AC 2012-4160: PROJECT LEAD THE WAY CONFERENCE FOR RECRUITING: A SMALL-CAMPUS OUTREACH TO LOCAL HIGH SCHOOL STUDENTS

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Project Lead the Way Conference for Recruiting: A Small-Campus Outreach to Local High School Students

Abstract

Quite a bit has been written in recent years to address Project Lead the Way (PLTW) curriculum,[1,2,3,4,5] instruction,[6,7,8,9,10,11] and articulation,[12,13] as well as outreach to underrepresented groups,[14,15] but they are generally either broad in scope (state or national level) or from the perspective of a fairly large educational institution, or both. The authors of this paper are part of a large university in the state of Indiana, but are not located on the main campus. They are part of a small group of faculty and staff who are tenants on a regional campus of another public university. This situation is a substantial obstacle to awareness in the community and student recruitment.

One of the activities the faculty and staff use to increase local awareness and boost recruiting is an annual Project Lead the Way Conference for local high school students. The third annual conference was held September 30th, 2011, hosting 76 students and five teachers from area high schools. Each conference includes hands-on activities with technology, along with information about careers and campus life. This paper provides some background about the campus relationships in Purdue University, then describes:

- the conference and its evolution over the past three years,
- lessons learned along the way,
- establishment of relationships with local high school teachers,
- industry participation,
- attainment of local media coverage of the event, and
- feedback from follow-up surveys of the high school teachers after the conference.

The last section before the Conclusion summarizes the authors' suggestions for setting up a similar successful conference. The conclusion discusses areas of further improvement to be implemented in future conferences.

Background

Project Lead the Way (PLTW) is a national provider of curriculum related to science, technology, engineering, and math (STEM) at the middle school and high school levels. School administrators can voluntarily adopt the programs which offer problem-based learning with projects and hands-on experiences in the area of engineering and biomedical science.[16]

Purdue University offers degree programs in 10 different "Statewide" locations around the State of Indiana. These degree programs follow the same curricular requirements that exist on the main campus. The mix of degree offerings varies at each location based upon the workforce needs in each of the 10 locations.[17] Purdue – South Bend is integrated into the Indiana University – South Bend campus, which itself is a satellite of the main IU campus in Bloomington, Indiana.

Conference Overview

Purdue's South Bend location hosted its 3rd annual Project Lead the Way Conference for approximately 100 high school students in the South Bend metropolitan area. A conference theme is chosen each year that will engage students in a hands-on activity to explore the electrical/electronic, mechanical, and manufacturing aspects of the conference theme. The theme for this conference was to explore a solar energy system to provide electrical power to an Indiana residence. Ancillary to the theme was to experience what university life is like on the campus, and to become aware of relevant industries and professions where graduates could work after earning a Purdue degree.

Our conference goals each year are:

- Engage the high school students in fun and interesting activities to spur their interest in engineering and engineering technology careers;
- Provide motivation for better high school study habits by linking the technical activities to math and science;
- Inform students of the degree options available at Purdue – South Bend and expose them to each discipline: electrical engineering technology (EET), mechanical engineering technology (MET), and industrial technology (IT);
- Introduce them to the campus to get some idea of what a college is like; and
- Link the necessity for a college degree to jobs in local industries.

Conference activities are designed by local faculty in cooperation with PLTW high school teachers. Each activity is 25 minutes long so that all of them can be run simultaneously. Student groups from the various high schools rotate from one session to the next throughout the conference, until they have attended all of the sessions before leaving for the day.

The total estimated cost to host the conference is $3,500. This includes lunch for conference faculty, staff, and students in the campus dining hall, conference activity consumables, conference marketing, facility and custodial fee, conference scholarships, school bus transportation to and from the conference, and funding for substitute teachers.

Lunch for 100 students, 20 adults	$1500
Conference consumables	$200
Marketing (duplication, Purdue lanyards)	$500
Facility and custodial fee	$200
Scholarships for needy students	$500
Bus transportation and substitute teachers	$600

(NOTE: Readers who are not interested in some of the conference details may want to skip directly to the section titled "Suggested Approach.")

Building Relationships

Before starting the PLTW conferences, Professor Harding spent a few years building relationships with teachers from local high schools. Of the 20-30 high schools in the region, there were four PLTW schools, so he started there. His first contact at each school was generally with the principal, then with the PLTW teacher(s).

