OPAS Diversity Meeting (DIVR) #5
August 14, 2006 1:30 – 3:30
Gladys Valley Gymnastics Center, Corvallis

Attendees: Eda Davis-Butts (OSU/SMILE), Don Kirkwood (N. Salem), Jo Oshiro (OPAS), Wendy Powless (OIT); Ginnie Lo (UO)

Summary

- **SMILE Update**
  - SMILE is refining the organization of the program to emphasize college readiness and an ongoing instructional focus, and add program-based focus themes over time. This year's focus is safety.
- **Committee Roster Tweaking**
  - Gayle Yamasaki of OIT will become less active. Eda is working on recruiting Mary Bunn from ODE, with whom Don has previous experience and endorses highly.
- **Steering Committee Update**
  - Most topical for this committee is the proposed fall mini-workshop. Current thinking on the format of this workshop is that it will be centered around issues which committee chairs will be asked to nominate, so committee working time will be limited.
  - Other Committees:
    - Alignment and Coordination: Curricular and Co-curricular – ETIC has awarded OMSI a grant of about $25K to kick-start a network of providers of informal STEM education planned for late January or early February.
    - Student Success: Access, Motivation, Retention (SAMR) has released a survey, "Sparking an Interest in Engineering." This is actually three surveys, aimed at high school and college students interested in engineering and young professionals in technical careers. Because the surveys will be released fairly widely, they are written to filter out non-targets for comparison. Eda and Wendy agreed to further release this survey provided it does not close before November 1, 2006.
    - Standards, Courses, and Curricula (SCC) – Jeremy Tucker, BEC Teacher Intern for the summer, has reviewed several states' standards relating to science and technology, looking for rigor and usability of standards and inclusion of technology, design, and engineering components. These are linked on the page "OPAS State Science Standards Review" at http://opas.ous.edu/Committees/Resources/Standards/standards.html. A link will be added to the committee webpage.
  - A new consolidation of committee resources, the OPAS Master Resource list is now available on the web at http://opas.ous.edu/Committees/Resources/. This list is sortable by column, ascending or descending. To search the list itself for keywords, use your browser's Edit Find function. To search the posted articles and the OPAS website, use the Google search box at the top of the table. We will

keep the Diversity resources on the wiki, whether or not they also get posted to the Master Resources list.
    - The Steering Committee continues to work on diagrams and documents to help frame committee and policymaker discussions and OPAS Public Relations and communications work.

- **Issues, Concerns, Events & Opportunities**
    - Summer Jobs for Kids – (Ginnie) Can we spark interest via summer jobs, say in CS? Are there job opportunities out there for kids with little formal training? (Wendy/ Don) OIT and Chemeketa are seeing many fewer job opportunities for AA and BS degrees in IT. There is certainly a perception that all these jobs are outsourced or gone. Chemeketa is phasing out its AA IT degree. (*8/24/06 – Jo will dig up some data/info on this.*)
    - ACM SIGCSE (Special Interest Group in Computer Science Education) is coming to Portland in the Spring of 2008 and will include some coverage of high school education issues. Don Kirkwood has been tapped to organize this.
    - ACT recently published a study, "High School Graduates Need Similar Math, Reading Skills Whether Entering College or Workforce Training Programs". Do we have the opportunity to implement increased rigor within the framework of the Small Schools Program?
        - AP and IB can bring rigor with instant credibility.
        - "Small Schools" mean students are grouped in non-academically tracked cohorts, not that class size gets smaller. Students are more likely to recognize each other and teachers on sight and by name. Funding tends to go for in-service work, and is often inadequate.

- **Care and Feeding of Evangelists and Exceptional Teachers**
    - Evangelism is a replicable model. Programs are not successful, people are successful. Programs do not make the difference, people make the difference.
        - Recruitment of pre-service teachers from education classes and from STEM disciplines.
        - Ongoing support for these people -- opportunities to try some things out … all we need is the jazz. Pilot programs for new classes such as Don's MECA (Math, English and Computer Applications) class or NBA (No Boys Allowed) program.
        - Don will rough draft proposals and put them on the wiki & email. (*Done 8/24/06)*
    - We need to reach out to teachers where they are at – in person so they can hear, see, touch, ask questions (that interpersonal intelligence issue again) - Can we subsidize participation at an already planned event like OCTM, OSTA, OMEC, OSEC, (and also) ToToM (Teachers of Teachers of Mathematics)? There are AMATYC and similar organizations at the community college and college level
    - (Ginnie) Can we try to find out who are the excited people already out there? Identify change agents, evangelists, first adopters? *(Jo notes that one of the ETIC grant proposals that was not funded was some surveys and phone followup trying to identify technology and CS teachers and leaders in every high school in*

Oregon. One reason it was not funded was that the reviewers were not convinced the case was made that this information was not available elsewhere. Anecdotal evidence of teachers and some other people say it is not. Also, the reviewers were not convinced that the SAOF (Software Association of Oregon Foundation, sponsors of SuperQuest) is the appropriate repository of this database.)

