

Industrial Manufacturing/Engineering Systems Pathway

Meeting Summary – February 24, 2006

Attendees: Cindy Baum (NECC), Rhonda Collins (Norfolk Sr High), Dan Davidchik (CCC), Rick Davis (US Dept of Labor), Tracy Dodson (Columbus High), Edward Fejfer (Schuyler Central), Tony Glenn (Dept of Ed), Lisa Jennings (Consultant), Richard Johnson (West Point – Beemer HS), Dan Kallhoff (Vulcraft), Duane Matson (Behlen Mfg Co.), Bonnie McPhillips (Workforce Development); Gary Nelson (CCC), John Renzelman (Wayne State), Mike Riley (UNL), Michelle Roggasch (CCC), Harvey Rosenbaum (Norfolk Sr High), Greg Smith (CCC), Dennis Tyson (CCC), John Vyhldal, Jim Vyhldal, Steve Woodside (Columbus), Suzanne Yates (Tyco-Healthcare)

1. **Introductions & Welcome** – Duane had everyone introduce themselves, and Duane Matson welcomed everyone to Behlen Manufacturing.
2. **High School Pilot Progress** – High Schools reported the following information regarding the assessment instruments (Career Safe, Skills USA PDP, CALS, technical skills checklists) that they are piloting:

Schuyler (Ed Fejfar) – Steve Williams (Manufacturing Technology instructor) has piloted the CALS assessment with 8 sophomore/junior students in January and will follow up with an update in late April/May. Feedback from him is as follows:

- ✓ Gives the teacher a way to evaluate students early on; able to visit with students
- ✓ To date, no parent contact--this instrument provides parental input
- ✓ Future employers may use this as a screening tool or to identify a job portfolio
- ✓ Students can use as part of their job portfolio

Schuyler has ordered the Skills USA PDP startup kit and will use the same group of students to pilot.

Tom Wheeldon (Ag instructor) is using the CareerSafe with 16 students. He would like to continue using this instrument with other students in the future. Feedback included:

- ✓ Trouble logging in
- ✓ Tech support was good for lost passwords
- ✓ Would us it again
- ✓ Not sure about future funding

Tom Wheeldon also piloted the Welding Skills Checklist:

- ✓ Too many to cover at the high school level
- ✓ Very complete list
- ✓ Used as an advantage for students to take with them to college or the job interview
- ✓ Employers can get an idea that student has the knowledge and skill sets
- ✓ Eliminate “and/or” in questions

Norfolk Senior High School (Harvey Rosenbaum) – Harvey is using the Welding Skills Checklist and CALS assessment.

- ✓ Both checklists make the instructor review the course curriculum and goals;
- ✓ English teacher is already using an instrument similar to PDP
- ✓ Instruments are additional work for instructor

- ✓ Norfolk is already requiring career planning and these instruments will parallel what they are planning

West Point-Beemer High School (Richard Johnson) – Richard reported that they are using the Welding Skills Checklist.

- ✓ The checklist defines classroom activities; shows student classroom accountability;
- ✓ The school will be organizing student tours at Valmont and through the Chamber of Commerce. Students will be able to see application of what they are learning.
- ✓ Dave Hughes is using the CALS assessment in his Advanced Architecture class for grades 9-12. Students will self assess, along with teachers and parents.

Columbus High School (Tracy Dodson) –

- ✓ PDP Skills USA – using in the Precision Machining class for juniors (hosted at Central CC)
- ✓ CareerSafe – being used in the jr/sr class – used their “free” assessment and went through together as a class.
- ✓ When working on CareerSafe individually, students will need headsets!
- ✓ Career Safe – login and password difficulties
- ✓ CALS – students will self-assess, take instrument home to parents, teacher will participate, and they need to pick one other person
- ✓ Funding support is needed to continue CareerSafe in the future

Columbus Lakeview High School (Gary Nelson) –

- ✓ Gary reported that Dave Green [has been using the Welding Checklist and Dave feels the checklist is a valuable tool as a curriculum guide. He said he will not get the checklist completed \(he was assured that he is not expected to get the checklist completed\).](#)
- ✓ [He is planning on using the CareerSafe, CALS, and the PDP as curriculum for substitutes during the track season, it will be easy for them to use.](#)
- ✓ Would use this instrument in the future

3. Open Houses

Gary reported that there is approximately \$1,000 conduct eight Open Houses for high schools and community colleges. Your plans should be submitted if you want dollars in advance. Gary encouraged high schools and colleges to work together. Dan Davidchik may be available to do a Mechatronics demonstration in connection with an open house, contact Dan, 562-1408, if you are interested.

Tony Glenn reported that Hastings High has an open house each year during the school day. Each technology class demonstrates and works on projects.

Mike Riley, from UNL, reported that the University would be interested in participating and attending any of the schools’ open houses.

4. Summer Camp (Riley)

Lincoln has a Bright Lights summer camp for junior high students and is funded by the Bright Lights Foundation. Camps are staffed by UNL graduates and junior high staff. The UNL

Engineering Dept presents ½ day with projects and activities. Camps range for half-day to whole day programs.

Mike Riley talked about the Industrial Engineering program. This field is commonly not associated with a specific “job” or industry. Typically, the student learns manufacturing processes and design, plant layout, packaging, tool design, logistics, ergonomics and safety. Most graduates go to work in manufacturing. Key is that students must have the capability to design.

Columbus is planning on hosting a two-day camp for 10-15 students. Some of the activities: drafting lab, design, 3-D printer, CNC, and ending up with a final product (possibly a Christmas ornament).

5. Middle School Activities/Outreach

Some of the suggestions were:

- Get middle school students involved with camps and open houses
- Promote the video – “Dream It, Do It”

6. Engineering Awareness

Discussion on what engineering coursework a high school student should take:

Math – Calculus I, II, II – don’t have to love it; just have to tolerate it

Physics I, II, Chemistry

CAD

Skills & attributes: determination, perseverance, problem-solving

Integration of Engineering into high school coursework – Tony Glenn talked about a program that Omaha North High School (Omaha Public Schools) is working on – Project Lead the Way. This program has pre-engineering curriculum. The project is tied closely with McMillan Middle School. Enrollment has gone from 9 to 180 with 12 staff dedicated to the project.

Grand Island Northwest High School is in its 2nd year of Project Lead the Way.

Teachers go through a two-week session (UNL affiliate) to qualify to teach Advanced Placement course.

7. Industrial Manufacturing Promo Materials – Lisa Juricek shared the Industrial Manufacturing promotional folder, inserts and specifically the Ind. Mfg insert. Suggestions for improvement of the insert: replace pictures with UNL athletic engineering graduates (volleyball, football), add quotes from Nebraska engineers, success stories, Tony Raimondo and Dirk Peterson (Vulcraft) quotes, career cluster slice, Mechatronics Education Center Project, assessment instruments and website links.

Tony Raimondo joined the group at 12:15p. Tony provided an overview of Behlen and its business units, and Behlen currently employs 1500 people. Other topics included: global productivity and markets, competition, vertical vs. horizontal business units and organizational structure, leading edge teamwork, and others.

The meeting adjourned at 1:00p. Ten people attended the Behlen tours.

Next Meeting: **Scheduled for Thursday, April 20, 2006**
Location: TBD