He built a recruiting presentation, and started visiting the schools. At one school, the largest in the region, the PLTW instructors set up large assemblies of students (PLTW classes, physics classes, etc.) so he could speak to hundreds of students in a single visit. At the other schools he normally spoke to one or two PLTW classes.

Although it has a recruiting component, the presentation itself was/is more than just a recruiting pitch. It addresses a number of topics, not just information about the local Purdue campus. He begins with some motivation, including job opportunities and salary potential. He also discusses industries that need engineers, the different types of jobs engineers do, similarities and differences between pure engineering and engineering technology, who makes a good fit for a career in those fields, and how to prepare while still in high school. The last topic is what school to attend. This is where he compares the main campus in West Lafayette to the local Purdue campus in South Bend. In recent years he has also added a discussion of some of the noteworthy activities at the local campus, including the annual PLTW conferences.

Since the presentation is much broader than a pure recruiting pitch, we now refer to it as a careers (not a recruiting) presentation. It has been well-received by teachers and students alike. Teachers, in particular, have commented that they appreciate the breadth of information because it serves many of their students, not just the few who may attend Purdue – South Bend. That approach is intentional on our part. Our aim is to serve as many as possible, with the hope that the students who are a good fit for the local campus will make that choice. The opportunity to speak breaks down a huge barrier: informing students and teachers that we exist as a local option for engineering technology education.

2009 Conference

Our first PLTW conference was held October 9th, 2009. It was unintentionally scheduled the same day as the local community college's Science, Technology, Engineering, and Mathematics (STEM) conference. By the time we (personnel at both schools) realized the schedule conflict, it was too late to change either conference date, so we decided to combine them. Students were initially bused to Ivy Tech Community College for the opening session: a welcome from our congressional representative and the local mayor, followed by a keynote speaker speaking about nanotechnology.

The joint session at Ivy Tech lasted from 9 – 10 a.m., then the students destined for Purdue were transported to our campus, about 5 minutes away. Four high schools participated, with each student attending three technical sessions and a campus tour, plus lunch. The technical sessions were: computer graphics technology (CGT), electrical engineering technology (EET), and

mechanical engineering technology (MET). The sessions were run in parallel with each other four times, so the conference ran from 10:30 a.m. – 1:30 p.m. as shown in Table 1.

Table 1: 2009 PLTW Conference Schedule

Period	High School				Time
	Elkhart Central	**Elkhart Memorial**	**Penn**	**Riley**	
1	CGT Room 220	EET Room 130	MET Room 125	Tour East doors	10:30am -11:00am
2	MET Room 125	CGT Room 220	Tour East doors	EET Room 130	11:05am - 11:35am
Lunch (Student Activities Center, rooms 221, 223, and 225)					11:45am -12:15pm
3	Tour East Doors	MET Room 125	EET Room 130	CGT Room 220	12:25pm -12:55pm
4	EET Room 130	Tour East doors	CGT Room 220	MET Room 125	1:00pm -1:30pm

As the conference approached, we decided to select a theme for the technical sessions: audio technology. The EET session covered first-order high- and low-pass filters. After a brief discussion of why filters are used for woofers and tweeters, then how RC circuits can be used to create simple filters, students passed music clips through the filters to hear how the sound changed. In the MET session, students investigated the effects of speaker enclosures and linings on sound quality, and in the CGT session they worked on design styles.

After the conference, we used Survey Monkey[18] to gather anonymous feedback from the teachers who brought their students. The survey included questions about technical content, amount of hands-on time, student interest, session length, academic program information, career information, pre-conference communication, the $10 student participation fee, and one open question asking for comments or suggestions. The feedback indicated most items were about right, except for program and career information. Several teachers indicated that they thought more information should be provided about both the academic programs (CGT, EET, and MET) and subsequent careers. The full survey results are included as Attachment 1.

There were two major lessons we learned from the first conference. The first was to contact Ivy Tech early and make sure our conferences were not scheduled for the same date. The second lesson concerned career and program information, which prompted us to change the format slightly for the 2010 conference, adding some program information to the technical sessions, as well as a separate session to cover careers.

