

**IMPACT AAPI Steering Committee Meeting Winter 2013**  
**22 Mar 2013**

**Present:** Mallory Newell, Melissa Aguilar, Ricardo Delgado, Jeff Schinske, Simon Kang'a, Jerry Rosenberg, Rowena Tomaneng, Ron P Muriera, Reza Majiels, Jason Bram, Alicia De Toro, Suzanne Chan, Tom Izu, Thomas Ray

**Notes:** Deepa Yuvaraj

Tom Izu presented the updates from Winter Quarter (see power point slides).

**Questions about the program -**

- *How many students are currently enrolled and how many in STEM areas?*

Cohorts are growing; Anu is working with Faculty in STEM to expand reach

Impact AAPI team is new to the CREM and STEM pathway;

IMPACT AAPI wants to increase our work in STEM promotion

What is the percentage of AAPI students? Mallory - 35 % Asian, 5 % Filipino

- *Can you identify target population in our STEM related courses even if they aren't directly connected to the IMPACT program? For example, what about basic science entry courses such as Astronomy with 140 students enrolled, Astronomy 10, could you find your targeted students in this courses?*

Yes, through Institutional Research we can disaggregate the data and figure out AAPI numbers and those that especially fit the demographic we are going after.

**Summary of Suggestions from this group on how to move forward:**

- KEY is EXPOSURE – make students see what's out there- Room for everybody and anybody in science!
- Make sure students can see that they can actually do the work
  - e.g. number sense – feeling confident of making predictions for example using math (without really knowing they are actually doing math! - little successes help them build on more and more success
- We have a proven model of LinC that can be applied to STEM:
  - possibly Bio 11 with EWRT 2A Transferable Bio 11, 10 class, outreach to students earlier on for classes with no prerequisites with clear understanding of how this fits into being able to transfer into STEM work .
- Talk about careers
  - Create exposure to careers in STEM, also some that do not need higher math
  - Learn about local companies in STEM areas and what kind of knowledge they need their employees to have.
  - 'So many pathways are possible' – give better idea to students of various ways to get into STEM
  - If it is explained that STEM jobs can be part inside (in lab, and office) and could also be out in the field or with the public, students can realize that there are many possibilities and not just the traditional MD, Engineers, etc.
  - Use of Excel skills in Math courses – this is a real skill that is transferable to work situations. A lot of students (and staff) aren't aware of this.

- Find something student is passionate about and relate it to STEM
  - For e.g. video games – computer science/programming, or music – this is connected to science, math, and technology – recording/digital sound – writing - can become a science reporter and combine interest in writing with science and technology
- To help with outreach, use a mid level AAPI student already tracked in to STEM to do outreach to other AAPI students. Or how about a summer program or bridge style program utilizing advanced STEM College students as mentors?
- Awareness about the Stereotypes associated with STEM careers is key (see below).
- Service Learning - connect to social and community issues students are concerned about and are deeply aware of already and show how technology science can be a part of service.
- Important to integrate a lot of these ideas directly into the curriculum including role models, student's passions,
- It is also important to bring successful and exciting people to speak to our students as part of the courses.
- Can we create another class similar to Counseling 200 for all incoming students that would promote STEM ?
- Explore options like STEM related occupations that may not need MATH?

### **STEM Discussion**

1. *In your experience, what inspires students to participate in STEM programs? What are some obstacles that students face in choosing STEM pathway?*

- It is important to develop number sense and this can be used to increase confidence with math. Use exercise of making predictions, and with this, little successes can help them keep going and a feeling of making progress is very important - failures in this area hurt them more, emotionally – example of a
- Latino student who quit because he “defeated” himself, and examples of those that were able to slowly improve and see the improvement. Lot of issues to do with confidence and lots of steps to reach students in this area.
- Field trips to places, exposure to STEM work, places that trigger interest, day trips together with other students from the same background.
- Inhibitor: Math – this is a big barrier and obstacle for many of our students – some times keeping them from even considering on any level any sort of STEM path.
- Important for students to see someone who looks like them with a STEM career.
- Stereotypes associated with STEM
- Engineering is 90% male
  - Perceived as having to be very competitive, into number crunching only, and highly intelligent in a certain way.
    - Students get scared – they think they “must be a genius” or a techno-geek and assume they don't fit in based on some of these stereotypes without knowing more about the field.
  - Important to figure out how NOT to scare them away from science.

- Instructors need awareness to make sure testing isn't a barrier (how tests are structure or ways of measuring their students success in the course) – *Show them they can do it!!*
  - Parents and families encourage and or pressure students – need awareness of their importance and influence on students and their success or failure in STEM. Family and friends have a tremendous impact on students in this regard. So, it is important to address issues related to parents and well as figure out a way to include families into some of the programming.
  - Students like field activities, so if it is explained that STEM jobs can be part inside, part in lab, part in office and can connect to public – Students can realize there are lots of possibilities!
  - Culturally specific context – they have a connection or disconnection to their homeland – especially with issues their homelands are facing – environmental, energy, recycling, etc., and how they might be able to help.
  - Statistics and methods – precursor to stat class, use **excel skills** that are marketable
  - Find something student is passionate about and relate it to STEM
    - eg. video game – computer science - programming
    - Music – recording
    - Few STEM classes – Service learning -
    - Can be scientific reporter?
  - (Melissa) Example of project – we are doing a Math and Science fair in June – Main quad – and will target all students, it will operate it like Club Day – but with different student projects on display with \$200 scholarship from DASB for best projects!
  - (Alicia) -Filipino American – former student of De Anza – Excited about the possibilities here. Did not know environmental issues could be pursued in college and had never done a class on Environmental Science in High School. Struggled with math and didn't get to see what the application of math in real world was, until later. Also important to connect the subject with actual jobs and areas beyond what students experienced in high school. It is important to see STEM being used in environmental work and that there are many different careers in this area.
2. *How can the Impact AAPI grant support existing and new STEM initiatives?*
- Fund curriculum, field trips in courses, integrate in outreach, LinC course models in STEM and include developing service learning opportunities
  - Summer program with College students supported by IMPACT?
  - Sponsor career talks– featuring local companies in universities, etc.
3. *How do we organize ourselves to help follow-up with some of these ideas?*
- Service learning – Cynthia Kaufman (ICCE) and Jeff Schinske to communicate with Anu Khanna (IMPACT Curriculum Lead) to think of ways to further develop service learning opportunities.
  - Professional development – Christine Chai (IMPACT Staff Development Lead) to coordinate some talks related to opportunities for faculty to connect students with speakers on careers, and other activities.
  - Career exploration options for students and field trip can be supported by grant
  - Explore some sort of course similar to counseling 200 that can be STEM connected?