

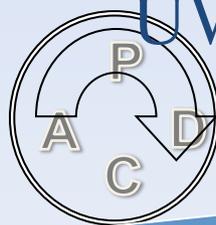
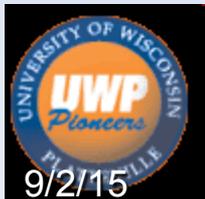
Opening Workshop for New STEM Faculty 2009
Inclusive Teaching Methods
Sponsored by
UW System Women & Science Program

Planning and Supervising
Community-Based Learning Projects

Swaminathan Balachandran

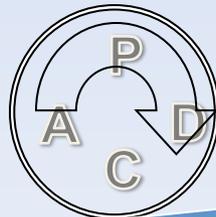
Professor of Industrial Engineering

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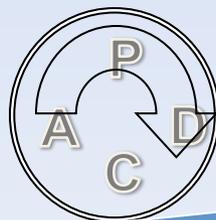
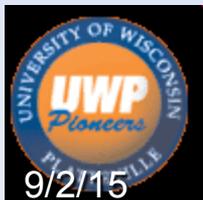
Definitions

- Community-Based Learning (CBL) – University-wide approach of teaching, research, or experiential learning that combines authentic community or public service activity with academic instruction, focusing on critical, reflective thinking as well as evidence of civic responsibility and/or personal growth.
- Service-Learning is a form of active learning that connects meaningful community service with academic coursework and purposeful reflection. The experience yields reciprocal benefits for all participants, a renewed sense of civic connection, and encourages critical thinking and self-examination.



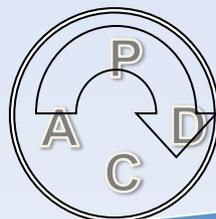
Community-Based Learning (CBL) - Goals

- Mutually beneficial relationships between university and the extra-campus community through service learning for the purposes of education and growth among all parties.
- Service learning experiences that integrate in-class knowledge and meaningful engagement within community
- Connect faculty research agendas and student learning to the needs of the community with sound pedagogy.
- Foster long-term relationships with regional, national, and international organizations. Transfer ideas and knowledge from university to the community and from the community to university.
- Enrich classroom engagement by providing students with service learning activities that require application of their coursework.

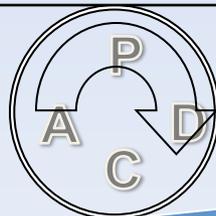
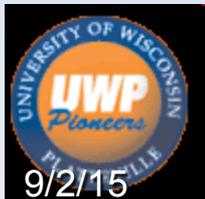
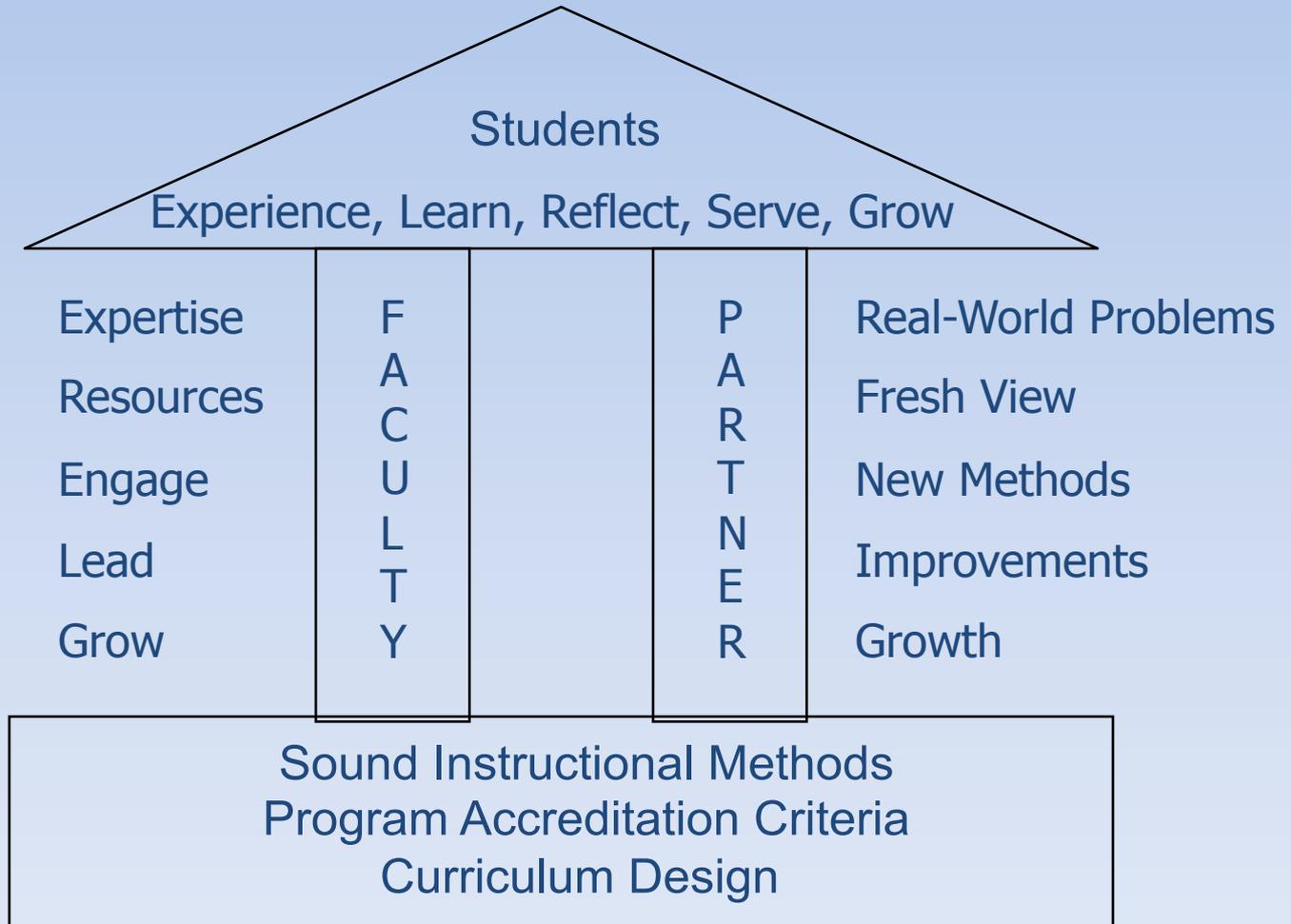


CBL Approaches

- CBL may encompass a variety of teaching and learning strategies so long as service and learning components are balanced.
- EL: Experiential Learning, ABCS: Academically Based Community Service, CL: Civic Learning, CE: Civic Engagement, EE: Environmental Education, PBE: Place-Based Education, SL: Service Learning, WBL & STW: Work-Based Learning, also referred to as “school-to-work” (STW), CUP: Community University Partnerships
- Apprenticeships and internships that enhance and reinforce learning, Practicum and capstone projects that connect learning with activity in the community