2010 Conference

As mentioned above, we communicated with Ivy Tech to make sure our conference dates did not conflict, added some information about our academic programs, and added a fifth session to

cover careers. With five sessions, we expanded the conference from 80 to 100 students (five 20-student sessions). We also changed some other things in the second conference.

A decision had been made to phase out the CGT program at our location, and we had a relatively new industrial technology (IT) program, so we changed the third technical session to IT. We also contacted local media in hopes of getting coverage on the news. This worked out quite well. Three local television affiliates (ABC, NBC, and Fox) covered the event with short segments in the evening news, and the local newspaper included an article in their daily edition.

Unfortunately, we waited too long to schedule the location where we did lunch the year before, and it was not available. This left us with three options for lunch, none of them good: 1) use a public meeting area in one of the dormitories; 2) set up tents outside our building; 3) eat lunch in the classrooms and labs where we were holding the conference. The second option was not good because of possible bad weather; it could be cold and snowing that time of year in our location. The third option was not chosen because of the potential mess in our labs, and because we wanted to get to a different location for a "break" during lunch. Although the dormitory option was the best, it could only seat 60-70 students, so we had to be creative about the lunch session, splitting it over two time periods so everyone could eat. During period 4A, three groups ate lunch, then during period 4B the other two groups ate (see Table 2).

Table 2: 2010 PLTW Conference Schedule

Time	Group and Location					Event(s)
	Elkhart Central	**Elkhart Memorial**	**Penn 1**	**Penn 2**	**Riley**	
9:40 - 9:55	Wiekamp 1001	Wiekamp 1001	Wiekamp 1001	Wiekamp 1001	Wiekamp 1001	**Welcome**
10:00 - 10:25	ECET TB130	Careers TB217	Tour East doors	IT TB220	MET TB125	**Period 1**
10:30 - 10:55	MET TB125	ECET TB130	Careers TB217	Tour East doors	IT TB220	**Period 2**
11:00 - 11:25	IT TB220	MET TB125	ECET TB130	Careers TB217	Tour East doors	**Period 3**
11:30 - 11:55	Lunch	Lunch	MET TB125	ECET TB130	Lunch	**Period 4A, lunch**
12:00 - 12:25	Tour East doors	IT TB220	Lunch	Lunch	Careers TB217	**Period 4B, lunch**
12:30 - 12:55	Careers TB217	Tour East doors	IT TB220	MET TB125	ECET TB130	**Period 5**

The meal was catered as sack lunches instead of the buffet style used the year before, and that did not work out nearly as well. Several students felt the sack lunches were just too small and thought they did not get enough to eat. The buffet style has the advantage of allowing students with larger appetites to get larger portions and/or return for "seconds."

The theme of this conference was electric vehicle (EV) technology. We managed to get an electric vehicle manufacturer in the region to bring one of their EV delivery trucks over for

display, and we borrowed one of the electric go-karts from the main campus (they have an annual EV go-kart race). These "show and tell" items were a nice addition to the conference.

The EET session used a circuit simulation package and spreadsheet to compare the relative efficiencies of resistive and pulse-width-modulated motor control.[19] The MET session explored wind resistance and material deflection, and the IT session was a lean simulation using paper airplanes. The campus tour was essentially the same as last year, with the addition of the go-kart and EV truck. The careers session was new, presented by our location director.

There was one surprise during the conference, created by the media coverage. We did not anticipate their desire to interview the conference chair, Professor Harding, during the conference. This presented a problem because he was running the EET session. He tried to squeeze the interviews in during the 5-minute break between sessions, but that proved impractical. Fortunately, our technician was able to get those EET sessions started until Professor Harding could take over.

We used Survey Monkey[18] again to gather conference feedback. Most of the questions were the same, but we replaced three of the questions (e.g., pre-conference communication and the participation fee) with questions about dropping the campus tour, number of students they would like to bring if they could choose, and how well we met our conference goals. The multiple choice questions generally indicated we were on track, but again the open question garnered good comments. The teachers liked having the EV truck on display because of the tie to industry, although they would have preferred a "marketing" type to talk about it. The driver who was with the truck was not a skilled presenter. The other comment that we got in the feedback and verbally from at least one teacher was that the lunches were too small and the lunch period too short. The entire survey is listed at attachment 2.

