Program Development Grant Final Report Cover Sheet

DR# 059

Project Title: Email Mentoring **Date:** August 26, 2001

Project Manager: Sue Richards **Section:** Willamette Valley

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Deliverables: Indicate type (i.e. document, web page, brochure, etc.), title, and media (hard copy, email file, disk, etc.)

Final Report and Web references

Select the <u>one</u> primary Strategic Priorty this project addressed:

•• Leadership X• Education •• Diversity •• Visibility •• Vitality

SWE Committees to which this report and deliverables would be of interest:

X• Career Guidance •• Public Relations •• Multi Cultural Committee
•• Continuing Devel. •• Publications •• Other: _____
•• Membership

Project Audience (age, sex, diversity) Female: X Male: _____

Age Group	*No. Actual/Proposed*	*Diversity*	*No. Actual/Proposed*
• Elementary	/	X Caucasian	6/N/A
X Middle School	8 / 10	• African American	/
• High School	/	X Hispanic	2 /N/A
• College	/	• American Indian	/
• Professional	/	• Pacific Islander	/
• Other _____	/	• Asian	/
Contact Hrs: 12	per attendee	• Other _____	/

SWE Volunteers (No.) 8 **Estimated Total Hours: 100**

Non-SWE Volunteers (No.) 1 **Estimated Total Hours: 20**

Amount of Grant: $5300 (90% of funds was given up front- $4770)

Total Final Expenses: $5020 **Amount SWE Owes You: $250**

-or-

Amount You Owe SWE: N/A

Executive Summary: A short summary of what the Project was and what it accomplished.

The Willamette Valley Section was selected to receive funds from the first Exxon program grant for the E-mail mentoring program with the Santiam Canyon School District. The program objective was to reach out to a rural school district in Oregon. Through mentoring , female students in fifth through eighth grades will established relationships with female engineers in industry to encourage them to enter careers in engineering math and science. The funds bought computers and math and science software for the schools in the district to provide email capabilities and assistance in their projects.

The girls had little exposure to female role models in careers involving engineering and science. Through the E-mail mentoring program the girls were exposed to careers outside of logging and welfare opportunities. The program was based on an e-mail mentoring program already established by Hewlett Packard. It is structured around building relationships with the mentor and pursuing engineering, math and science interests of the students. The email mentor relationship taught fundamental computer email usage to the students. The students wrote biographies of the mentor after several email "interview" exchanges detailing the mentors personal life, education and career. The students utilized the computers to research various areas of math and science that they were interested in and discussed those fields of interest with their mentor. The program concluded in April with a SWE program called "Manufacturing in Action" where the students met with their mentors, had lunch and toured the Hewlett-Packard

plant for the afternoon. This program exposed the girls to wafer manufacturing, inkjet pen production, environmental waste stream management and digital imaging applications.

DR059 Final Report

Sue Richards

August 26, 2001

- Final Report Cover Sheet
- Recognition of SWE and the Donor - ExxonMobil Education Foundation.
- Narrative Description, including program goals, schedule, program conduct and content.

This program was geared toward exposing rural young women, in the 5-8th grades to women in the engineering industry. We partnered with Santiam School District and the Mill City Middle School. The majority of the industry in this area is lumber based, and these young girls do not have many role models in the area that have a technical background. We targeted middle school aged girls since this is the age where the interest in math and science must be sparked to set the girls up for high school courses and a possible career in engineering or any other science related field. Our goal was to have 10 email mentors and protégés. We utilized the Hewlett-Packard telementor program that is detailed at the following web site: http://www.telementor.org/itc/Mentors/mentors.html This program is fairly generic and can be adopted for any email mentor program that a chapter wants to host.

Our schedule consisted of the following checkpoints

Mentor and Protégé recuitment	March 1999
Computer and software selection	April 1999
Computer Purchase	April 1999
Computer Installation	May 1999
Summer Break	
Mentor training	Feb 2000
Program Kickoff	March 2000
Mentor and Mentee meeting/Program conclusion	April 2001.

- Measured results (number and mix of attendees, surveys, other measures of impact, etc.) including comparisons to prior data or prior expectations, what constitutes success, use charts where appropriate.

We had a total of 8 mentors and 10 protégé's participate in the program. We had two of the students who were Hispanic. My expectations of the having 10 mentors be able to participate was aggressive for a small chapter such as the Willamette Valley Chapter. We lost two students over the summer of 2000 and had to reinitiate the program with two new protégés. At the conclusion of the program, we had 50% of the students who felt that they would like to become engineers in the future.

- Publicity or other public attention. – N/A- There was no publicity for this program
- Description of deliverables.

Our deliverables consisted of bi- weekly email communications between the mentor and the protégé including the biographies of the mentor which was written by the protégé following an exchange of "email interviews" with the mentor. This interview consisted of the personal background, the educational and the professional background of the protégé. It also consisted of the student picking a science topic that the protégé could research on the Web and report back/discuss with the mentor via email. The final deliverable was the program finale, which consisted of a face to face meeting between the mentors and protégés at Hewlett-Packard in Corvallis. This day consisted of a tour of the HP facility, lunch, and hands on experiments. The students investigated pH of different liquids and learned how acid and bases are treated in the facility waste stream. They also toured the entire factory to learn how ink-jet cartridges are manufactured from the beginning in the semiconductor fabrication area, to the final packaging of the cartrides. The students learned the science behind inkjet and how drops of ink reach paper to form images. The students also were able to utilize digital cameras, computers and printers to take pictures, manipulate digital images and print them out on demand.

- Lessons learned, problems encountered and future plans (what you would do differently if you did this again.) If the project design you followed differed significantly from the original plan describe the nature of and the reasons for the changes.

We did have a significant project delay due to the set up of the computers in the computer lab at the school and the ability to access email at the school. We decided to delay the initiation of the program until the following year so we could get a fresh start on the program with the start of the school year. Upon the start of the school year, many of the students who initially signed up were no longer interested or did not have time to participate. This led to another recruitment and selection process for the protégés. When we had the new list of the protégés, we also had an additional delay of 2 months with organizing the mentors, due to the fact that my time as the organizer was limited due to work priorities. If I was to do this again, I would assign an alternate email mentor lead to act as the back up if business conditions, personal circumstances, don't enable a timely response. Once we got rolling on the program, all went fairly smoothly. We did extend over the summer of 2000 and had two students leave the program since their families moved out of the area. We initiated two more students into the program in the fall and worked with them until we had our face to face event.

- Budget information:

Item	Cost
2 iMac PC's	$2298
2 Additional Ram	$178
2Super Disk Drives	$289.99
2 Mouse	$49.98
Connection Cable	$9.95
Cyber Max PC	$1366
Software	
2 - Virtual PC	$303.99
Math and Science Package	$200
Reference Package	$200
Student Desktop Toolkit	$125
Total	$ 5020.91