New Partnerships for a New Economy: Effectively Preparing STEM Students for Careers of Choice
STEM C³ Symposium Summary

Presented at California State University, Fullerton

Funding Provided by
Learn and Serve America: Corporation for National and Community Service

California State University

Service Learning Transforming Educational Models in Science, Technology, Engineering, and Mathematics (STEM)²
California State University Consortium


Rebecca M. Eddy, Ph.D.
H. Todd Ruitman, M.A. & Benjamin Marsh, M.A.

February 17, 2012
The California State University developed the *Service Learning Transforming Educational Models in Science, Technology, Engineering, and Mathematics (STEM)* initiative funded by *Learn and Serve America: Corporation for National and Community Service* to support efforts to promote service learning and community engagement in the Science Technology, Engineering, and Mathematics (STEM) fields throughout the 23 campuses of the CSU. One component of the initiative included the development of a manual written by Program Directors and their evaluator from the *CoyoteCareers* program at CSU San Bernardino: *New Partnerships for a New Economy: A Guide to Effectively Preparing STEM Students for Careers of Choice*. Consequently, a symposium was held at CSU Fullerton to present the contents of the manual to representatives from southern California-based CSU campuses. The following is a summary of the evaluation survey form completed by attendees at the conclusion of the symposium.

Individuals from six campuses are represented in this sample: Bakersfield (6), CSPU-San Luis Obispo (3), Dominguez Hills (4), Fullerton (6), Long Beach (5), and Los Angeles (7). The following results are based on the 31 of 38 attendees who returned their completed surveys.

**Satisfaction with STEM C³ Symposium**

Attendees rated their level of agreement with two statements on a 5-point Likert scale (1 = *Strongly Disagree* to 5 = *Strongly Agree*) designed to assess their level of satisfaction with the symposium.

<table>
<thead>
<tr>
<th>Attendees' Agreement with Statements</th>
<th>Number of Attendees</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Met Expectations</strong></td>
<td></td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td></td>
</tr>
<tr>
<td>Neutral</td>
<td></td>
</tr>
<tr>
<td>Agreed</td>
<td></td>
</tr>
<tr>
<td>Strongly Agree</td>
<td></td>
</tr>
<tr>
<td><strong>Provided Realistic Steps</strong></td>
<td></td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td></td>
</tr>
<tr>
<td>Neutral</td>
<td></td>
</tr>
<tr>
<td>Agree</td>
<td></td>
</tr>
<tr>
<td>Strongly Agree</td>
<td></td>
</tr>
</tbody>
</table>

In general, the symposium met my expectations. All attendees (with one exception) agreed that the symposium met their expectations with most agreeing strongly (*M* = 4.65, *SD* = 0.79).

The presentations provided realistic steps to incorporate a program like *CoyoteCareers* at my campus.

Most attendees strongly agreed that the presentations provided realistic steps to incorporate programs like *CoyoteCareers* at their respective institutions (*M* = 4.45, *SD* = 0.85). One participant selected *Strongly Disagree* for both survey items; however, we suspect that this was in error given their positive open-ended comments at the end of the survey.

**Intentions to Pursue Program Components**

Attendees were asked to indicate their intentions to use some of the many ideas provided at the symposium. More specifically, those who expressed intent to use some of the ideas provided by the
symposium were asked to indicate which of an array of program components they would likely pursue in the future. It is important to note that several attendees indicated that they were already utilizing some of the components provided in the list.

### Program Components to Pursue

<table>
<thead>
<tr>
<th>Program Components</th>
<th>Number of Attendees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alumni Network</td>
<td>30</td>
</tr>
<tr>
<td>Service Learning</td>
<td>25</td>
</tr>
<tr>
<td>Ace Modules</td>
<td>20</td>
</tr>
<tr>
<td>Tutoring</td>
<td>15</td>
</tr>
<tr>
<td>Other</td>
<td>10</td>
</tr>
</tbody>
</table>

### Attendees’ Intentions to use ideas learned at the symposium.

All symposium attendees indicated that they intend to use ideas learned at the symposium at their respective institutions.

### Which program components do attendees’ intend to pursue?

The four program components listed were more or less of equal interest to attendees, with several indicating that they intend to pursue all the program components. The category “Other” included a diverse number of comments that are included in the text box to the right.

### Open-Ended Feedback

Attendees were also provided with two open-ended questions concerning the needed support to implement CoyoteCareers-like programs as well as general feedback for event.

### Other Program Components Considered

- Evaluation logic model
- Evaluation
- Developing research-based pedagogical tools to incorporate into our STEM gateway courses
- Integrated approach to serving students in STEM
- Find sponsors for PAD-Folios, professors for a day
- Possible Title V grants unifying some existing components
- Positive attitude
- Pursue relationships with more STEM departments and programs
- Structure of the on campus partnerships that are re-configured to make this program work
- Instructional technology
- Ideas shared by other campuses during large group activities
- Community engagement
What further information or support do you need to successfully implement a program similar to CoyoteCareers at your campus?

Affirmations
- I'll be calling.
- I'm going to kidnap Diane!
- Thank you for sharing many great ideas and the manual with us. This has been a fairly stimulating presentation.
- I'm not sure... This certainly planted some seeds!

Needs
- Possible funding sources for the aforementioned program
- External funding
- Information on grants that support this work
- More conferences, dedicated staff/faculty to run the program, the support from the provost/president encouraging this effort; hands on training from statewide office at individual campuses
- Methods of connecting with alumni via department contacts
- Support from my superiors

General
- No Information, but lots of work to do.
- Unsure but your CD, Zip drive and book seem like we could look it up! Thanks!
- Is there a website we can go to in order to ask our questions? Probably on the CC website. I'll check it out.
- Nothing for now

Do you have any feedback for the CoyoteCareers team in planning future symposia?

Affirmations
- This was great and kept us all engaged.
- Thank you for the thorough manual and presentation.
- Great presentation!!!
- Great job!
- Great Workshops. I learned a ton. Thank you for taking time to prepare and share.
- Great presentation. Great program! Thanks for sharing and presenting this so well.
- Great! Very energetic, kept participants engaged
- Well done
- Thank you!
- Awesome job!! Super impressed
- Great job!
- You all rock!
- You did an excellent job sharing what you did.
- Excellent symposium. It was well worth my time. Thank You!
- Great symposium! Learned a lot - plan to use it.

Suggestions
- Bring in current & past CoyoteCareers students to future symposia.
- I wish you would have posted the question each time when we broke into groups. I think it was only displayed once.
- Minor - A need for signage in lobby, with RM # etc. Otherwise, great. Exceeded my expectations greatly! Hopefully we can implement some ideas.
- Excellent! Informative! Practical! Give out pens, define SMART, and write out activities on a large board. We often couldn't recall our tasks.
- Great job! Having a component regarding assessment once you do have a grant in place. What type of assessments should you focus on?