



Oregon Pre-Engineering & Applied Sciences Strategic Planning Summit

Instructional Professional Development (IPD) Subcommittee

Mission: Increasing the capacity of teachers and faculty to deliver learning experiences that inspire and prepare students. Identifying and providing professional development programs and strategies that enhance their knowledge, skills, and mastery.

Recommendations: The three priority strategies in this focus area were to develop pooled resources for teaching engineering and applied science projects, elucidate the role of engineering in supporting core curriculum, and improve the relevance and quality of teaching at the post-secondary level.

Meeting Minutes

March 13, 2006

Virtual Meeting

Members in attendance: Larry Flick, Kent Foster, Megan Helzerman, Winnie Miller, Doug Stuiivenga

1:00-2:00

Meghan Helzerman, who was unable to attend the March meeting, introduced herself. Meghan is the PTE (Professional-Technical Education) Regional Coordinator for Clackamas ESD. She manages federal Carl Perkins grant funds and sponsors programs aimed at improving professional-technical education, such as:

- The Clackamas Technical Education Consortium (C-TEC)
- The Business Education Compact Summer Internships
- The Clackamas Regional Skills Competition
- Advanced College Credit
- Regional high school programs at Clackamas Community College in Collision Repair, Manufacturing, and Automotive
- AWSEM (Advocates for Women in Science, Engineering and Math)
- Workforce Investment Act (WIA) At-Risk Youth Programs
- Professional Technical Program Quality Assurance and Teacher Approval Process

Goals and Expectations: What is it that we would like to see this committee accomplish?

Larry:

- Help make current programs and projects that support engineering education more visible and better funded.
- Develop fact sheet(s) to distribute to legislators and other community leaders on the state of education for engineering in the state.
- Design a middle school initiative that seeks to improve the science and mathematics background of teachers through projects and activities that teach science and math through engineering concepts.

Winnie:

- All PK-12 teachers in Oregon schools will be aware of and have access to resources available for integrating pre-engineering concepts into math and science coursework.
- All PK-12 teachers in Oregon schools will have opportunity to participate in training for implementing the available resources either in face-to-face or online formats.

Doug:

- Identify all the activities that we, as a group, support. Where are the gaps? What can we do to fill in those gaps?

Kent:

- Microsoft is interested in partnering with and facilitating computer science teachers leverage.

Meghan:

- K-12 district pathway; at this time, teacher interest is not district wide.
- Pre-engineering in the middle schools; Project Lead the Way currently involves only high schools

Other discussions:

Oregon does not offer a computer science teaching degree. However, it does offer an professional-technical endorsement. That group of folks is identifiable through Megan.

Are we looking at this as additional curriculum? the creation of a course? creation of content? If so, this implies something must be removed.

For physical science and math teachers, can we relate science and math with engineering concepts?

Doesn't ODE require students to have a career related plan that starts with next year's graduates? Engineering could be a suitable piece of this plan.

Interesting research about college freshmen pertaining to apprentice/trades, computer programming, etc. will be disseminated by Larry either at the April meeting or posted to our website prior to the meeting. What does college require of me? What are some alternatives?

Meghan will bring something to the April meeting also pertaining to pre-engineering pathways.

Some interesting work is currently going on in schools like North Eugene High School through Microsoft Gates Foundation Smaller Schools which provide technologically rich environments. Doug's school staff is still trying to reach consensus about moving in this direction, too.

2:00-2:30 Proposed agenda Items for the April 21 meeting

Bring an action plan to the April meeting. What do you hope to accomplish in the next 3 months? In the next 12 months? Define goals and determine how you would measure success. Keep your eye on the ball. Do your goals fit in with the OPAS mission?

It was suggested that we conduct a needs assessment with the target audience of middle school teachers. What are their needs in terms of math, science and technology? What are their professional development interests? Microsoft would then be able to do some research to find out how other States are dealing with these issues.

Instead of emails flying back and forth on the listserv, it was suggested that Jo set up a chat room or a chat board...some kind of an electronic meeting space so all the ideas and attachments do not get lost in the forest of emails.

(Note: Carla was unable to attend at the last minute, but she has posed some great questions and is looking forward to hosting our April meeting at PSU.)