Basic Components of CBL/SL



CBL/SL Characteristics

Service

Learning

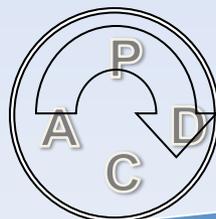
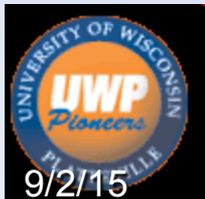
FOCUS



Recipient

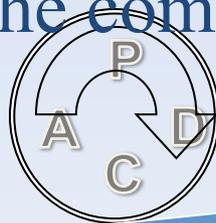
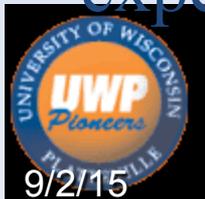
PRIMARY INTENDED BENEFICIARY

Provider



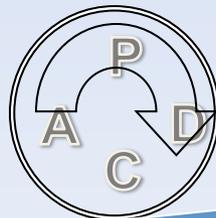
What is Volunteering, Learning & CBL/SL?

- If students help out at the Badger Camp two days a week, that's volunteering.
- If students study designs for people with disabilities in a course, that's learning.
- If student teams develop solutions for problems faced by people with disabilities at the Badger Camp in a course, learn team management, project planning, activity scheduling, and communications skills, write weekly progress reports, final and project report under faculty guidance and reflect on their your experience in the community, then it is CBL/SL.



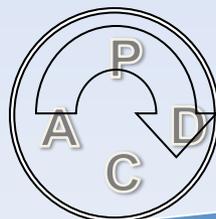
"I hear and I forget. I see and I remember. I do and I understand." -
Chinese Proverb

Outcomes for Students:
Personal Growth
Career Development
Social Development
Academic/Cognitive Impact



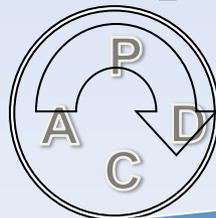
Benefits to Faculty

- Engage all learners & help students to structure and act on knowledge
- Facilitate critical synthesis and learning
- Enhance and augment learning
- Relate course material to real-world and practical applications
- Create lasting partnerships with community agencies, organizations, industries and professionals
- Increase professional recognition, reward or consulting work
- Augment and redirect professional development and research



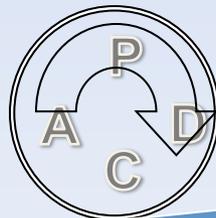
Benefits to Community Partners

- Community partners value students' point of view and are willing to reimburse their expenses.
- Community partners appreciate help with projects on the “back burners”
- Students are eager to use new tools and methods they learned and community partners need help with those tools.
- Increased efficiency, quality of services, or extent of services offered by university-assisted agencies
- Increased access to university resources (e.g. facilities, expertise, programs)



Benefits to the University

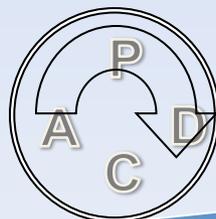
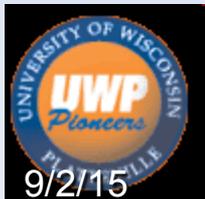
- Good public relations
- Good rate of return on the 30% of support from the State.
- Great resource for community
- Help community organizations that do not have resources to hire professionals
- Placement of graduates with community partners
- Support from community in times of need



Service-Learning Integration Steps

Part I - Preparation

- 1) Service-Learning Contemplation & Research
- 2) Identify Community Needs & Projects
- 3) Designate Goals and Outcomes of Each Project
- 4) Choose a Course Model
- 5) Construct Course Syllabus



Service-Learning Integration Steps

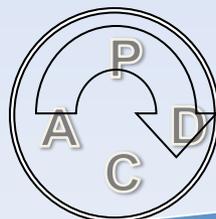
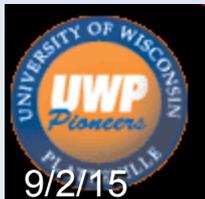
Part II – Action, Part III - Assessment

Part II - Action

- 6) First Week of Class - Assign Students to Projects
- 7) Provide Orientation and Training
- 8) Supervise Students

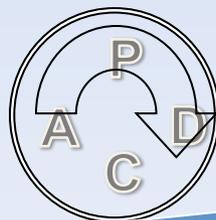
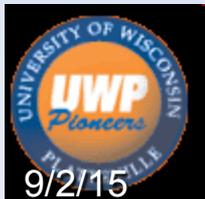
Part III - Assessment

- 9) Reflection – Team & Individual
- 10) Celebrate
- 11) Assess and Evaluate the Course



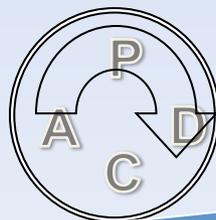
1) Service-Learning Contemplation & Research

- Visit the University (PACCE) website. Review the mission, vision, and definition of service-learning.
- Review current service-learning courses and faculty training opportunities . Survey online resources .
- Think about how some aspects of your course might be enhanced by service-learning.
- Contact community partners and identify most promising partners – see next slide
- Investigate creative pedagogy



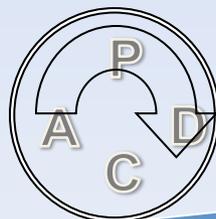
Community Partner & Project Selection

- Start process in April or November. Visit partner or sponsor May or December
- Primary sources for projects: Alumni, Members of Industrial Advisory Board for the College, e-mail from companies requesting help, employers, past partners. Maintain a file of all contact information. See display.
- Secondary sources for projects: Manufacturers' Directories and databases by State, Region, & Industry, 2009 Dane County Answer Book, Career Fair, Engineering Expo, etc. See display.



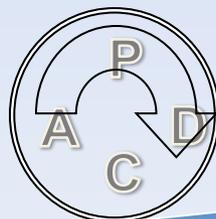
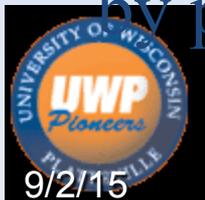
Potential Community Partners

- Local, Regional, State, National, International, Online
- Existing businesses, New ventures, Non-profits, Social organizations, Civic organizations, Community governance, Educational institutions, Group homes, United Way's "Human Care Services Directory", Nursing homes, Social service agencies, Churches, Neighborhood organizations, Hospitals, Local Chambers of Commerce, Schools, Community councils, Child-care centers, etc.



