OPAS Student Success: Access, Motivation, Retention (SAMR)
Meeting #5 September 6, 2006

Attendees: Bruce Schafer (OUS), David Coronado (PSU/MESA), Jo Oshiro (OUS/OPAS), Ellen Momsen (OSU/COE), Eileen Boerger (Agilis)

Summary

Steering Committee Update

- **Graduation Requirements/ OSBE Relations** – Bruce and others developed a document framing the discussion of possibly requiring an additional year of science to graduate from high school. The near-consensus of OSBE and their advisors is close to OPAS' consensus that while another year is good, more important is improving the delivery – that is, moving toward active and applied learning without compromising academic rigor. OPAS recommendation: two years of "traditional" science, the option for the third year to be an applied science such as computer science, agricultural science, or engineering. Bruce's advance work has laid the foundation for OPAS' role as a respected advisor.
- **Fall Workshop** – the Steering Committee is working toward some blend of a committee time vs. issues format. There will be a meeting of committee chairs to help fine-tune the planning, and committees are encouraged to put forth issues, discussion points and especially action plans through their committee chairs. Current topics are choosing top strategies and finding more resources. *(9/9/06 - The committee chairs meeting has been scheduled for October 5, 2006.)*

SAMR Direction

- Summary of Last Meeting – We want to
  - do something with a relatively short payback time,
  - enable teachers and counselors to motivate students,
  - focus on a few existing programs rather than re-inventing the wheel,
  - focus on grades 6-10,
  - study the possibility of enabling small to medium companies to easily contribute.
- Brainstorming Connecting Teachers to Industry
  - Look at existing programs – Business Education Compact, MESA
  - Questions for BEC
    - Geographical range of BEC?
    - How do they connect volunteers to classrooms?
    - Who participates? Profile of companies? Profiles of Educators?
    - What is their marketing plan to educators? To industry?
    - What is support structure, manhours to run logistics of National Engineers Month?
    - What have the results been?
    - How do they measure success?
    - Who develops their classroom activities?

        - What support, guidance do they offer to NEM volunteers? Canned curricula/ lessons/ activities? Tips for adjusting material to audience?
        - Do they offer any additional support to the teacher? Stuff to lead up to the presentation or reinforce it later? Lessons, videos, or ???
        - What would more recruiting of industry, especially small to medium companies, take?
        - What would more recruiting of educators take?
        - What is the feasibility of providing a clearinghouse of volunteer opportunities or connections? Lowest level implementation – expansion of the SuperSite.
        - How well do they connect with groups like SAO, AeA, AOI, Industry Cluster groups? Oregon Innovation Council?
    - MESA
        - Costs $5500-6000 per year per chapter. A Middle School chapter is 20-30 students and one teacher; a high school chapter is 15-20 students and one teacher. Maybe 10% goes back to the MESA office for infrastructure. Funded as part of PSU; in other states, MESA is a separate organization.
    - Potential Leads/ Experts
        - Larry Flick, Chair of the Department of Math and Science Education, OSU *(Jo sent email 9/9/06; Jo has also been trying to collect contact info for his counterparts at other institutions.)*
        - (Jo) Debbie Wintermute (former principal of Hiteon Elementary, now Assistant Professor of Education and Director of Field Placements at Pacific University)
    - Supporting volunteers – guidelines or tips and tricks for being a better speaker, classroom volunteer, mentor, or coach might make it easier to get to "yes".
        - SWE *(Jo was unable to locate rumored tips and tricks for mentoring/classroom volunteering; email sent to Carole Peterson of SWE 9/9/06)*
        - IEEE *(Jo sent email 9/9/06 to OPAS members Dan Arnold and John Vinson)*
        - (Jo) Susan Shugarman, OHSU
        - Others *(Jo sent email 9/9/06 to Saturday Academy, ISEF, and BEC contacts.)*

Next Steps

- Meeting with BEC – *Jo, Eileen, and MaryBeth Horton of BEC to meet Friday, September 22.*
- Pursuing Counselors – David Coronado will investigate putting together a focus group of counselors similar to our MESA teachers focus group.
- Further release survey – Jo will request her high school teacher contacts to release the survey to their students. Please send it to college students, recent graduates, and young professionals that you know. It is written not assuming anything about residence and will filter out non-technical people.