- **Wiki and Best Practices Project Action Item:**
  - Read and comment on these resources from the "Complete Table of Resources" on the wiki. Add at least one comment by September 6th. When you have made comments or substantial changes to the wiki, email ticklers to all committee members via the listserv opasdivr@lists.ous.edu, which is linked to the wiki Main Page (see the Committee Roster) as of 8/24/06).
    - Akron 10-year study;
    - Latino Youth & comment by September 6th.
  - Recommend steps to recommend to the larger committee.
  - We will delay discussion of the Best Practices Guide what and how until after reading the articles above. In the meantime, Jo will start a wiki page on the nuts and bolts of how the guide should look. (Eda) The original intention of the Best Practices Guide was to cull through resources and pull out the essential to make a useful tool informing practice around STEM education. Review resources whether or not they are based in Oregon. For Best Practices and programs exemplifying them, focus on Oregon. One of the things we can do to counteract skepticism (one of the problems with BP is the "can't be done here" reaction) is to provide examples of that practice working in Oregon. (Wendy) Looking through all these resources, we will begin to see the same themes again and again; we need to boil down and articulate them AND THEN LOOK FOR WHAT'S MISSING. Can we have help filling it in?

- **Next Steps/ Action Items**
  - Wiki reading and comments by September 6th, as noted above.
  - Think about how we can be very focused on what the recommendations that come out of this group are. Think about a committee statement of viable options of how we can move from where we are now to where we say we want to be. If we are going to maintain momentum we need to keep on, but we need to aim for the fall meeting. We need to try something, get the feedback. Let's put forth some doable next steps, thoroughly framed, a "Top Three" suggestions to impact diversity in STEM education and careers.
  - **Next meeting**: another wiki working session over the phone; please set yourself up with a hands-free phone (if possible, not a cell phone which tends to interact poorly with the phone bridge) and a computer with internet access. **Thursday, September 14, 3:00-5:00**.

Discussion Details

The SMILE Program

Eda talked us through a visual tour of the SMILE resource library and its various users, including SMILE teachers, students, OSU students in departments such as Science and Math Education. Her own area of interest is educational toys.

One current project is a Great Inventors program in collaboration with Eastern Oregon University. SMILE also recently hosted a three-day on-campus event for its teachers which went extremely well. SMILE teachers meet over the summer, in February, and in May.

While SMILE has always had a college readiness component, they have now drilled down to the elementary school level with a specific instructional focus on college readiness. In elementary school, this includes awareness of college; in middle school, exploration of careers and interests, gathering information about college, on-campus experiences, and developing a plan of study for high school. In high school, continued involvement with math and science. In grades 9 and 10, continued exploration is emphasized. High school juniors and seniors take the PSATs and the SMILE program takes an active role in identifying potential matches of students with institutions.

Another structural change in the SMILE program is the articulation of six Essential SMILE attributes. The program will focus on one attribute a year for the next 6 years, and then cycle through. This year's focus is on safety.

Committee Members:

OIT - Wendy has just finished 5 weeks of camp, TWIST (Teen Women in Science) among others and is happy to say they went well. Gayle Yamasaki is on loan to a local charter school effort. A group in Klamath Falls is founding a "New Technology" curriculum school. Wendy and/or Gayle may be able to pass on more information as it becomes available.

Eda is working on recruiting Mary Bunn from ODE to the Diversity committee; Mary seems amenable. Don has worked with Mary before and endorses her highly.

Steering Committee Update (Don and Jo):

- October OPAS mini-summit, workshop, mini-conference – the Steering Committee has been discussing pulling together all of the active OPAS committee members to increase our focus and keep the momentum going. The original poll of the subcommittee chairs indicated a need for substantial committee working time. Discussion in the steering committee hoped to, rather than continuing as we have been, re-energize and perhaps collapse the committee structure around the most critical issues that various committees have found in their discussions, which tend to be lively and far-ranging.
- Three Paradigms synthesis – one of the conceptual models which Bruce and the steering committee have been working with to help hone our thinking has begun to morph, so that it addresses Rigor and Relevance. We have tried to understand and articulate the pros, cons, barriers and timelines attached to various approaches of addressing STEM

education, student disengagement, and pre-engineering education. The work is ongoing, but has been superceded in priority to Graduation requirements.