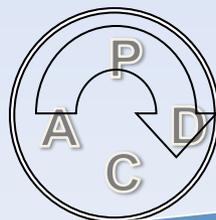
2) Identify Community Needs & Projects

- Project should be appropriate for course learning outcomes. What will each party contribute to project?
- Project scope should be such that it can be completed in about 14 weeks by a group of 4 or 5 students
- Communicate with potential community partners to make sure there is a match between learning goals and their needs.
- Draft problem statement and refine it with the partner
- Finalize time schedule and project deliverables
- Mutual agreement on time and financial commitment by partner



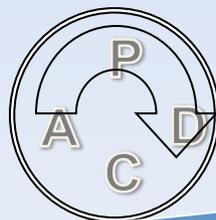
4) Choose a Course Model

- Is it important that every student is involved in service? Is it possible to offer an equally rigorous alternative project for some students? Student participation may be mandatory or optional with a comparable alternative.
- Should I expect a minimum number of hours, or is it more important that students provide consistent and dependable service or a deliverable project? The format for service may be a required number of hours, a required number of visits, an extended project, or a short-term project.



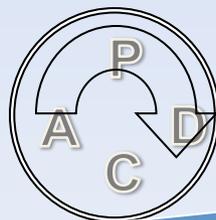
Course Format

- Can my learning goals be accomplished with a one-shot project, or do I expect long-term engagement with community partners?
- Is the project scope fixed? Does it allow students to discover additional opportunities for improvement? Will students work with the community rather than for it?
- Is there any way to connect with other courses to collaborate on shared projects? Decide how responsibility will be shared.



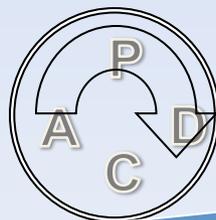
5) Construct Course Syllabus

- See handout for an example. Have this ready when contacting the community partner. See timeline or project milestones.
- How the service experience will be measured and what will be measured.
- Roles and responsibilities of students
- Description of the reflective process
- Plan for public dissemination of students' work following completion.



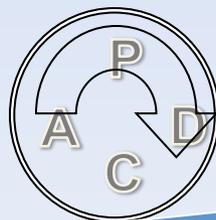
Course Syllabus

- Resources, activities and/or assignments that will prepare your students for their service-learning experience built into the syllabus
- Project milestones that will serve as ‘check points’ throughout the semester
- Designated class time for discussions about project, problems, logistics, supplies, reading, classroom discussions, or guest speakers from local agencies.



6) First Week of Class - Assign Students to Projects

- Use student data to match student to projects
- Each group to have at least one student who had cooperative education or internship experience
- Balance group composition (experience, gender, international student, etc.
- Using funds from college, PACCE grant, sponsor, etc for reserving university vehicle for travel, purchasing supplies. Logistics, insurance, etc.
- Course handout, timeline for reports, presentations, evaluation, etc



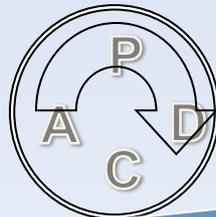
Student Information Sheet

- Name, Majors & specific emphases chosen in each major, minors. List of courses enrolled in now.
- Expected graduation date, # of credits completed
- List of junior and senior level IE courses completed
- Cooperative education / internships completed
- Plan for graduate school, job offers, seeking job
- Knowledge of specific tools & techniques needed in sponsored projects (lean operations, safety engineering ...).
- Example is at the course website.



7) Provide Orientation and Training

- Sponsor contact information, Guidelines for communications . Examples are at course website.
- Visits to sponsors' worksite, Deliverables and timeline, Budget, Quick training in class by instructor
- See handout for example project definition.
- Handout or presentation by community partner(s)
- Example project contract and Gantt chart, weekly progress reports, project presentations, and project reports
- Address student concerns, fears, and expectations



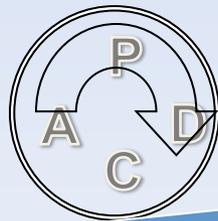


Capable workers need clear instructions.

When they understand, give them full responsibility for work.

Periodically ask: How is the project progressing?

You are doing fine now. See me if you have problems.



8) Supervise Students

- Record of weekly meeting (specify format). Weekly progress report (specify format). Record of communications with sponsor. Record of visits plant. See examples at the course website.
- Each team to submit a project contract, team letterhead, Gantt chart of project activities and milestones, monthly draft copies of report, final report.
- Periodic meetings with instructor & oral interview of all students in the 8th week of the semester. Periodic feedback from sponsor to instructor



The purpose of supervision is to make sure that good quality product or service is delivered on time and within budget.

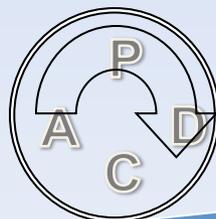


Closely monitor
team work.

Check assigned
work and delivery
on time.

Meet with
individuals one at a
time and discuss
project activities.

Meet with team
when problem
arises





Recognize &
appreciate
Good work and
contributions.

Is everything under
control, Joe?

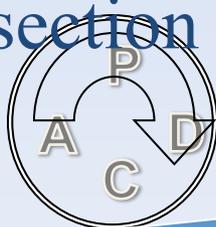
Joe, that was a great
job.

Do you need my
help?



9) Reflection – Team & Individual

- **WHAT IS IT?** Structured, has objectives and involves critical thinking, sharing, & learning
- **WHEN?** Throughout – before, during, after
- **WHERE?** Anywhere – classroom, site, bus
- **WHO?** Everyone - students, teachers, agencies, recipients
- **WHY?** To connect & crystallize real world service & learning experience
- **HOW?** Individually, in a group, and using a variety of activities
- See reflection section in handout.

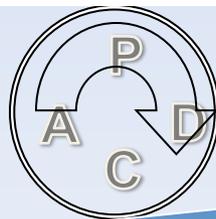


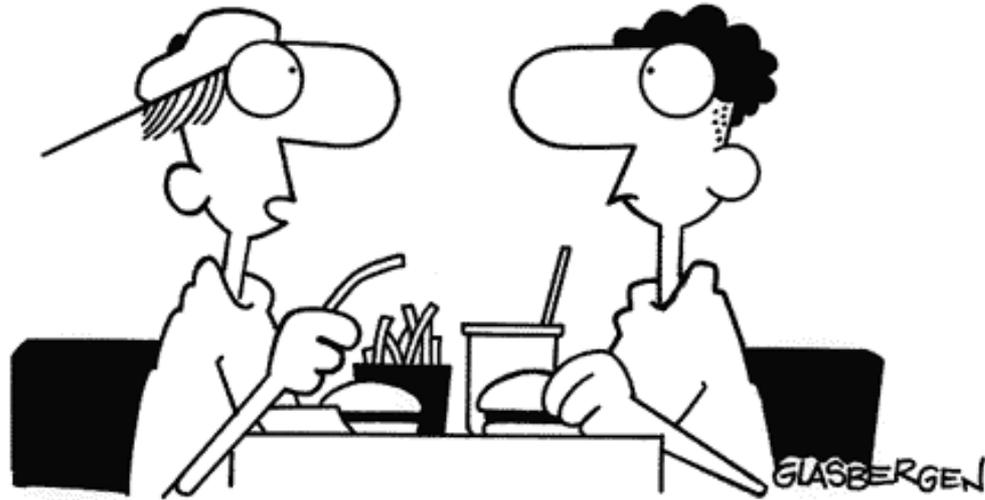
Not Good Technique

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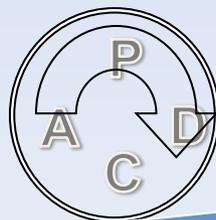
“Why is it important for today’s kids to learn algebra? Because *I* had to learn this junk in school and now it’s *your* turn, that’s why!”