The most important lesson from the 2010 conference was to schedule campus facilities very early and return to the buffet style lunch. The other important lesson concerned the media. For the 2011 conference, we made sure both our technician and a student helper were "primed" to begin the EET session, just in case Professor Harding was interviewed again (he was).

2011 Conference

We kept the five-period format for the 2011 conference, but decided to add a session on campus life. Since three of the four teachers from the previous year had indicated we should not drop the campus tour, we decided to keep it, but not as an independent session. The trip from the opening welcome session to the Purdue building requires a walk across campus, so we worked the campus tour into it. This change made room in the schedule for a "Campus Life" session, which covered topics like: services available to students on campus (cafeteria, bookstore, housing, tutoring, counseling, etc.), differences between high school and college, the admissions process, financial aid, and a comparison between our campus and the main campus. There were five sessions again: EET, IT, MET, Careers, and Campus Life. The schedule is shown in Table 3.

Table 3: 2011 Conference Schedule

Time	Group and Location					Event(s)
	Elkhart Memorial	Northwood	Penn 1	Penn 2	Riley	
9:30 - 9:55	Wiekamp 1001	Wiekamp 1001	Wiekamp 1001	Wiekamp 1001	Wiekamp 1001	**Welcome**
10:00 - 10:25	ECET TB130	MET TB220	IT TB217	Careers TB207	Campus Life TB201	**Period 1**
10:30 - 10:55	MET TB220	IT TB217	Careers TB207	Campus Life TB201	ECET TB130	**Period 2**
11:00 - 11:25	IT TB217	Careers TB207	Campus Life TB201	ECET TB130	MET TB220	**Period 3**
11:30 - 11:55	SAC	SAC	SAC	SAC	SAC	**Lunch**
12:00 - 12:25	Careers TB207	Campus Life TB201	ECET TB130	MET TB220	IT TB217	**Period 4**
12:30 - 12:55	Campus Life TB201	ECET TB130	MET TB220	IT TB217	Careers TB207	**Period 5**

The theme for the 2011 conference was photovoltaic (PV) technology. Students in the EET session explored a power inverter to convert solar cells' DC output to AC for interfacing to the electrical grid. In the MET session they discussed requirements for mounting the solar cell arrays and investigated strength and elasticity parameters for support beams. The IT session was a lively activity to demonstrate the benefits of lean manufacturing processes using nuts, bolts, and washers. The Careers session was similar to the one from 2010, and the Campus Life session was described above.

We notified the local media the day before the conference, but only one affiliate came for the 2011 conference. We thought a day would be sufficient notice because of today's rapid news cycle. In retrospect, perhaps we should have notified them a few days in advance.

Feedback and Lessons Learned

Feedback from participants after the conference is important to help determine the success of meeting conference goals. After the first two conferences we chose to use Survey Monkey to gain feedback from the high school teachers from each school in attendance. Survey Monkey was chosen for the ease of administration and convenience. (See attachments 1 and 2)

After our 3rd conference we decided to gain feedback by meeting personally with each teacher. We did this for several reasons. One school in particular that had attended past conferences did not attend. Another school, which had the largest student attendance in past conferences, had a dramatic drop in attendance. And, we decided that the feedback we wanted to learn about our hosting of this conference over the past three years would best be learned through face-to-face meetings.

As might be expected, meeting face-to-face with teachers provided richer information. It gave us insight into the challenges faced by teachers in selecting students to attend, taking time away from their instructional day, and the logistics involved in the administration of a fieldtrip. The face-to-face interaction also gave us valuable feedback about the level of technical information we were presenting and the overall conference design, all of which would not be possible through Survey Monkey.

What we learned from this face-to-face feedback is that we were "on-target," with the several topics about which we had concerns. The technical challenges presented at the conference were at the right level for the students in attendance. The short length of time spent on each subject fit students' attention span well. One unexpected thing we learn was that the quantity and quality of the lunch served influenced the students' opinion as to how much they enjoyed the conference. Another valuable thing we learned was that we cannot fully satisfy everyone. School corporations are different and teachers have different priorities, pressures and procedures within each school. The many other things we learned are covered in the next section on "Suggested Approach."

Suggested Approach

In consideration of offering a conference like we have outlined in this paper we would suggest you choose your target students well. We chose to work with local PLTW high schools for the simple reason that the students who voluntarily elected to follow the PLTW curriculum were making the statement that they were already interested in STEM subjects.

