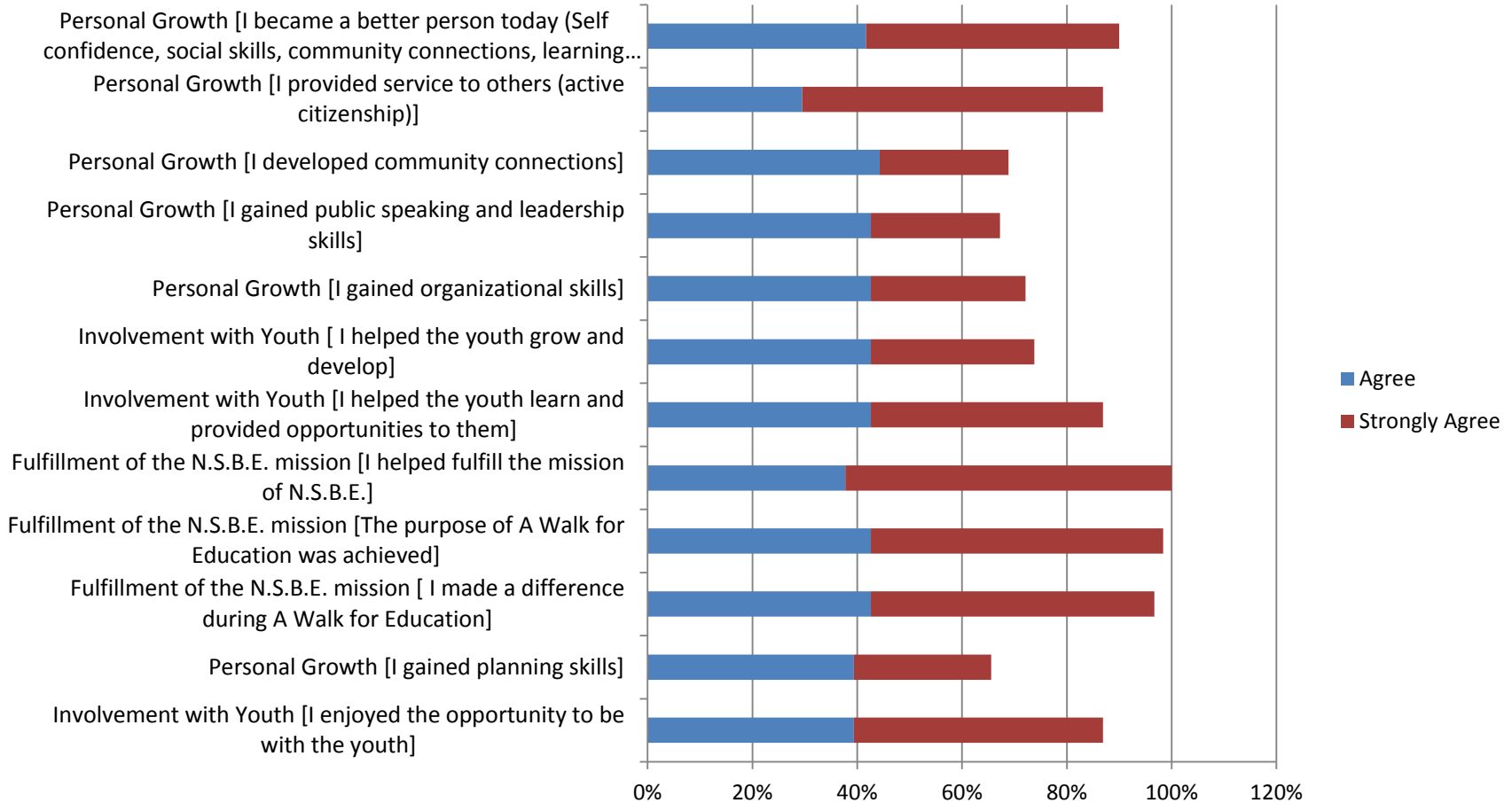
- NSF GK-12
- Service learning models
- Asses mentors through self-reported views of engineering education
 - Confidence and perceived skill in communicating technical ideas
 - Impact on an individual’s career and educational objectives.

AWFE



- Broadly adopted program component
- Survey distributed via chapter leaders
 - Involvement with Youth
 - Personal Growth
 - Fulfillment of the NSBE mission
- Sixty-one volunteers from 8 different walks responded
 - Demographic information,
 - AWFE participation information

AWFE Results



Annual Convention: Informal Science & Engineering Fair



- Survey
 - Academic interests
 - Effect of TORCH volunteering n
- All reported influence on career goals
 - Interest in teaching
 - Corporate outreach programs
- All interested in continued technical community service
- All see mentor role as important

Focus for 2011-2012



- Continued data collection on mentor impact
- Collect efficacy data from students in established programs
- Increased exposure within the society of the program
- Promote chapter funding, tie data collection in
- Establish timeline and tools for further research



Questions?
torch@nsbe.org