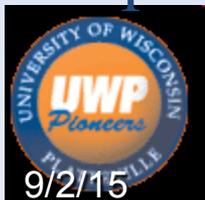
**“I forgot to make a back-up copy of my brain,
so everything I learned last semester was lost.”**

“Reflection is the use of critical thinking skills to cement the learning that was acquired in various service learning project activities.” Bala



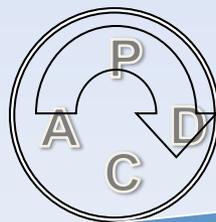
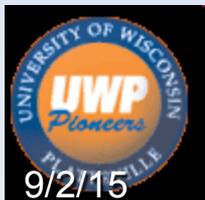
10) Celebrate

- PACCE banquet, poster day & slide presentations
- Recognize the efforts of all involved (that includes those being served) in making the service-learning project a worthwhile and rewarding experience.
- Share reflections with one another.
- Have fun! Celebrate! You've done something great!
- Make awards and recognition proportional with performance.
- Papers at student chapter conferences
- Sponsor may present students with a portfolio



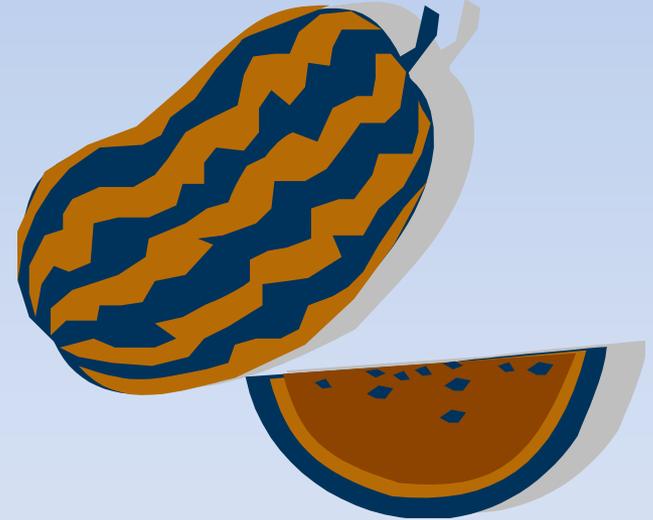
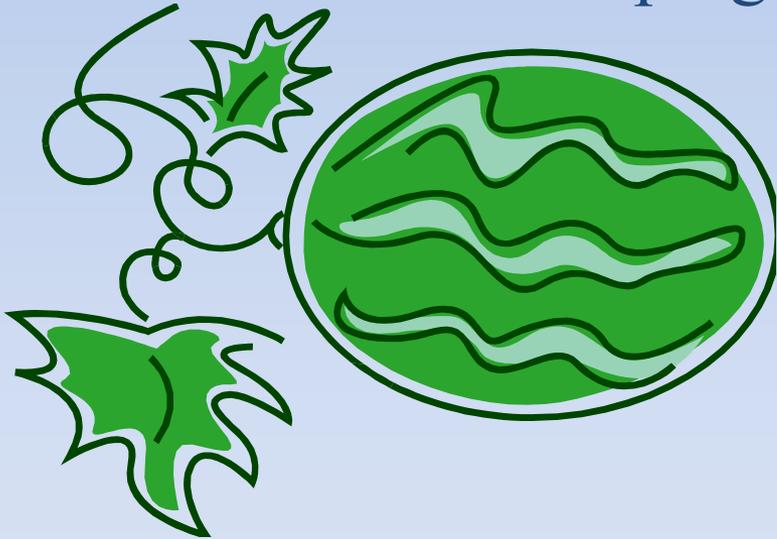
11) Assess and Evaluate the Course

- Evaluate analytical skills, communication skills, critical thinking, and judgment from student's reflection papers and presentations. Grading rubrics are useful to clarify your expectations.
- Administer evaluation forms to students and community partners . Complete an evaluation form yourself.
- Utilize university or college course evaluation
- Use evaluations to plan and refine your next service-learning experience or course



The Watermelon Problem

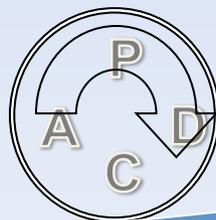
- A farmer in the country had a watermelon patch and upon inspection, he discovered that some of the local kids had been helping themselves to a feast.



- The farmer thought of ways to discourage this dishonest eating of the watermelons.

Farmer's Solution

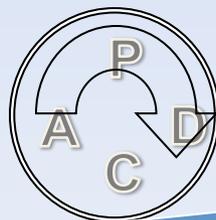
- He put up a sign that read:
“WARNING – ONE OF THESE
WATERMELONS CONTAINS CYANIDE!”



Kids' Response

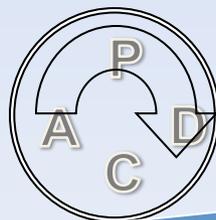
- The farmer returned a week later to discover that none of the watermelons had been eaten but found a sign that read : “NOW THERE ARE TWO!”
- *Reflection*

In trying to solve a problem a wrong strategy, instead of resolving the problem, complicates the problem even more.