Make early contact with local high school teachers who teach in PLTW and STEM disciplines and who will have support from their administrators and school corporation. Contact with school principals or assistant principals is also good to help them understand the goals of the conference and why their students should participate.

Set the conference date as early as possible. We have learned to do ours almost one year in advance. Most educators have day-by-day or week-by-week subject matter plans and fitting a day-long conference in may not be possible on short notice. Also reserve needed facilities, equipment, and food service as soon as the conference date is set.

Plan a conference "theme" or technical topic and try to relate all activities during the day to the theme. This makes the events flow well and adds an air of professionalism to the conference. Also, if you can select the theme before you make initial contact with the teachers and administrators, you can communicate the theme to stimulate interest and incentive to attend. If possible, create a web page with pictures and descriptions to provide detailed information and further generate interest. The URL can be referenced in any correspondence or literature marketing the conference.

Develop a conference budget. It should include the usual food costs, facility cost, consumables, but also include costs for bus travel and the hiring of substitute teachers for each school in

attendance. Some of our local high schools could not participate without the reimbursement for bus travel and substitute teachers.

Once the date is planned, the theme is determined, and the budget is set, start to contact potential businesses and industries for funding support: either a direct cash donation or in-kind donations.

A new idea we got this year from one of the high school teachers, which we plan to try next year, is to send a personal invitation to each student. We plan to have the teachers nominate students and get them to sign up for the conference (with their contact information). Then we will send a personal letter to each of the students and parents. This approach has three key benefits: 1) It allows us to make contact with the parents, which has been a big challenge for us in the past; 2) We are hoping it will create an aura of exclusivity, since students will be nominated and selected for participation; and 3) It will give us their contact information.

Keep all activities short; 25 to 30 minutes works well. This keeps the conference moving and gives each student a sample of each topic without much opportunity to get restless or bored. This short activity also means the activities must be well designed and tested in order to be successful. Our experience indicates that simulations (electrical circuit simulations, Excel spreadsheet analyses, etc.) are fine. As long as they are relevant to the theme and real world activities, they essentially count as "hands-on" activities. A dry run is appropriate for each technical session to be sure it fits the timeframe and is at the right level of technical difficulty. We like to dry run it using our non-technical staff to make sure it will not be overwhelming for the high school students.

The overall conference day must fit within the high school day. The conference schedule must allow for student bus travel from each school to the conference after school has started, then return travel before the school day ends.

Write a press release or media alert and send to all media contacts 3-7 days before the conference. Media coverage is also free marketing and great public relations.

Finally, follow up with a debrief meeting of the faculty and staff that were involved in the conference as soon as practical. Moreover, develop a brief survey that you can administer to the high school teachers and/or students who attended.

Conclusion

Hosting a conference is an excellent way to accomplish many things. It helps identify and recruit potential new students, and it provides them with a "glimpse" of college life. Likewise, it provides their teachers with examples from higher education that can be used to motivate students to study harder, make better grades, and set goals toward earning a college degree. In a bigger-picture sense, it also provides a platform from which high schools, colleges, and industry can collaborate on the goal of educating the community's future citizens.

There are three changes we plan for the fall 2012 conference. First, we plan to invite more schools, but allow fewer students from each school. There are over two dozen public and private high schools in the region, so instead of allowing each school to take an entire session of 20-24 seats (or two sessions in the case of one school), we plan to place two schools in each session, allocating 10-12 seats per school. This will allow more schools to participate, and hopefully make the conference spots more "exclusive" and attractive on an individual basis.

Second, instead of our more generic careers session, we plan to have someone from industry cover those topics briefly, then talk specifically about how one of their products was engineered and career opportunities within that company. This is partially in response to feedback from one of our teacher interviews, in which the teacher said his students asked what jobs they could do in the area with our degrees.

Third, we plan to modify our funding approach slightly. In the past we have not been very successful generating funding donations, but our requests were not specific, other than to share the entire cost of the conference. This time we plan to set specific funding levels and dollar amounts, such as $100 bronze, $250 silver, $500 gold, and $1000 platinum (or something similar). Each increasing funding level will come with more prominent advertisement in conference materials, and possibly other perks for the donor.