- Graduation Requirements – OSBE is having discussions on whether or not to require an additional year of science as a minimal high school graduation requirement (school district requirements may exceed, but not be less than, the state requirements). If another year is added, what courses should fulfill the additional requirement? Should CS, technology, environmental science, Ag science, etc. count? Bruce developed a document to frame this discussion and has been talking with some individual board members.

Issues, Concerns, Events & Opportunities:

Eda: Study – employers are looking for things colleges are looking for *(Jo notes – this ACT press release is on the Master Resources List as of 8/24/06).* What opportunities to implement increased rigor within the framework of small schools program?

Wendy/Don: Bring along the rigor via AP, IB. Instant credibility.

Don: at N Salem High School, they are implementing a small school model, but the way it is done has so little funding, smaller class sizes are not happening – the money goes for in-service. And sometimes other classes get bigger (9^{th} are in small-schools, but 11^{th} & 12^{th} are bigger classes). "Small Schools" means kids travel in a cohort, (different schools implement in different ways) not that class size gets smaller. Within the letter of the law (of the Gates grants), there is no academic tracking.

Don: Jo & Don's brainstorming on the drive down – SIGCSE (Special Interest Group in computer Science education of ACM) in Portland in Spring 2008; they pull in a local HS teacher in charge of helping the committee to pull together the thread; heavy hitters (ALICE, BLUEJAY). An ideal forum to discuss this stuff – an ideal opportunity to present, and ask questions.

Care and Feeding of Evangelists and Exceptional Teachers

Don: Curriculum is contracting, not expanding. (MECA – math, English, computers and their applications) a class he developed, he could not do now because of minimum enrollment requirements. What about a pilot program for new curricula, to keep

Eda: part of the concern for framing the startup – wants wider applicability. Wants prep time, networking time, professional development, evaluation time & presentation time – 3 year project, 2 years teaching.
Wendy: Do the 2 year plan, will get the already evangelists. Do the 3 year plans, will get the maybe evangelists.

Don: Education courses not jazzed, not taught to grab people. So what if we send out to student teaching infrastructures some evangelists to talk about what the jobs are, so teachers understand what their students are training for? Mentor network for STEM fields.

Eda: There is a white paper on STEM mentoring that may be available soon.

Wiki and Best Practices Guide

Ginnie: we won't really use it too much until someone is actively engaged in a project. Another wiki work session.

Don: each make a commitment to get on once a week, make a comment.

Ginnie: our first assignment is to get on, upload a document, make a comment

Eda: Ffirst assignment: Look at the Akron article, post comments.

Don: Also look at the "Latino Youth and the Pathway to College" article.

Don: A lot of stuff – resources, curricula, lessons - are not really used. These need to be VERY concise, usable, and then there has to be some way to get the word out.

Eda: Where are the educators already meeting? We need face-to-face time with the educators; they need to hear and see.

Don: Another example: NBA – No boys allowed, a program for middle school girls. Grant from Chemeketa CC includes some mentoring for other program startups.

Jo: It has to be personal – need to budget the interpersonal time. Teachers are interpersonally intelligent and operate as such.

Don: Finding a practical, logical time is a problem.

Jo: Can we subsidize participation at an already planned event like OCTM, OSTA, OMEC, OSEC, (and also)ToToM (Teachers of Teachers of Mathematics)? There are AMATYC and similar organizations at the community college and college level.

Don: One of the things that convinced me that this was worth doing, was that Bruce has the connections to get thing done, get funding.

State In-service day October 13.

Don: Any way to get together to refine a proposal before the October OPAS workshop?

Teaching

Wendy: Being in a small school, teaching many different subject, not getting to repeat the same lesson stunted my growth as a teacher.

Don: I can't teach the same lesson twice in one day – I get confused about who I have told what.

Don/Wendy: each teacher has a different approach, and they will work differently for different kids.

(*Jo remembers comments by Walt Mayberry, who left industry to teach high school Computer Science, in another committee meeting, commenting that once the curriculum was written (playwright function) he welcomed the opportunity to teach the same materials several times quickly in succession, "perfecting his performance as an actor"*.)