Next Meeting – sometime after the September 22nd meeting with BEC.

Discussion Detail

Bruce: Updates on steering activity. Graduation requirements: establish credibility, influence result, ... And …

What should be required, what should count? Rigor, relevance, reach (across multiple intelligences, cultural), (academic) retention.

Bottom line: provide limited flexibility, one year of applied or traditional. The question not asked: what about the delivery? Improving delivery maximizes rigor, relevance, reach, and retention. This is state of the art, but not highly deployed.

The majority of kids don't learn nearly as much as you'd like and remember even less. A few come out of HS knowing science really well and are really well prepared.

Advanced campaigning. OSBE 150 people in the room. Multiple table consensus process. At the end of the day, consensus leans towards our viewpoints. The OSBE has a limited amount of influence over what districts and schools actually do. Huge number of reality and implementation questions to get us where we want to go.

All-OPAS workshop: one day, very little additional recruiting, current members. 2 perspectives, probably get hybrid. Committee centered, joint meetings or issues focus. Bruce's issues: 1) prioritize strategies – do a ZBB on it – time to choose 2 or 3; 2) How do we get more non-state resources: Fed, non-profits

EB: Must somehow balance short-term and long-term.

Summary of last meeting

EB: Concentrating on motivation and retention. How can we increase? Concentrate on MS, 9-10 students and especially teachers and counselors. What can we do now vs. curriculum, standards, etc. What are programs that we can support and how? How to pull industry in? Pull in industry to help connect teachers and counselors to keep kids motivated.

Brainstorm:
Ellen: connect really well with science and math education departments. Publicise industry links there – new teachers more open. Pre-service education connection.

EB: Industry can really address "relevance" of 4Rs. Use some industry people to brainstorm with teachers?

EM: Getting industry in to classroom – giving them some tips for classroom, leveling the talk.

DC: Provide the translation piece to volunteers. OHSU has a center that gives the scientists the teaching piece.

JO: find the ref/ link. Also EM says SWE has tips for delivery to different age levels.

EM: Ask MBH how much support does BEC offer to the engineers sent out to classroom? Does Intel education do that?

EB: How to have a connection between teacher/ curriculum and speaker? Intel has resources.

DC: Bill Cameron and Susan Sugarman at OHSU. A lot of industry has a community relations person or department – can we get to them?

EB: Small to midsize companies – lots of volunteers, leftover materials, not cash. To reach, a combination of AeA, SAO, AOI (Associated Oregon Industries). We need to offer an organized way for people to come in and help. I feel like there's an untapped group out there.

DC: Anecdotal evidence – business owner frustrated because no central clearinghouse?

JO: Expand BEC TechnoScienceSuperSite to include volunteer opportunities for professionals.

EB: Plug MESA into BEC?

DC: MESA needs more funding for infrastructure in general (finds and place industry volunteers, maintains the resource library, develops new lessons and curriculum) – stipends for teachers is a big ticket item to grow the number of schools. Currently get money from the state, ETIC, private and industry sponsors (Intel, Pacificorp, Lemelson)

EB: What level of funding? How much?

DC: Per school, $5500-6,000 per chapter per year. Chapter is one club cohort of (MS – 20-30) or HS 15-20 with one teacher. Maybe 10% go back to infrastructure. Would love more revenue for admin and/or program coordinator. Student workers – lots of turnover, more implementing than creating.

Other MESA programs are funded by their respective states with industry partners. Wa MESA is a non-profit housed in the university. OR MESA part of the campus services line item budget in OR, took a hit; is actually part of the university.

MESA can't talk to legislators etc. except through government affairs office. Must go through development office to talk to funders for soliciting donations, sponsors. Can just respond to RFP. Creating a faculty advisory board to respond to RFPs. The eternal funding problem – easy to find money for new stuff, not for ongoing. Need an annuity revenue stream.

Fall Workshop: Table this until we see what happens with pre-workshop, BEC meeting. EB certainly wants to make sure that SAMR is pushing the things this committee wants.

DC: Will research how to contact counselors. Has some contacts through PSU admissions.

Next Meeting: To be scheduled after BEC meeting.