Finally, the bottom line is that we believe these conferences, at least for us, are an all-around win. They simultaneously raise our prominence in the community, which helps bolster our reputation and recruiting, and they serve the members of our community, including high school students, their parents, and the local industry that ultimately employs them.

Attachments

1. 2009 conference feedback survey results
2. 2010 conference feedback survey results

[1] Adelson, G., Blais, R. R., Project Lead the Way – A Model Program for Initiating, Funding, and Maintaining a Successful Pre-engineering Program in the Nation's High Schools. *Proceedings of the 1998 28th Annual Frontiers in Education Conference*.

[2] Johnson, G., Project Lead the Way: A Pre-engineering Secondary School Curriculum. *Proceedings of the 2001 ASEE Annual Conference and Exposition*.

[3] Foster, G. N., K-12 Programs Plug into Technology with Project Lead the Way Curriculum. *Proceedings of the 2002 ASEE Annual Conference and Exposition*.

[4] Newberry, P., Hansen, J., Spence, A., Research of Project Lead the Way (PLTW) Curricula, Pedagogy, and Professional Development. *Proceedings of the 2006 ASEE Annual Conference and Exposition*.

[5] Prevost, A., Nathan, M., Stein, B., Tran, N., Phelps, A., Integration of Mathematics in a Pre-college Engineering Curriculum: The Search for Explicit Connections. *Proceedings of the 2009 ASEE Annual Conference and Exposition*.

[6] Johnson, G., Swanger, D., Project Lead the Way: Synergy of Colleges and Universities with Secondary Education. *Proceedings of the 2003 ASEE Annual Conference and Exposition*.

[7] Burr-Alexander, L., Kimmel, H., Rockland, R., PLTW: One State's Perspective. *Proceedings of the 2004 ASEE Annual Conference and Exposition*.

[8] Ncube, L., Preparing Tomorrow's Engineers and Engineering Technologists: An Evaluation of the Project Lead the Way Outreach Program for Middle and High School Students in Indiana. *Proceedings of the 2006 ASEE Annual Conference and Exposition*.

[9] Bredow, J., Wright, C., Manley, B., Work in Progress: A Model for Cooperation between University and K-12 Components in Science and Technology Education. *Proceedings of the 2006 36th Annual ASEE/IEEE Frontiers in Education Conference*.

[10] Lemire, L. E., A Model for Enhancing Project Lead the Way Teacher Knowledge in Software Applications. *Proceedings of the 2011 ASEE Annual Conference and Exposition*.

[11] Rethwisch, D. G., Laanan, F. S., Haynes, M. C., Starobin, S. S., A Longitudinal Evaluation of Project Lead the Way in the State of Iowa. *Proceedings of the 2011 ASEE Annual Conference and Exposition*.

[12] Stapleton, W., Bahram, A, Stern, H., Gourgey, H., A Novel Engineering Outreach to High School Education. *Proceedings of the 2009 39th Annual ASEE/IEEE Frontiers in Education Conference*.

[13] Reid, K., Feldhaus, C., Articulation Agreements with High Schools Implementing Project Lead the Way (PLTW). *Proceedings of the 2005 ASEE Annual Conference and Exposition*.

[14] Middleton, R., Perdomo, S., Women in Engineering Career Day Conference: A Recruitment Tool for Massachusetts High School Girls. *Proceedings of the 2008 ASEE Annual Conference and Exposition*.

[15] White, C., Martin, C. S., Drew, M., Forbes, G., Innovative STEM Conference (ISC): Outreaching to Underrepresented Minorities in an Effort to Increase their Participation in STEM Research. *Proceedings of the 2011 ASEE Annual Conference and Exposition*.

[16] http://www.pltw.org/about-us/who-we-are, last accessed January 4th, 2012.

[17] http://www.tech.purdue.edu/statewide/, last accessed March 14th, 2012.

[18] http://www.surveymonkey.com/, last accessed January 1st, 2012.

[19] Harding, G., Cole, D. EET Project Session in a Project Lead the Way Conference for Local High School Students [CD-ROM]. *2011 Annual Conference Proceedings, American Society for Engineering Education*.

