BURST FORTH at Freshman Orientation, cont.

Fig 4. BURST FORTH data collection and community engagement.
(A) An undergraduate mentor assists BURST FORTH participants with data analysis and graphing.
(B) CSUF’s Assistant Vice President of Institutional Research & Analytical Studies works with a BURST FORTH participant (seated) and an undergraduate mentor.
(C) Data from each session were posted on the BURST Facebook page.

Survey Results: Peer Mentors

"This experiment seemed to create a better sense of community within the biology department compared to if they had just come here to register."

"This was a great way for students to know what they are getting themselves into and what biology is all about. It is also takes away some of the anticipation that some of the students going to be feeling their first labs because they get exposure in the laboratory. It was also very informative and the students were engaged."

100% agreed the activity should become a permanent part of orientation.

Survey Results: Incoming Students

Categories identified by factor analysis

Questions

How likely are you to:

Engage

Extremely unlikely (1) to Extremely likely (6)

(1) Attend meetings of a biology student group

(2) Engage in biology research in college

(3) Participate in biology community service

(4) Join a biology study group

(5) Attend an orientation group reunion

Community

Strongly Disagree (1) to Strongly Agree (6)

(6) Feelings about students in orientation group:

(1) I feel connected to...

(2) I felt supported by...

(3) I feel a spirit of community with...

Ask Questions

Strongly Disagree (1) to Strongly Agree (6)

(5) When I had a question:

(4) I felt encouraged to ask

(3) It wasn’t easy to get help

(2) I wasn’t reluctant to speak openly

Major

Strongly Disagree (1) to Strongly Agree (6)

(2) Regarding the biology major at CSUF:

(1) Advising helped me plan classes

(0) Advising helped me understand requirements

(1) Advising spent enough time with me

(0) I know where to find additional information

Fig 5. BURST FORTH: N = 30 students, CONTROL: N = 7 students. Data are mean ± SE of the mean response for all questions in the category. Question categories were determined by factor analysis. * indicates significant difference between groups (Wilcoxon Rank Sums test, Z = -2.37, p = 0.02; all others p > 0.15).

Next Steps

• Fall 2014: Analyze follow-up survey from fall 2014

• Spring 2015: NSO Reunion activities

• Summer 2015: Round 2 of BURST FORTH at orientation

• Long-term: track progress of participant and control students

Acknowledgements

• Awarded by CSU Office of the President

• K. Lau and the Office of Student Affairs provided logistical support

• S. Walker worked with students in control group

• Administrators P. Nexos, E. Sulivan, and S. McMahan participated.

• Research performed under NIH grant 1R15-HS14-00233 and CSUC 911.07.07


• Cabrillo Marine Aquarium staff & numerous volunteers helped with gene collection and fertilization.

Works cited

1. CSUF Department of Biological Science unpublished data.


Survey Results: Incoming Students, cont.

Fig 6. BURST FORTH: N = 30 students, CONTROL: N = 7 students.

I felt isolated in my orientation group.

BURST FORTH increased student interest in undergraduate research (Fig. 7).

Did your orientation experience change your interest in conducting research as an undergraduate?

Fig 7. BURST FORTH: N = 30 students, CONTROL: N = 7 students. Data are mean ± SE. Vertical arrow = increased interest; horizontal arrow = did not change interest; * indicates significant difference between groups (Chi-square test of independence, X² = 5.51, p = 0.02).

Low survey participation in control group limits strength of conclusions.

Next Steps

• Fall 2014: Analyze follow-up survey from fall 2014

• Spring 2015: NSO Reunion activities

• Summer 2015: Round 2 of BURST FORTH at orientation

• Long-term: track progress of participant and control students