

Outcome Assessment Experiences at California State University, Los Angeles

Ethan B. Lipton, Ph.D.

Assistant Vice President for Academic Affairs -- Planning & Resources
Dean, Educational Support Services
elipton@calstatela.edu

Darrell W. Guillaume, Ph.D.

Associate Professor, Department of Mechanical Engineering
California State University, Los Angeles
dguilla@calstatela.edu



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Cal Poly Pomona

Successful ABET Visit in 2000



ABET Pre-visit Preparation Experiences

- Determine Leadership Roles
- Develop Team Structures
- Learn About New Accreditation Criteria
- Determine Outcomes
- Section of Tools
- Develop Assessment Cycles
- Promote Faculty Participation

Leadership Roles

- Overall Coordination and Resources provided by the Dean and Associate Dean
- Leadership by Department Chairs
- Department Level Assessment Coordinator
- Department Committees

Department Chairs

- Select Program Assessment Coordinators
- Establish Program Improvement Task Teams
- Chair of Program Improvement Task Team
- Implement action plans developed by Program Improvement Task Team
- Monitor faculty progress in implementing changes called for in action plans

Program Assessment Coordinators

- Survey constituencies
- Coordinate development of program educational objectives
- Coordinate development of program outcomes
- Evaluate strength of curriculum in focusing on each outcome
- Implement assessment tools and collect data
- Serve on College Assessment Task Team
- Serve on Program Improvement Task Team
- Write annual program final report on assessment

Program Improvement Task Teams

- Analyze data from assessment tools
- Draw conclusions from assessment data
- Develop program strengths and areas for improvement
- Develop action plans designed to bring about improvements
- Present assessment data, conclusions, and action plans to program faculty
- Evaluate effectiveness of assessment tools and report findings to College Assessment Task Team
- Review results of program changes to ensure improvement in program quality

Team Structure

Assessment Task Force

E. Lipton, Chair (Assoc. Dean)
D. Guillaume, ME Assessment Coordinator
R. Purasinghe, CE Assessment Coordinator
C. Liu, EE Assessment Coordinator
K. Mew, TECH Assessment Coordinator

Civil Engineering Program Improvement Task Team

Y. Kim, Chair
R. Purasinghe
H. Hashemian
R. Jeng
C. Khachikian

Electrical Engineering Program Improvement Task Team

H. Boussalis, Chair
C. Liu
M. Roden
R. Ramchandani

Mechanical Engineering Program Improvement Task Team

S. Felszeghy, Chair
D. Guillaume
M. Mirmirani
L. Hsia

Learning About Outcomes Based Assessment

- Assessment Coordinators Attended Workshops for Programs being Assessed
- Administrators and Selected Faculty Attended Training Courses on Being ABET Evaluators
- Major Message: *Outcomes Based Assessment means Continuous Quality Improvement*

Continuous Quality Improvement

- Overall perspective on “continuous improvement”
- Model for “Continuous Improvement”
- Implementation of Program Outcomes and Assessment Effort
- Strengths and Areas of Improvement for Engineering Educational Unit

Overall Perspective on “Continuous Improvement”

- Assessment vs. Evaluation
- Internally imposed mandate (desire to improve; to be the best we can be)
- Externally imposed mandates (ABET, WASC, CSU System, University Program Review)
- Provides systematic approach to improving quality
- “Continuous Improvement” as a Management Tool

Model for “Continuous Improvement” (PAI)