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Response Summary

Total Started Survey: 5
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1. How was the level of technical information in each of the following sessions? Create Chart Download

	Too much	About Right	Too little	Response Count
a. CGT	0.0% (0)	**100.0% (5)**	0.0% (0)	5
b. ECET	0.0% (0)	**100.0% (5)**	0.0% (0)	5
c. MET	0.0% (0)	**100.0% (5)**	0.0% (0)	5
			answered question	**5**
			skipped question	**0**

2. How was the amount of hands-on time in each of the following sessions? Create Chart Download

	Too much	About right	Too little	Response Count
a. CGT	0.0% (0)	**100.0% (5)**	0.0% (0)	5
b. ECET	0.0% (0)	**80.0% (4)**	20.0% (1)	5
c. MET	0.0% (0)	**100.0% (5)**	0.0% (0)	5
			answered question	**5**
			skipped question	**0**

3. How interested and engaged were your students in each of the following sessions? Create Chart Download

	Very engaged	Moderately engaged	Not interested	Response Count
a. CGT	**80.0% (4)**	20.0% (1)	0.0% (0)	5
b. ECET	40.0% (2)	**60.0% (3)**	0.0% (0)	5
c. MET	20.0% (1)	**80.0% (4)**	0.0% (0)	5
			answered question	**5**
			skipped question	**0**

4. How appropriate was the length of the sessions? Create Chart Download

	Response Percent	Response Count
Too long	0.0%	0
	answered question	**5**
	skipped question	**0**

4. How appropriate was the length of the sessions? Create Chart Download

About right	**60.0%**	**3**
Too short	40.0%	2
answered question		**5**
skipped question		**0**

5. Should we include a tour of the Purdue building, in addition to the campus tour? Create Chart Download

	Response Percent	Response Count
Yes	**80.0%**	**4**
No	20.0%	1
answered question		**5**
skipped question		**0**

6. How was the amount of academic program information (e.g., specific information about Purdue-South Bend's CGT program), as a proportion of the overall session, for each of the following? Create Chart Download

	Too much	About right	Too little	Response Count
a. CGT	0.0% (0)	**60.0% (3)**	40.0% (2)	5
b. ECET	0.0% (0)	40.0% (2)	**60.0% (3)**	5
c. MET	0.0% (0)	40.0% (2)	**60.0% (3)**	5
answered question				**5**
skipped question				**0**

7. How was the amount of career information (e.g., what an ECET graduate might do in the industry), as a proportion of the overall session, for each of the following? Create Chart Download

	Too much	About right	Too little	Response Count
a. CGT	0.0% (0)	**100.0% (5)**	0.0% (0)	5
b. ECET	0.0% (0)	**60.0% (3)**	40.0% (2)	5
c. MET	0.0% (0)	20.0% (1)	**80.0% (4)**	5
			answered question	**5**
			skipped question	**0**

8. Was the pre-conference communication Create Chart Download

	Response Percent	Response Count
Too much	0.0%	0
About right	**100.0%**	**5**
Too little	0.0%	0
answered question		**5**
skipped question		**0**

9. Do you think the $10 student participation fee was Create Chart Download

	Response Percent	Response Count
Too much	20.0%	1
About right	**80.0%**	**4**
Not enough	0.0%	0
answered question		**5**
skipped question		**0**

10. Do you have any additional comments or suggestions? Download

	Response Count
Hide replies	3

1.	I believe my students really enjoyed the information that was presented to them in the conference and the classes.	Mon, Oct 19, 2009 9:11 AM	[Find]
2.	Perhaps have an object the students could take back with them such as the Flash Drives Ivy Tech handed out. The students told me they have found advertisements on them for Ivy Tech. You could have a lot of information of all types on a rather inexpensive drive. Thank you for the opportunity to visit your labs. I will definitely recommend that some of my students consider your programs.	Fri, Oct 16, 2009 10:53 AM	[Find]
3.	I think more time should have been spent on why they should go to Purdue, especially Purdue-SB. More promotional items for the students.	Fri, Oct 9, 2009 5:46 PM	[Find]

answered question	**3**
skipped question	**2**

2010 Purdue-South Bend PLTW Conference Survey Edit

Default Report + Add Report

Response Summary

Total Started Survey: 4
Total Completed Survey: 4 (100%)

PAGE:

