



OPAS Steering Committee

Detailed Meeting Record

#32 – April 29, 2008

Attendees: Ken Cone (OUS), Jo Oshiro (OUS/ OPAS), Bruce Schafer (OUS), Dick Knight (Saturday Academy), Ben Manny (Intel Retirees), Steffen Moller (Clackamas CC), Eda Davis-Lowe (OSU/ SMILE), Don Domes (HilHi)

3:30 - 3:35	Introductions, opening remarks
3:35 - 3:50	Recent work by Workgroups <ul style="list-style-type: none"> • Motivate • Prepare • Success • Pathways
3:50 - 4:05	OPAS-related RFPs <ul style="list-style-type: none"> • 4-year overview • Summary of 3 interim reports • SMILE Q2 Status • PCC Q2 Status • Redmond HS Q2 Status
4:05 - 4:30	Continue planning for 2009-2011 Biennium <ul style="list-style-type: none"> • Dick Knights pipeline model and possible insights, conclusions <ul style="list-style-type: none"> ○ highlights of the current version - 3 pg pdf ○ expect an update collating feedback from Bruce, Tom et al. • Next Steps <ul style="list-style-type: none"> ○ Developing management plans
4:30 - 4:55	Possible sources in advance of July 2009 <ul style="list-style-type: none"> • Foundations - summary of webpage information • Federal RFPs
4:50 - 4:55	Other business (members should suggest topics before or during meeting)
4:55 – 5:00	Schedule next meeting - default Tuesday, May 13

Summary as Emailed and Posted June 18, 2008

Seven members of the committee attended the April 29 meeting, hosting guests Ken Cone of OUS and Don Domes of Hilhi, both of whom are well-connected to the OPAS Initiative.

Because of the accelerated schedule of Steering Committee meetings as we work on more detailed planning for the coming biennium, only two of the Workgroups have met since the last Steering meeting:

- Succeed Workgroup (Eda):
 - Don Kirkwood reports a successful and well-received presentation to CTE teachers and administrators at the Oregon Association of Career and Technical Educators'

(OACTE) mid-April conference. The presentation, *STEM – With All Your Concerns, Why Should You Care?*, included occupational outlook and salary data. Don's report sparked a rich discussion on how to build on the success of local programs.

- Succeed is taking as an action item consideration of how to best ensure equity is effectively addressed throughout the ETIC “Brighter Future” proposal. Other workgroups are encouraged to bring specific concerns to Jo, who will pass them on to the group.
- ETIC's Computer Science Task Force (CSTF) is in the final push towards the Oregon Game Project Challenge (OGPC) in mid-May. After that event, they intend to pursue the overlaps of interest and action between the CSTF, the Prepare Workgroup's in-class programs promoting CS, the Motivate Workgroup's interest in fostering engineering (and by implication Computer Science) team challenges, and the Techstart Education Foundation. Chris Brooks, chair of the foundation's board, sits on both CSTF and Prepare.

ETIC/OPAS grant updates: summary updates were linked to the agenda, but only lightly touched on during the meeting. One key point is that some staff (Ken Cone) bandwidth will be dedicated to monitoring and analyzing the effectiveness of grant performance and analyzing data across grants.

Dick Knight presented an introduction and orientation to a parametric model for predicting the source of future engineering and applied science graduates from OUS institutions, “Where Will They Come From?”. This analysis looks for knobs we can turn to achieve the goal of more graduates. Some of the most obvious knobs are increasing recruitment of women and underrepresented minorities (non-Caucasian, non-Asian). The model shows a perhaps surprising emphasis on our dependence on more global initiatives such as reducing the drop-out rate and increasing access to college and retention through college (and over the transition from community college to university.) Some of the most obvious knobs are increasing recruitment of women and underrepresented minorities (non-Caucasian, non-Asian). Dick has collected comments and edits and will be publishing an update shortly.

Accessing further funding through foundations was discussed.

The next meeting is tentatively scheduled for Tuesday, May 27, 2008, pending ok by the committee chairs.

Action Items as Emailed and Posted June 18, 2008

Jo:

- get Eugene gaming company info to Chris Brooks as an FYI
- get Dick Knight the attribution of the research showing that middle schoolers interest in science is a better predictor of their future success than their math preparation.

Dick:

- Update the parametric model and forward to Jo for distribution.
- Talk to Eda Davis-Lowe and Don Domes about the JETS ASSESS opportunity.

Additional Items Referenced, of Interest

- Succeed (Eda): Discussion of how we might support teachers in checking out existing successful programs and supporting women and minorities.
 - More support than off-site conferences and workshops.
 - Don Kirkwood will draft some proposals on minigrants for recruiting in CS and pre-engineering and applied sciences.
- Computer Science (Ben) updated the group on the meeting of ETIC and OPAS CS stakeholders looking for the overlap of programs and synergies; they got a good start and intend to follow up in late May. Did determine there is little overlap or working at cross-purposes; need to think more about possible synergies
 - Chris Brooks, Dick Knight, Ben Manny, Eileen Boerger, Bruce Schafer representing OPAS Motivate and Prepare Workgroups, ETIC CSTF (which has been more tactical in its approach), CSTA, and the Techstart Education Foundation.
 - How might these groups collaborate or agree to divide and conquer?
 - Should there be joint meetings? How to configure?
- ETIC CSTF (Bruce) The pilot season of the Oregon Game Challenge Project is a tournament format; currently closer to 25 teams rather than expected 10.
- Dick: JETS ASSESS tool development opportunity as they work on porting the tool to the web. OPAS initial reaction to the ASSESS instrument is that it could be direly intimidating except for the very well-prepared student. JETS has invited us to participate, but someone seeing students more often than I am might have more valid input at this stage.
- OPAS-related RFPs – quick overview of materials.
 - Redmond is behind the curve in their spending; Ken will follow up.
 - Ken made a visit to the PCC Road Trip group; of note:
 - about a third of Benson students intended to pursue 4 year degrees.
 - Difficulty scheduling classroom teacher time to do anything – teachers, subs, busses, permissions from other teachers.
 - Dick –any formative metrics?
 - Ken: Most of the group felt that 25% of the kids participating felt that it was a worthwhile experience, and the group felt that was a pretty good hit rate.