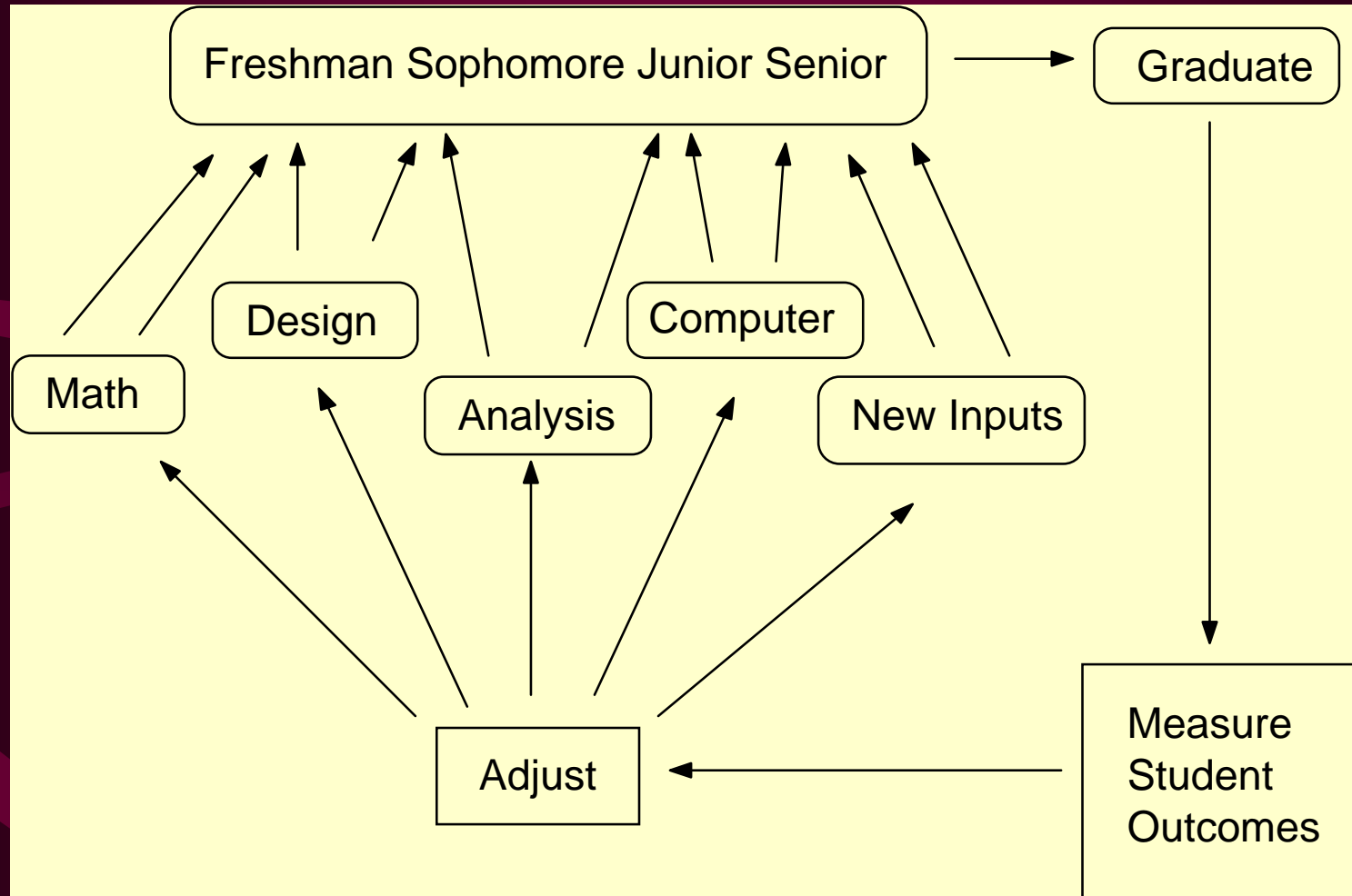
PROCESS

ASSESSMENT

IMPROVEMENT



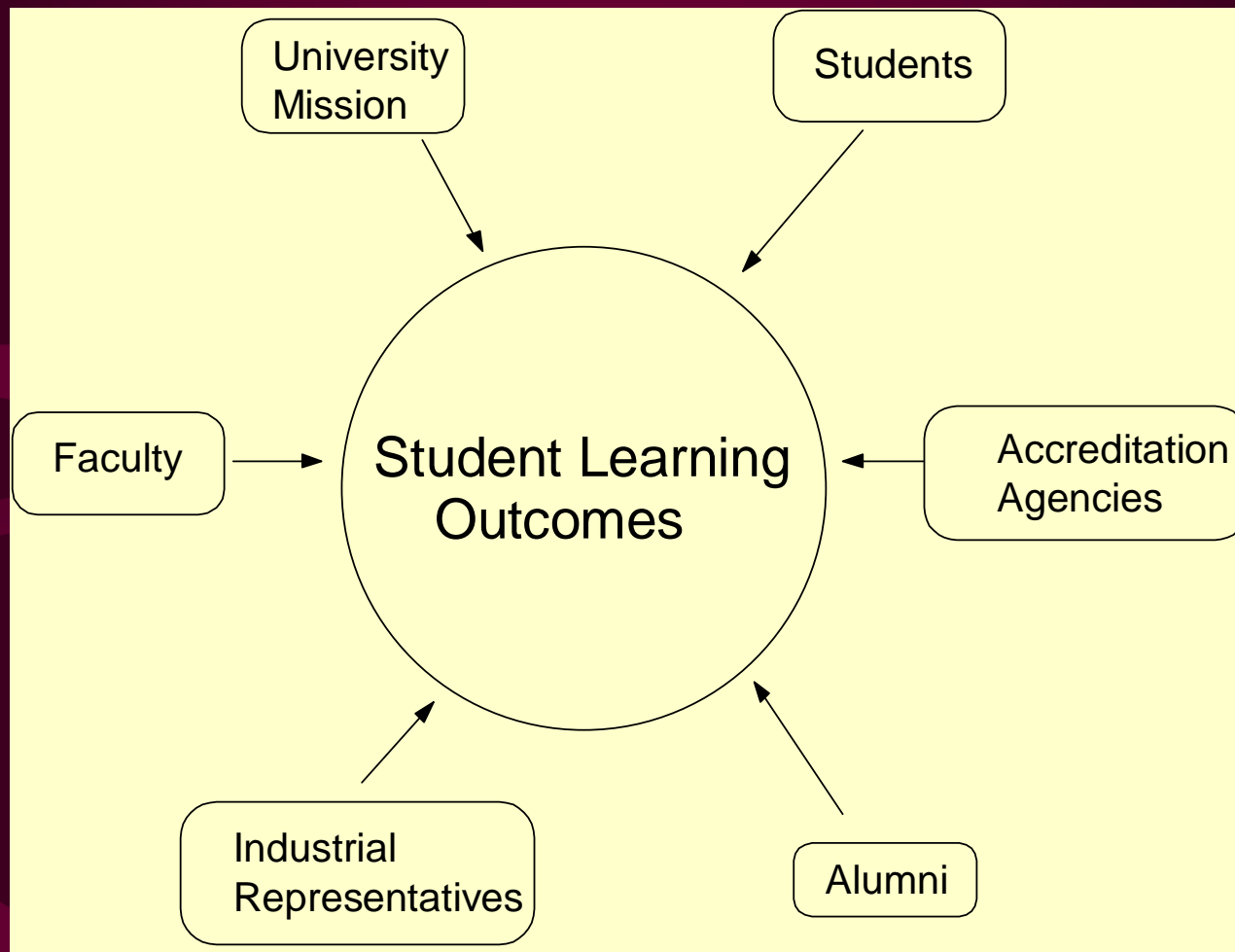
Outcomes-Based Assessment



Determination of Outcomes from Program Educational Objectives

- Defined constituencies
- Surveyed constituencies
- Established Vision and Mission Statements
- Developed and implemented systems and processes
- Established educational objectives and program outcomes
- Publicized educational objectives and program outcomes