1. How was the level of technical information in each of the following sessions? Create Chart Download

	Too Much	About Right	Too Little	Response Count
ECET	25.0% (1)	**75.0% (3)**	0.0% (0)	4
IT	0.0% (0)	**75.0% (3)**	25.0% (1)	4
MET	0.0% (0)	**100.0% (4)**	0.0% (0)	4
			answered question	**4**
			skipped question	**0**

2. How was the amount of hands-on time in each of the following sessions? Create Chart Download

	Too Much	About Right	Too Little	Response Count
ECET	0.0% (0)	**100.0% (4)**	0.0% (0)	4
IT	0.0% (0)	**75.0% (3)**	25.0% (1)	4
MET	0.0% (0)	25.0% (1)	**75.0% (3)**	4
			answered question	**4**
			skipped question	**0**

3. How interested and engaged were your students in each of the following sessions? Create Chart Download

	Very Engaged	Moderately Engaged	Not Interested	Response Count
Campus Tour	**75.0% (3)**	25.0% (1)	0.0% (0)	4
Careers	**50.0% (2)**	**50.0% (2)**	0.0% (0)	4
ECET	**75.0% (3)**	25.0% (1)	0.0% (0)	4
IT	**75.0% (3)**	0.0% (0)	25.0% (1)	4
MET	25.0% (1)	**75.0% (3)**	0.0% (0)	4
			answered question	**4**
			skipped question	**0**

4. How appropriate was the length of the sessions? Create Chart Download

	Response Percent	Response Count
Too Long	0.0%	0
About Right	**100.0%**	**4**
Too Short	0.0%	0
answered question		4
skipped question		0

5. Should we drop the campus tour so we can lengthen the other sessions and/or shorten the conference? Create Chart Download

	Response Percent	Response Count
Yes	25.0%	1
No	**75.0%**	**3**
answered question		4
skipped question		0

6. How was the amount of academic program information (e.g., specific info about Purdue-South Bend's ECET program), as a proportion of the overall session, for each of the following? Create Chart Download

	Too Much	About Right	Too Little	Response Count
ECET	0.0% (0)	**100.0% (4)**	0.0% (0)	4
IT	0.0% (0)	**100.0% (4)**	0.0% (0)	4
MET	0.0% (0)	**100.0% (4)**	0.0% (0)	4
answered question				4
skipped question				0

7. How was the amount of career information (e.g., what an ECET graduate might do in industry), as a proportion of the overall session, for each of the following? Create Chart Download

	Too Much	About Right	Too Little	Response Count
Careers	0.0% (0)	**75.0% (3)**	25.0% (1)	4
ECET	0.0% (0)	**100.0% (4)**	0.0% (0)	4
IT	0.0% (0)	**100.0% (4)**	0.0% (0)	4
MET	0.0% (0)	**100.0% (4)**	0.0% (0)	4
answered question				4
skipped question				0

8. If you could bring as many students as you wanted, how many would you bring? Download

		Response Count
	Hide replies	4
1. Still close to 40	Fri, Oct 29, 2010 8:49 AM	Find...
2. 20-25	Mon, Oct 25, 2010 8:41 AM	Find...
3. 20 has been good	Mon, Oct 25, 2010 8:07 AM	Find...
4. 25-30	Fri, Oct 22, 2010 11:28 AM	Find...
	answered question	**4**
	skipped question	**0**

9. How well did we meet our conference goals? Create Chart Download

	Very Well	OK	Not so well	Response Count
Engage students in technology projects	25.0% (1)	**75.0% (3)**	0.0% (0)	4
Inform students about careers in industry, Purdue programs, and campus life	**50.0% (2)**	**50.0% (2)**	0.0% (0)	4
Motivate better study and career planning while in high school	25.0% (1)	**75.0% (3)**	0.0% (0)	4
		answered question		**4**
		skipped question		**0**

10. Do you have any other suggestions? Download

		Response Count
	Hide replies	3
1. More from industry. Ask for someone from sales or project management to talk (about the EV truck). (Jim Langfeldt's responses as transcribed by Gene Harding.)	Fri, Oct 29, 2010 8:49 AM	Find...
2. students complained that the lunch was enough and they didn't have much time. They seamed to be rushed.	Mon, Oct 25, 2010 8:41 AM	Find...
3. The electric truck generated a lot of interest and helped connect what they learn at college to actual products.	Mon, Oct 25, 2010 8:07 AM	Find...
	answered question	**3**
	skipped question	**1**