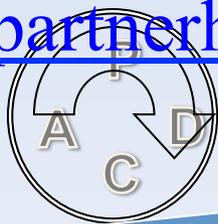
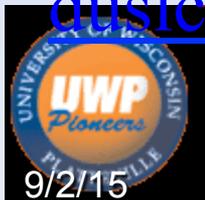


SOME EXCELLENT RESOURCES

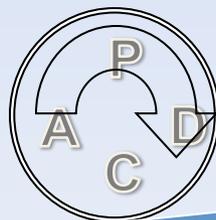
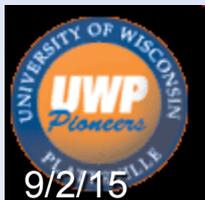
- Service Learning Handbook and Faculty Resource Guide, University of South Carolina
<http://www.housing.sc.edu/servicelearning/pdf/SLManual.pdf> Many of the slides in this presentation follow the format in this manual.
- Pioneer Academic Center for Community Engagement (PACCE).
<http://www.uwplatt.edu/pacce/>
- Faculty *Manual*. Teaching a Community-based *Service Learning* Course at DePaul University.
http://steans.depaul.edu/docs/faculty/FacultyManual_2004.pdf



- K-12 Service-Learning Project Planning Toolkit, 2009 Updated Edition, Learn and Serve America's National Service-Learning Clearinghouse
http://www.servicelearning.org/filemanager/download/8542_K-12_SL_Toolkit_UPDATED.pdf
- Service Learning Resources, Illinois State Board of Education, October 2006
<http://www.standingupforillinois.org/uploads/servicelearningresources.pdf>
- Getting Involved with Service-Learning: *A Guide for Community Organizations*, Dominican Univ., CA
<http://www.dominican.edu/academics/service/dyslcommunitypartnerhandbook.pdf>

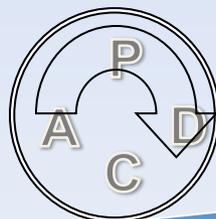


- Handbook for educators, students, and community members who lead community service and service-learning efforts
<http://www.kusd.edu/media/pdf/service-learning/handbook.pdf>
- **Service-Learning resources, UW Extension,**
<http://www.uwex.uwc.edu/service-learning/resources/>
- University of Wisconsin-Eau Claire, Service Learning, <http://www.uwec.edu/sl/index.html>
- The above references include additional links and resources. See the conference/workshop website also.



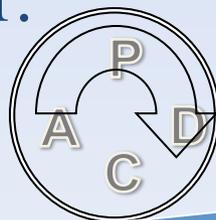
PACCE Pioneer Academic Center for Community Engagement

Experience → Grow → Make a Difference



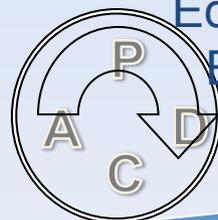
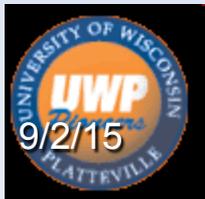
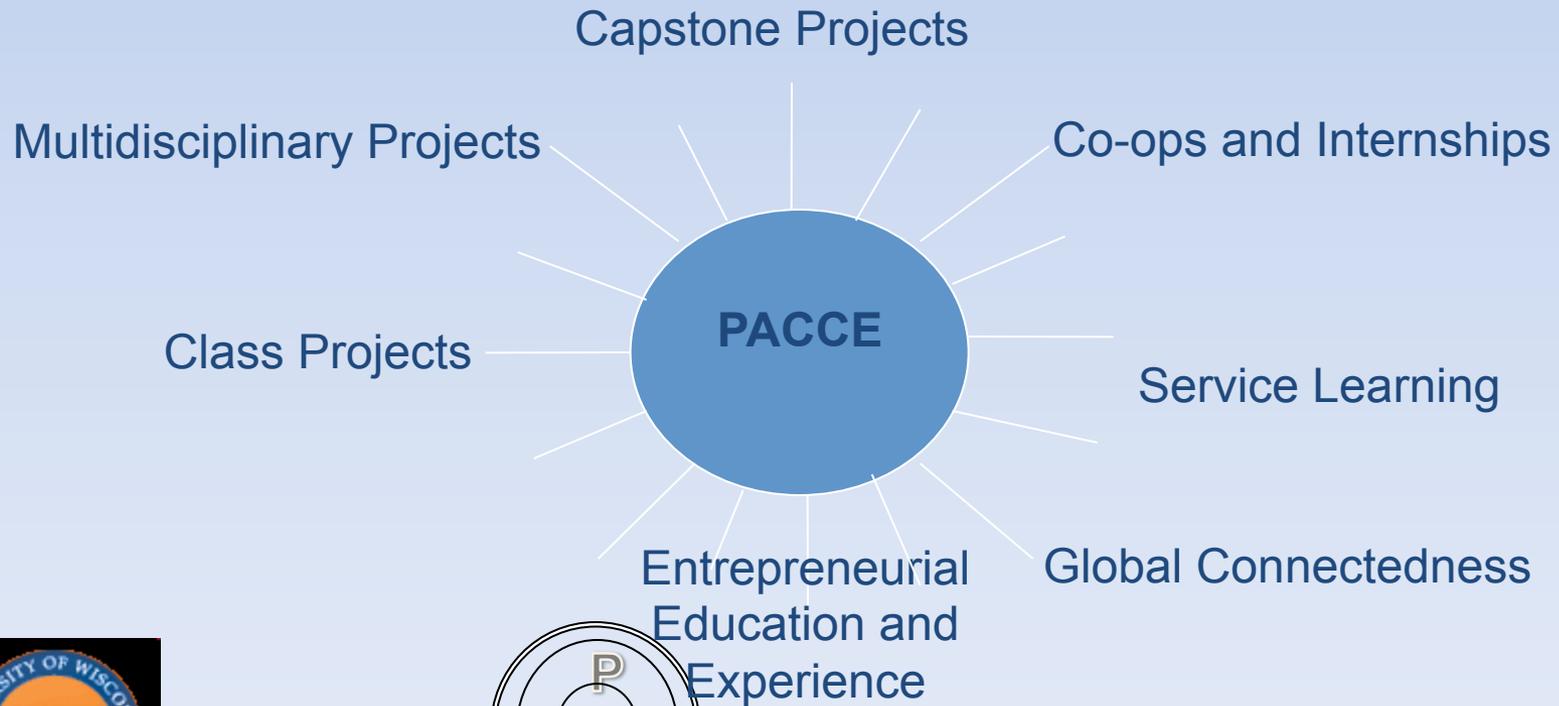
Differential Tuition at UW – Platteville

- \$100/student from fall 2008
- Plan will be reviewed after four years
- Expand a first-year experience program (retention)
- Add a full-time mental health counselor and a staffer for the risk-awareness team to help students
- Hire career services staff to help students prepare for interviews, create portfolios of their work, etc
- Establish PACCE - Pioneer Academic Center for Community Engagement (PACCE) and assist students to apply their skills with guidance from a faculty adviser.



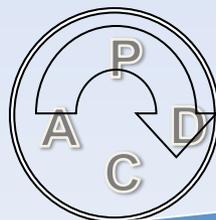
The Initial Charge

A transformative initiative for the Campus-wide coordination, integration, and leadership of community-based scholarship of engagement.



