

REPORT OF RESULTS

Survey of Educators and Employers regarding a Kitsap County K-20 Engineering Pathway

February – March 2010



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Introduction

In August, 2009, Dr Mitchell invited area educators and engineering-related employers to discuss the formation of a K-20 engineering pathway. A key element from this meeting was to develop a survey to find out what everyone is already doing would be a good place to start.

With this backdrop, area business/agencies and schools were surveyed to create an inventory of current practices surrounding engineering-related activities in the schools and in the community. Focus areas were:

- Guest Speakers
- Tutoring
- Hands-on Projects
- Work-Integrated Learning Programs
- Mentoring
- Career Days/Employment Fairs

Two surveys were developed—one for educational organizations and one for businesses/agencies with an engineering-related focus. Surveys were sent electronically using Survey Monkey to all area schools (grades 6-12) in the Olympic College service area and businesses/agencies on advisory committees and recommended by area Career-Technical Directors.

Responses were received from 12 schools and 5 business/agencies. The West Sound Educational Leadership Consortium thanks those participants.

Findings

Question – BUSINESS/AGENCY - Do you **partner** with area schools (K-12 and Olympic College) to provide opportunities for students to engage in engineering-related activities: guest speakers, tutoring, hands-on projects, work integrated learning programs, mentoring, etc. SCHOOLS - Does your school **partner** with area businesses/agencies to provide opportunities for students to engage in engineering-related activities.

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|-----------------|--------------|-----|------------|----|------------|
| BUSINESS/AGENCY | 5 responses | Yes | 40 percent | No | 60 percent |
| SCHOOLS | 12 responses | Yes | 83 percent | No | 17 percent |

Of the five Business/Agency responses – 3 were from military representatives and 2 local engineering firms.

Question – BUSINESS/AGENCY– Does your business/agency provide **GUEST SPEAKERS** on specific engineering-related topics for area schools? SCHOOLS – Does your school have **GUEST SPEAKERS** on specific engineering-related topics from area businesses/agencies?

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|-----------------|--------------|-----|-------------|----|------------|
| BUSINESS AGENCY | 2 responses | Yes | 100 percent | No | 0 percent |
| SCHOOLS | 10 responses | Yes | 40 percent | No | 60 percent |

Question – BUSINESS/AGENCY– Does your business/agency provide **TUTORING** on specific engineering-related topics for area schools? SCHOOLS – Does your school have **TUTORS** from business/agencies on specific engineering-related topics?

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|-----------------|--------------|-----|------------|----|------------|
| BUSINESS AGENCY | 2 responses | Yes | 50 percent | No | 50 percent |
| SCHOOLS | 10 responses | Yes | 40 percent | No | 60 percent |

Question – BUSINESS/AGENCY– Does your business/agency provide **HANDS-ON PROJECTS** for students on specific engineering-related topics for area schools? SCHOOLS – Does your school partner with business/agencies that provide **HANDS-ON PROJECTS** for students on specific engineering-related topics?

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|-----------------|--------------|-----|-------------|----|------------|
| BUSINESS AGENCY | 2 responses | Yes | 100 percent | No | 0 percent |
| SCHOOLS | 10 responses | Yes | 70 percent | No | 30 percent |

Question – BUSINESS/AGENCY– Does your business/agency partner with schools to provide **WORK INTERGRATED LEARNING PROGRAMS** that use a community site or workplace as a vehicle for learning and applying knowledge and skills required in a planned course for students on specific engineering-related topics for area schools? SCHOOLS – Does your school partner with business/agencies that provide **WORK INTERGRATED LEARNING PROGRAMS** for students on specific engineering-related topics?

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|-----------------|-------------|-----|-------------|----|------------|
| BUSINESS AGENCY | 2 responses | Yes | 100 percent | No | 0 percent |
| SCHOOLS | 9 responses | Yes | 78 percent | No | 22 percent |

The business/agency partners provide all paid internships.
Schools indicated the following distribution: (more than 1 response possible)

| | | |
|----------------------------|------------|-------------|
| Paid internships | 83 percent | 5 responses |
| Unpaid internships | 67 percent | 4 responses |
| Volunteer/service learning | 67 percent | 4 responses |
| Clinical experience | 17 percent | 1 response |
| Other | 17 percent | 1 response |

Question – BUSINESS/AGENCY– Does your business/agency provide **MENTORING** for students in engineering-related activities? SCHOOLS – Does your school partner with business/agencies to provide **MENTORING** for students on specific engineering-related topics? Mentoring is defined as an employee of a company helping a student in an engineering-related activity.

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|-----------------|-------------|-----|-------------|----|------------|
| BUSINESS/AGENCY | 2 responses | Yes | 100 percent | No | 0 percent |
| SCHOOLS | 9 responses | Yes | 33 percent | No | 67 percent |

Question – BUSINESS/AGENCY– Does your business/agency participate in **CAREER DAYS/EMPLOYMENT FAIRS** and provide information on engineering-related jobs?
 SCHOOLS – Does your school participate in **CAREER DAYS/EMPLOYMENT FAIRS** and provide information on engineering-related jobs? Mentoring is defined as an employee of a company helping a student in an engineering-related activity.

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|-----------------|-------------|-----|-------------|----|------------|
| BUSINESS/AGENCY | 2 responses | Yes | 100 percent | No | 0 percent |
| SCHOOLS | 5 responses | Yes | 44 percent | No | 55 percent |

Grade levels for Career Days and Employment Fairs

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|-----------------|-------------|------------|---------------|-------------|--|
| BUSINESS/AGENCY | 2 responses | | | | |
| | High School | 50 percent | College | 100 percent | |
| SCHOOLS | 5 responses | | Middle School | 20 percent | |
| | High School | 40 percent | College | 40 percent | |

BUSINESS/AGENCY respondents were asked what they would consider their **best practice** for partnering with schools.

The two respondents said:

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|-----------------------------------|-------------|
| Guest Speakers | 50 percent |
| Work-Integrated learning programs | 100 percent |
| Mentoring | 100 percent |
| Career Days/Employment Fairs | 100 percent |

Neither respondent chose tutoring and hands-on projects.

Conclusions

1. Survey response was minimal from businesses/agencies and schools.
2. The two businesses/agencies that partner were military-related and have extensive involvement.
3. School partnerships are varied – work integrated learning programs were used most frequently mentioned.

Recommendations

Since these survey results represent a very small beginning to inventorying business/agency and school partnerships in engineering-related activities available in the area:

- Additional requests could be made to solicit responses to the survey.
- Known business/agency partners could be personally contacted to enhance survey results.