Initial Development of Outcomes



Assessment Tool Selection & Utilization

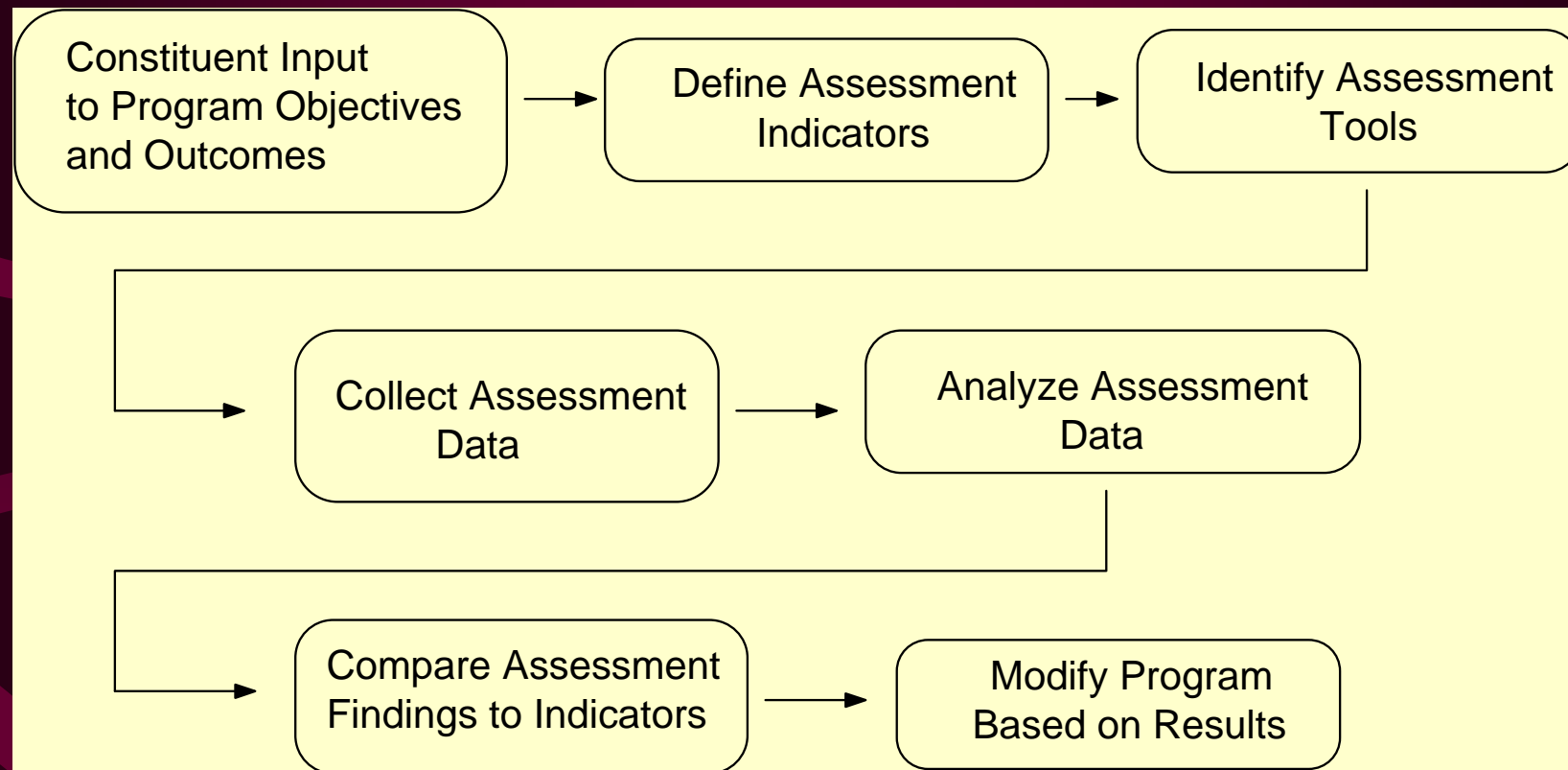
- Selected assessment tools for each program outcome
- Implemented assessment tools and gathered data
- Analyzed assessment data and developed program strengths and areas for improvement
- Developed action plans for implementing changes
- Implemented action plans