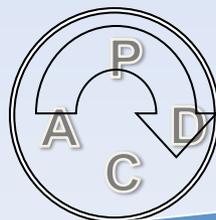
What is PACCE?

- Answer will be in terms of
 1. What is Scholarship of Engagement?
 2. What is the Center called PACCE?



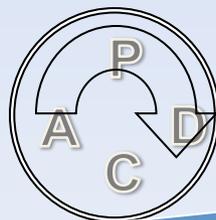
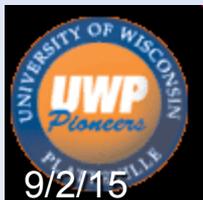
What is Scholarship of Engagement?

- Begin with what is Scholarship?
 - Many ways to address the question
 - Ernest Boyer and others provide the following:



Begin With Dimensions of Scholarship

- Discovery
 - Pursuit of inquiry and investigation in search of new knowledge
- Integration
 - Making connections across disciplines that lead to new understandings.
- Application
 - Applying knowledge to social, business, civic, and other community issues in a process that tests theory and knowledge.
- Teaching
 - Transmitting, transforming and extending knowledge.



What is Scholarship?

Dimensions of Scholarship

Discovery
Integration
Application
Teaching

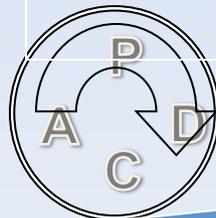
+

Add Process

1. Setting goals
2. Selecting methods
3. Applying methods
4. Reflecting on results
5. Dissemination of results

=

Scholarship

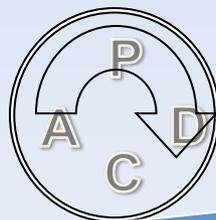


What is Scholarship of Engagement?

- Scholarship Reconsidered: Priorities of the Professoriate. (Boyer, 1990)
 - *“The scholarship of engagement means connecting the rich resources of the university to our most pressing social, civic and ethical problems, to our children, to our schools, to our teachers and to our cities...”*

Students meeting learning objectives through participating in a real activity, with real people, in the real world, with real consequences.

(adapted from Wikipedia)



What is Scholarship of Engagement?

Dimensions of Scholarship

Discover
Integration
Application
Teaching

+

Add Process that is completed through an active and interactive partnership with a Community Partner to:

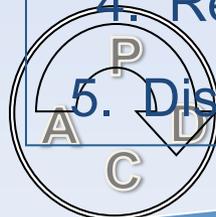
1. Set goals
2. Select methods
3. Apply methods
4. Reflect on results
5. Disseminate results

=

Scholarship of Engagement



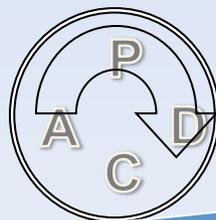
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What is Scholarship of Engagement?

It is students learning through elbow to elbow interaction with a community partner to pursue a challenge, find solutions, and test results.

It is Experiential Education

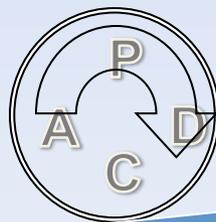


Who is the Community Partner?

- Local
- Regional
- State
- National
- International
- On-line
- Existing business
- New ventures
- Non-profits
- Social organizations
- Civic
- Community governance
- Education
- Large, small, individual



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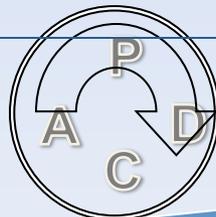
It's a Community/University Partnership

Dissemination, Extension, Outreach:

University → Community

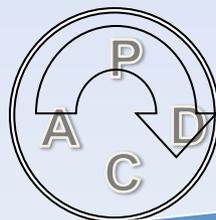
Scholarship of Engagement:

University ↔ Community



Scholarship of Engagement Requirements – The Big Three

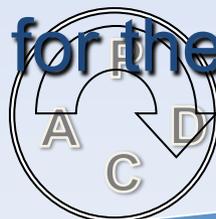
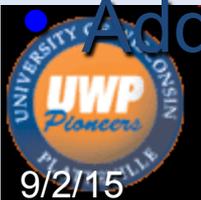
- 1. Must be for Academic credit (course or independent study):**
 - A Grade
 - Assessable Student Learning Outcomes
 - Faculty/Academic staff directed
- 2. Must have three partners working together**
 - Student – Faculty – Community Partner
- 3. Must include significant interaction with the community partner:**
 - Some component of the project takes place in a community setting with real people, real situations, and real consequences.
 - The community partner is a fully interactive part of project planning, implementation, dissemination, and evaluation.
 - The community partner is an integrated component of the student learning experience.



Other Components of Effective Scholarship of Engagement

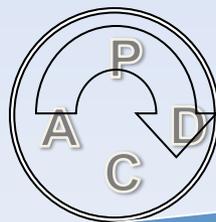
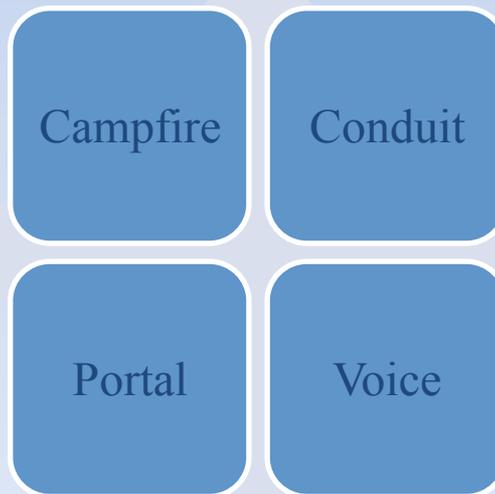
- **Reflection**
 - Processing by the student of the overall experience
- **Dissemination**
 - Is it scholarship if it is not shared?
- **Professional Recognition**
 - Something from the Scholarship of Engagement experience to build the student's (and faculty member's) professional portfolio
 - “2nd Transcript”

• **Added Value for the Community Partner**



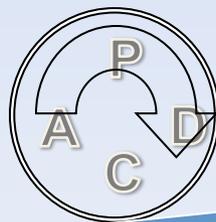
What is PACCE?

PACCE is the Place for the campus-wide coordination, integration, and leadership of community-based Scholarship of Engagement on the UW-Platteville campus; and is a funding source for Scholarship of Engagement projects.