“Where Will They Come From?” Model:

- The idea was that for ETIC, one of the key metrics was whether we could significantly impact the number of technical graduates in the OUS system (more than the growth of the overall system). Where are they going to come from? Thin air? Steal from other programs? Look for leverage points.
- Linked to the agenda are a selection of key slides from a 20 page document.
- Use the model to form some testable hypotheses.
- Walk through Figure 1.
 - Unlikely that the demographics alone will save us – baby boomlet over.
- Multiplicative model to make it easy to see effects. Based on study on OUS webpage
- See notes on handouts
- PSAT major-choice question percentages pretty much the same as SATs – trying to influence these kids in high school may be too late to be a high leverage point.

- Gigantic errors on one side of the model cancel out gigantic errors on other side of the model – speculating on where are the knobs that we can turn.
- The number of students choosing engineering – number has been rock-solid for a decade.
- States with the highest penetration of PLTW – have not seen any difference in the PSAT preference numbers. He has asked PLTW about this.
- Bruce: Pretty powerful model. The one part he is least comfortable with is the intent to transfer (i.e., community college to university)– many a slip between the cup and the lip.
- Steffen: It is a powerful model; many pieces worth a closer look. One of the pieces where we may be able to gain some could be the student who is a first generation to college, or experiencing financial barriers. Unfortunately at Clackamas, we find that those that have pre-calculus or HS calculus or are high-performing in math are much more likely to head straight to university.
- Ben: That’s OK for us, but one factor in choosing community colleges is affordability. As the economy continues to suffer, affordability becomes an even greater issue.
- DK: We need to take more ownership of the kids in the pool and where these kids come from. The most disturbing thing I ran into is that I have found no evidence anywhere that anything influences those choice-of-major numbers; they’ve been solid for 20 years. Where do we push it down to? 9th grade? 6th grade? Age 2?
- Ben: could be cultural
- DK: Where is the highest leverage point we can apply our resources. Self-selection bias issue.
- Ken: Campus support – examples of really positive best practices are on some of the campuses around here; really good support structure
- DK: lost attribution of data – being interested is twice as important as being good in math. If you find the interested kids, supporting them may be a bigger payoff than trying to interest the prepared. JO GET THE ATTRIBUTION TO DICK.
- Domes: these data support the internship model.
- BWS: Engineering in many ways a one-way door – hard to change into engineering major mid-stream. Built-in filtering process with spring sophomore selection of professional school.
- DK: how much forced selection in the system right now? Is it happening at a level above what is needed for good engineers? Is there a capacity problem.
- BWS: Need more faculty and more freshman to increase engineers; need the faculty we have and more freshman to increase CS.
- Leverage is high on CS knobs to turn.
- DK: We may want to bias our effort towards that.
- BWS: Crazy idea – I can’t prove this – The Calculus Question.
 - ABET requirement all engineers everyone needs calculus
 - Change ABET accrediting, no, but maybe but could be leverage point
 - Under represented in women, good at math, hs juniors don’t like math
 - Additional hurdle with math reqt for CS
 - Particular focus on learning discrete math needed for CS
- BWS: Most 15 year olds would get close to what engineers do; don’t think that they would close to what CS do – “CS study computers”. Better to rename “Software Engineering Technology” – talk about software engineering rather than CS.

- BWS: Can we sample students to study these issues? If you use the words without defining them, the 12 year olds think you are talking about trains and HVAC. Might have a semi-random number for the younger, only a slightly more informed number .
- Steffen – 11 year old son of one of the office co-workers loved the Explore brochure. How do we best get at the student who is likely to take pre-calculus in High School?
- Ken: Knobs – what can you twist? Fishbone diagram to see if something pops out?
- DK: We have a lot in common with other general health initiatives in the high school. Using our needs to reinforce things that need to be done in the system through the legislature.

Possible sources of funding:

- BWS: new insight on CH2M Hill. Historically wrote big checks for capital campaigns; tiny checks to feel-good things. Largely withdrawing from capital campaigns & big checks to emphasize building the pipeline of future engineers. Other angle that is more tenuous; he believes that a certain amount is earmarked for spending in cities where CH2M has a large presence. John Willis, local Area Manager, has come up to speed on ETIC but missed the OPAS presentation meeting. Could meet with John or his committee. Start a relationship or focus on a proposal, perhaps some piece of the \$4.56M “Brighter Future”? CH2M has adopted sustainability as a corporate culture – particular sustainability model that talks about environment, society & money – aka economics, environment, equity (social justice equity, not financial equity) (the triple bottom line model - <http://getsustainable.net/about>)
- Ben: Don has talked some with Jill and she has expressed some interest.
- DK: re: CH2M Hill, different suggestion: go to them as a partner and a consultant, have a workshop session, we share with them our collection of resources. Help them get the proposals they want to get. A cultivation paradigm, not a fundraising paradigm. Just from his read of Willis’ personality.
- BWS: Tried this paradigm at the Mentor Foundation, got nowhere.

Next Meeting: Tuesday May 27 -- Jo check with committee chairs.

Agenda

- Pilot project – engineering challenges
- Bigger discussion on the Calculus Question – Ben to bring it up with Goldman?
- Revisit parametric model after email discussion post –distribution of refined model in May 5-9 week.

Ken: appalled at the amount of time teachers spend grubbing for money.