Initial Selection of Tools

Assessment Tool versus Student Outcome

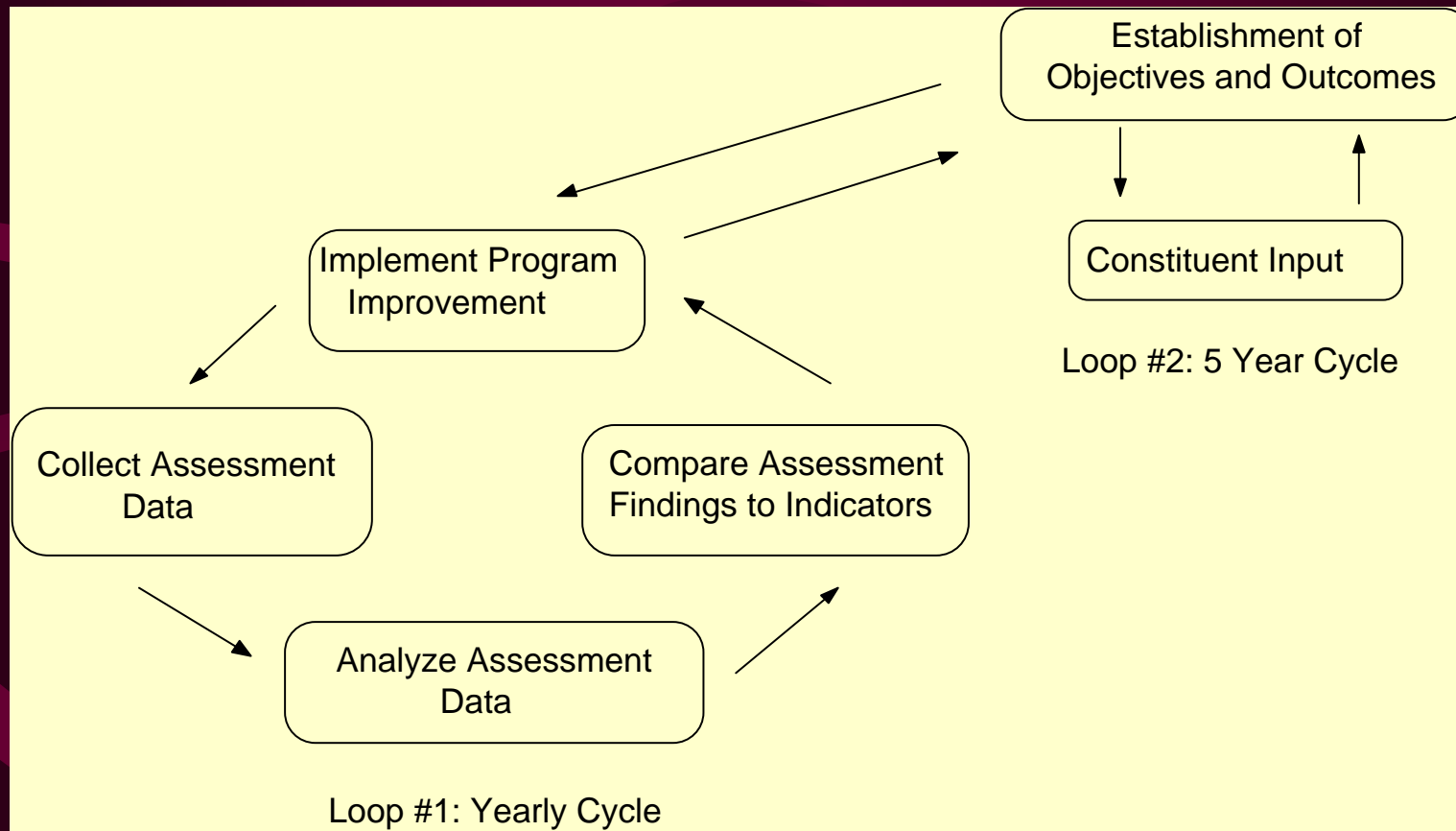
	Capstone Course	Webfolios	Surveys of Employers	Surveys of Students	Pretests/ Tests
Knowledge					
Math/Science/Engineering	No	No	Yes	Yes	Yes
Contemporary Issues	No	No	Yes	Yes	No
Broad Education	No	No	Yes	Yes	No
Ethics	Yes (Test)	No	Yes	Yes	No
Skills					
Experimental work	Maybe	Yes	Yes	Yes	No
Problem solving	Yes	No	Yes	Yes	No
Design	Yes	Yes	Yes	Yes	No
Communication skills	Yes	Yes (written)	Yes	Yes	Yes (WPE)
Work in teams	Yes	No	Yes	Yes	No
Use tools	Yes	No	Yes	Yes	No
Information competency	Maybe	No	Yes	Yes	No
Attitudes					
Lifelong learning	No	No	Yes	Yes	No
Professionalism	Yes	Yes	Yes	Yes	No
All other attitudes	No	No	Yes	Yes	No

Initial Structure for Assessment Program



Two-Loop Process

Loops at different rates: Too hard to hit a moving target



Types of Program Modifications that Were Made

- Courses modified, added, or deleted
- Prerequisites adjusted and enforced
- Importance of capstone course elevated
- Increased communication and cooperation with lower division supporting departments
 - Math
 - Physics

ABET Post-visit Reflections

- Assessment teams must be made a permanent part of the culture
- Release time is essential
- Not all faculty will participate equally
- Documentation is Critical

Making Assessment Part of the Culture

- Participation in Assessment activities should have a positive effect on Tenure and Promotion Files
- The Department committees should have membership created by ballot for fixed terms with equal weight and prestige as other University and College committees

Release/Assigned Time

- Outcomes based assessment is very time consuming.
- Budget constraints often target areas where need is not immediate (i.e. every 6 years).
- Seek grant support if necessary but assessment will not continue if it is left as a background activity.

Faculty Participation: *Attitudes Can Be Negative*

- “This outcome based stuff is just another ABET fad. It will be gone by next visit and they will be on some other kick.”
- “You are changing a program that has worked for 50 years.”
- “What is the error on your assessment measurements? We should not make any changes until we are certain of the data.”

Faculty Attitudes

- Include all faculty in ABET training workshops and discussions (notice we are not practicing what we are preaching).
- Continuously share articles and reports about the positive influence of outcomes based assessment.
- Recognize that not all faculty will buy into the programs.

Documenting Findings and Modifications

- Determine best ways to document assessment process for future ABET visits
 - Department based, college based or both?
- What should documentation address?
 - The types of tools used?
 - Raw data?
 - A record of the analysis used?
 - Summary of findings?
 - A list of program changes resulting from the assessment?