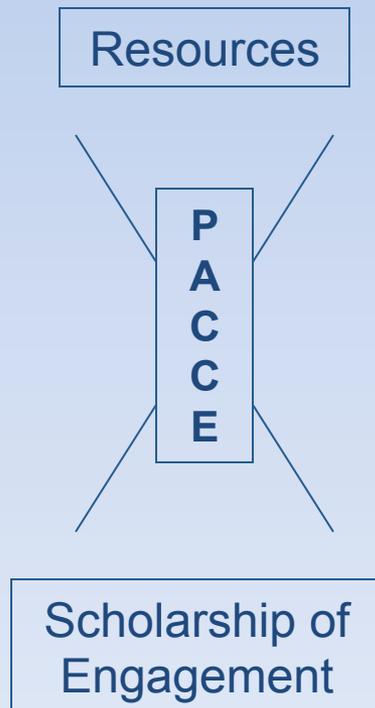
PACCE is:

A campfire around which those involved with community-based scholarship of engagement can meet to plan/coordinate awareness, advocacy, training, faculty development, assessment, and communications.

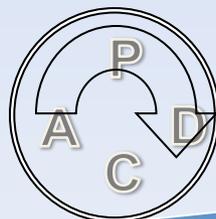


PACCE is:

- A conduit through which resources can flow directly to students and faculty or indirectly through other campus entities in support of Scholarship of Engagement.

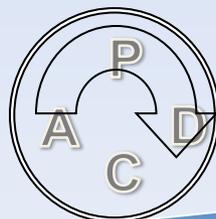
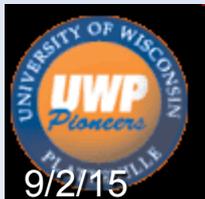


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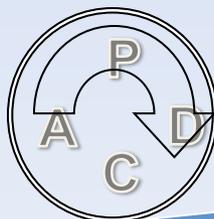
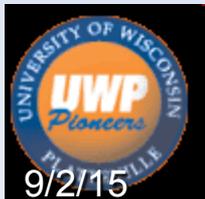
PACCE is:

– A portal through which community and campus entities can meet



PACCE is:

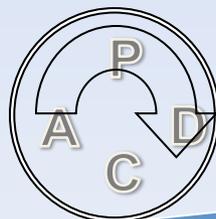
- A voice at the table for Scholarship of Engagement in administration, faculty, student and community circles.



PACCE Mission

Through the Scholarship of Engagement, PACCE will nurture a campus environment that empowers students, faculty & staff, and community partners to:

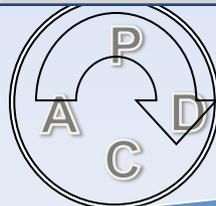
Experience -- Grow -- Make a Difference



PACCE Mission

The PACCE Mission is that each partner will Experience – Grow – Make A Difference

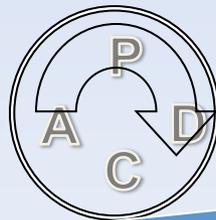
	Students	Faculty/ Staff	Community
Experience			
Grow	See Following Slides		
Make A Difference			



Experience → Grow → Make a Difference

- **Students**

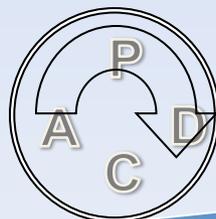
- Experience real people, real situations and real consequences
- Grow 1) their skills, experience, and ability to critically think and 2) Grow their spirit and confidence to challenge, explore, be innovative and succeed through pushing themselves through a new challenge.
- Make a Difference through the empowered capacity to pursue solutions in your professional, social, community, and personal worlds.



Experience → Grow → Make a Difference

- Faculty

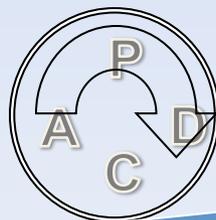
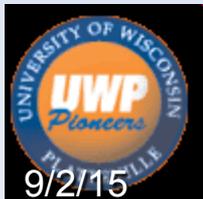
- Experience the Scholarship of Engagement
- Grow their capacity to be an effective teacher, researcher, publicly share their work through publishing and other outlets, and advance professionally
- Make a Difference for their students, themselves, and for their community



Experience → Grow → Make a Difference

- **Community**

- Experience a positive and productive relationship with the university's faculty and students
- Grow their capacity to address organizational challenges and pursue opportunities
- Make a Difference by better preparing tomorrow's citizens and pioneering the potential for positive change and growth in their organizations.



PACCE 2009-10

- ***Programs***

- *Pioneer Engagement Scholars*
- *Engagement Internship*

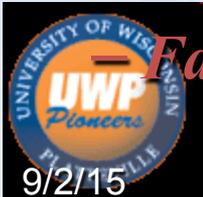
- ***Events***

- *Engagement Poster Day*
- *Dilemmas and Debates Seminar*
- *Scholarship of Engagement Workshops*

- ***On the Drawing Board***

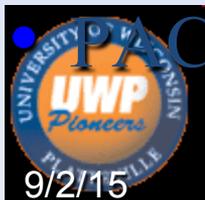
- *Entrepreneurship*

Faculty Scholarly Activity Support

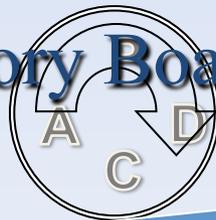


The People of PACCE

- Director: Kevin Bernhardt
- Staff: Beth Vaassen
- Scholarly Coordinator: Julie Phillips
- College Liaison:
 - BILSA: Jodi McDermott
 - LAE: Carole Spelic
 - EMS: Carol Beals
- PACCE Executive Committee
 - Lisa Riedle, Tom LoGuidice, Kevin Bernhardt



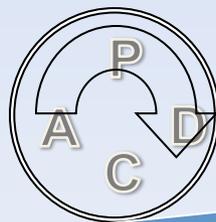
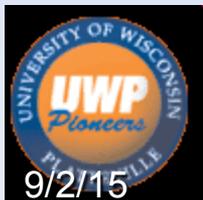
PACCE Advisory Board



The People of PACCE

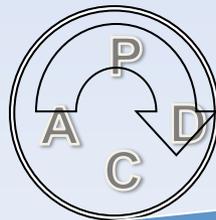
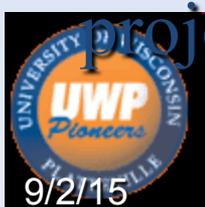
- PACCE Advisory Board

Tim Zauche Devine Nzegwu Beth Frieders George Krueger Chuck
Steiner Tom Hunt
Paul Ohlrogge Joanne Wilson Brent Bowers Osama Jadaan Frank Fiorenza
Pat Jinkins
Carole Spelic Mark Meyers Colleen McCabe Shane Drefcinski
Val Wetzel Tom Steinback Laura Anderson Wendy
Brooke Denee Hirsch Florence Omachonu, Elizabeth
Goodfellow



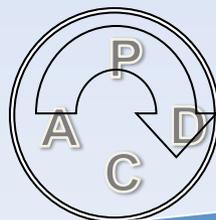
My Service Learning Projects

- 1985-1993: 59 Service Learning Projects were completed in my courses
- 1994-2009: 101 Service Learning Projects were completed in my courses
- Schools, churches, community organizations, industries, businesses, etc in WI, IA, and IL.
- Until fall 2008 project sponsors reimbursed travel expenses incurred by students
- From fall 2008, expenses incurred by students are reimbursed from PACCE grants awarded to my projects.



