Near-Peer Mentoring as a Tool for Increasing Interest in STEM

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Collaborative Network for Engineering and Computing Diversity

Near-Peer Mentoring as a Tool for Increasing Interest in STEM
Overview

• Context
• How it Started
• What *IT* is
• Why Do We Do it?
• Money Talks
• Growing & Changing
• Reflection
Background/Context
Beginnings and Connections

Johns Hopkins University
Whiting School of Engineering

Social Entrepreneurship class

STEM Outreach Center

Summer planning

Pilot Year at Middle School

Baltimore City
Program Structure

Baltimore City

Mentored Schools

Maryland Science Olympiad Schools
Near Peer Mentoring
Expansion

Growth of Science Olympiad Teams

- **Mentored Teams**
- **Baltimore City MSO Teams**

<table>
<thead>
<tr>
<th>Year</th>
<th>Mentored Teams</th>
<th>Baltimore City MSO Teams</th>
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<tbody>
<tr>
<td>2012-2013</td>
<td>1</td>
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<td>2013-2014</td>
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<td>2014-2015</td>
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<td>2015-2016</td>
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<td>10</td>
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<td>2016-2017</td>
<td>9</td>
<td>25</td>
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<td>2017-2018</td>
<td>12</td>
<td>28</td>
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<tr>
<td>2018-2019</td>
<td>16</td>
<td>17</td>
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Member motivations

Previous SO Experience

- Yes: 90%
- No: 10%

Considered Mentoring When Scheduling Classes

- Yes: 99%
- No: 1%
Member motivations
Financial Support

$5,000 from initial grant
2012-2016

$15,000 from NSF grant
2015-2017

$10,000 for VISTA
2015-2017

$13,000 from JHU
2017-2018

$23,000 from JHU
2018-2019

Organization structure

Executive Board (EB) 2012-present

Head Mentors 2015-present

EB Committees 2016-present

VISTA 2016-2017

PT worker 2017-2018

Graduate assistant 2018-present

Group leadership

- Founders as leadership: 2012-2014
- 2nd gen leadership overlap: 2013-2015
- 3rd gen leadership overlap: 2013-2017
- 4th gen leadership overlap: 2015-2019
- 5th gen leadership overlap: 2016-2020
Founder left before group started 2012

1st gen leadership 2012-2015

2nd gen leadership overlap 2012-2016

3rd gen leadership overlap 2014-2017

4th gen leadership overlap 2014-2018

5th gen leadership overlap 2015-2019

Growing Pains
Lessons learned

Community partnerships are complex and ever-changing and need oversight

College students may not realize their limits until it’s too late

Strong student leadership and role modeling