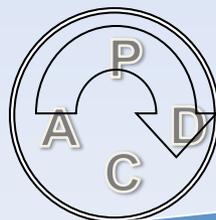
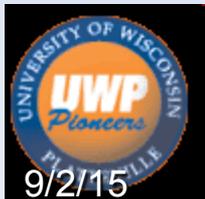
SERVICE LEARNING ACTIVITIES SATISFY ABET CRITERIA

- The criteria for accrediting engineering projects: open-ended projects , practical design experience to graduates
- Requirement for a senior-level capstone design course in the curriculum to provide integrative experience that allowed students to apply what they had learned in the lower level courses
- First ABET accreditation of the industrial engineering program in 1988



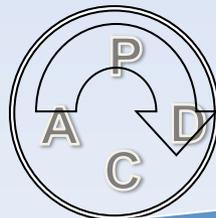
ACHIEVE PROGRAM OBJECTIVES

- Graduates successfully (1) apply technical knowledge to solve industrial engineering problems, (2) communicate effectively orally and in writing, (3) pursue professional growth.



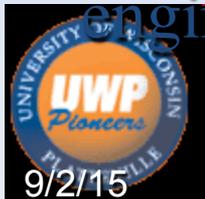
PROGRAM OUTCOMES 1-5

- An ability to apply knowledge of mathematics, science, and engineering.
- An ability to design and conduct experiments as well as to analyze and interpret data.
- An ability to design a system or process to meet specified requirements.
- An ability to work as part of a multi-disciplinary team.
- An ability to identify, formulate, and solve industrial engineering problems.



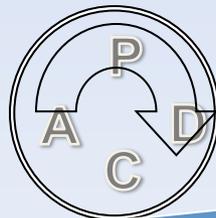
PROGRAM OUTCOMES 6-9

- * An understanding of professional and ethical responsibility.
- * An ability to effectively and accurately present information orally and an ability to effectively and accurately communicate in writing.
- * An understanding of the impact of industrial engineering solutions in a global, economic, environmental, and societal context.
- * An ability to pursue professional growth through lifelong learning activities, a knowledge of contemporary issues and ability to use techniques, skills and modern engineering tools necessary for engineering practice.



COMMUNITY PARTNERS WELCOME STUDENTS' IDEAS

- Partners value the fresh perspective they receive from students
- Partners like students to identify and eliminate waste
- Lean manufacturing, six-sigma problem solving approach and lean operation ideas did not exist when many of the upper level managers graduated several years ago.
- Current students have some skills, experience with software and education that is not very common in some industries and businesses.
- Students have opportunity to use state-of-art systems
- Benefits to all parties – students, faculty, and community partners



SERVICE LEARNING ACTIVITIES LEAD TO SELF-DISCOVERY

- Eyler & Giles, 1999
- Positive, meaningful and real to all the participants.
- Involve cooperative rather than competitive experiences and thus promote skills associated with teamwork and community involvement and citizenship.
- They address complex problems in complex settings rather than simplified problems in isolation.
- Engage in problem-solving by requiring participants to gain knowledge of the specific context of their service-learning activity and community challenges



SERVICE LEARNING ACTIVITIES RESULT IN EFFECTIVE PROBLEM- BASED LEARNING

- Problem-Based Learning (PBL): PBL is an instructional method of hands-on, active learning centered on the investigation and resolution of messy, real-world problems
- Originated in late 1960s at the medical school at McMaster University in Canada
- Rather than having a teacher provide facts and then testing students ability to recall these facts via memorization, PBL attempts to get students to apply knowledge to new situations. Students are faced with contextualized, ill-structured problems and are asked to investigate and discover meaningful solutions



- SERVICE LEARNING ACTIVITIES FACILITATE EXPERIENTIAL LEARNING

- Kolb, David A. 1984. Experiential Learning
- Four-stage cyclical theory of experiential learning theory which has a holistic perspective that combines experience, perception, cognition, and behavior.
- I have observed that service learning projects benefit students with different learning styles.
- They serve assimilators who learn better when presented with sound logical theories to consider, convergers who learn better when provided with practical applications of concepts and theories, accommodators, who learn better when provided with “hands-on” experiences, and divergers who learn better when allowed to observe and collect a wide



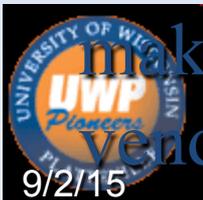
SERVICE LEARNING ACTIVITIES ALLOW SITUATIONAL LEARNING

- Service learning projects promote situational learning in students.
- Students have to learn that not all aspects of a problem can be openly stated and described in words.
- Some aspects of a problem can be understood only under specific context and culture.
- Students need experience in situational learning and many community partners are willing to provide these opportunities.
- If a faculty member is not making the best use of these opportunities, he/she is actually wasting very valuable resources.



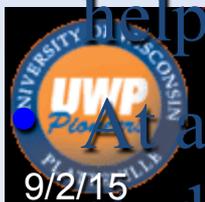
SERVICE LEARNING ACTIVITIES PROMOTE ACTIVE LEARNING

- Active learning model was developed by the University of Oklahoma, Instructional development program. In this model learning happens in four linked phases.
- Student learning involves some kind of experience ("Observing" and "Doing.") or some kind of dialogue ("Dialogue with Self" and "Dialogue with Others.")
- Dialog with self allows students to express *what* they are learning, *how* they are learning, what role this knowledge or learning plays in their own life, how this makes them *feel*, etc. Dialog with others may involve vendors, shop-floor workers, operators, customers, community partners engineers supervisors etc and



SERVICE LEARNING ACTIVITIES INTO LEAD TO CHANGES AND GROWTH IN STUDENTS

- When a community partner defines a project, the problem seems to be intractable to most students. They need my help in the initial stages of a project to learn to break down a large problem into smaller manageable subprojects.
- Once they overcome the inertia of the “contentment” room, they are able to easily move through the next two stages Denial and Confusion where they need help from instructor.



At about half way through the semester or project student teams become self assured and confident in

STUDENTS' REFLECTIONS ARE SUFFICIENT REWARDS

- Best student reflection: W.W.B.D? Many alumni ask themselves this question when they are assigned new projects. I am proud that I have taught them valuable skills in service learning projects.
- Mark Dreikosen (fall 2008): “During the course of the semester I participated in many activities that were completely new experiences to me. Working in a food processing and distributing center was a new concept as I had never experienced this type of business and atmosphere before.”

