

# Planning, Implementing, and Using Assessment Results: A Case Study Approach

Presented by:

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# Overview

- University College Structure and Context
- Assessment Methods
- Learning More About Assessment Through Case Studies
- Examples of Reports and Findings
- Effective Strategies for Using Assessment Results
- Discussion of Challenges

# University College and Institutional Context

# IUPUI – First-Year Students

- 2516 first-time, full-time students
  - 1637 (65%) University College admits
  - 879 (35%) Dual admits/Direct School
- 75% commute to campus
- 7% admitted conditionally
- Only 7% part-time students
- 60% female
- 97% In-State Students
- Only 2% 25 years of age or older
- 41% first generation
- 87% plan to work while attending school
- 16% plan to work more than 20 hours per week
- 82% receive some sort of financial aid
- 36% are offered a Federal Pell grant
- UC serves about 7000 students

# IUPUI – University College

- Indiana University Purdue University Indianapolis (IUPUI)
  - Downtown Indianapolis
  - Public comprehensive four year institution
  - Over 200 academic programs
  - Doctoral/Research Intensive
  - Enrollment – 30,566
    - Undergraduate – 22,245
    - Graduate – 8,321

University Colleges provide a structure to address the need for a comprehensive approach to entering students.

This is achieved by:

- Providing efficiency, effectiveness, and sustainability
- Facilitating collaborations on and off campus
- Improving opportunities for grants

Re-organization into UC structures has facilitated college entry and has increased student success at many institutions



# IUPUI – University College

- **UC Programs**
  - New Student Orientation
  - Summer Bridge Programs
  - Advising and Career Development
  - Pre-College Programs
  - Learning Center –Peer Mentoring
  - Student Support Services
  - Learning Communities
  - First-Year Seminars
  - Critical Inquiry

# IUPUI – University College

## MISSION

University College is the academic unit at IUPUI that provides a common gateway to the academic programs available to entering students. University College coordinates existing university resources and develops new initiatives to promote academic excellence and enhance student persistence. It provides a setting where faculty, staff, and students share in the responsibility for making IUPUI a supportive and challenging environment for learning.

## PRINCIPLES

**University College will achieve its mission through the...**

- Promotion of student learning
- Focus on individual student success
- Establishment of its own traditions and recognition of accomplishments
- Provision of a quality first year experience
- Development of strong connections with the degree-granting units
- Commitment to faculty and staff development
- Creation of a community that values diversity
- Implementation of collaborative governance built on individual responsibility
- Commitment to intentional reflection and assessment

# Essential Features of Successful University College Model

- Collaborations with P-12
- Campus collaborations among all units serving students at entry
- Joint staff, advising and faculty appointments
- Curricular approaches
- Strong academic support services
- Assessment

# Assessment

- **Evaluation** – “the collection of methods, skills, and sensitivities necessary to determine whether a program is needed and likely to be used, whether it is intense enough to meet an unmet need, whether the service is offered as planned, whether the program is provided at a reasonable cost without undesirable side effects.”  
Emil Posavac

- **Assessment** – “Assessment is the systematic collection, review, and use of information about educational programs undertaken for the purpose of improving student learning and development.”

Trudy Banta

# **ASSESSMENT . . .**

**“a rich conversation  
about student learning  
informed by data.”**

**-- Ted Marchese --  
AAHE**

# Historical Perspective on Assessing First-Year Programs at IUPUI

- **In the Beginning:**
  - New academic unit housing first-year programs. There was a lot of visibility and need to demonstrate program effectiveness as well as value added to the university.
  - Focus on summative evaluation, program development, needs assessment.
  - Engaged in active learning about what works in the first-year of college - participated in site visits, consulted with experts, and learned from other institutions regarding how to effectively implement first-year success programs.
  - Qualitative studies were conducted to improve understanding of learning outcomes and students' perceptions of programs.



# Historical Perspective on Assessing First-Year Programs at IUPUI

- **Current Approaches:**

- Using assessment to prove and improve programs: summative and formative evaluation.
- Employing multiple measures of student learning and academic success - moving beyond retention.
- Employing direct and indirect measures of student learning.
- Using program evaluation methodology: understanding needs, processes, and learning outcomes.
- Understanding the dialogue between qualitative and quantitative research.
- Seeking involvement of key stakeholders in assessment planning, implementation, and deployment.
- Ensuring information used to improve teaching, learning, programs, and services.
- Meta-Assessment

# IUPUI Curriculum

- Principles based – no core curriculum
- **Principles of Undergraduate Learning (PULs)**
  - Core Communication and Quantitative Skills
  - Critical Thinking
  - Integration and Application of Knowledge
  - Intellectual Depth, Breadth, and Adaptiveness
  - Understanding Society and Culture
  - Values and Ethics

# General Education (PULs) Assessment

- UC's role with regard to student learning and the PULS is more general and foundational.
- The collaboration between the UC other academic units for the delivery of special programs, student support, and faculty development related to general education is critical.
- Within the context of UC's programs, the PULs are introduced and students begin to develop them, but the goal and the ability to measure substantial results over time is often limited due to the fact that students quickly move from University College into the schools that include their major field of study.
- Employ a variety of methods to assess indirect learning outcomes as well direct student learning outcomes in the context of the first-year of college (beginning and intermediate levels of learning outcomes associated with general education outcomes).

# General Education (PULs) Assessment

- Student learning outcomes for beginning levels of the PULs in First-Seminars, Mentoring Courses, and Themed Learning Communities with faculty involvement have been specified.
- University College First-Year Seminar course goals, templates, and corresponding syllabi contain statements of expected learning outcomes for students that incorporate the PULs.
- In preparation for the 2012 Accreditation visit UC, faculty members and instructional teams are measuring direct student learning outcomes specified in the PULs in programs and courses (we are employing a course embedded, authentic assessment approach).

# Some Purposes of Assessment

- Determine if students learn content.
- Enable students to assess own strengths.
- Allow more opportunities for faculty to improve instruction.
- Help institution improve courses, programs, and services.
- Help institution demonstrate accountability.

# Summative and Formative Assessment

“John Gardner, Betsy Barefoot, and others have observed that first-year seminars and other programs serving large numbers of first-year students (e.g., advising, orientation, residence life, learning communities) are asked to “prove their value” more frequently than high status, discipline based program. “Proving and improving” is not a luxury for first-year programs but a core element of success, a natural extension of professional curiosity, and an essential expression of respect for our students.” (Swing, 2001, p. ix).

# Focus on Accountability

- Four-Year Graduation Rates
- Degree Completion
- Course Completion
- “Value-Added” Interventions
- Cost-Effectiveness
- Student Learning Outcomes



# Good Assessment is Good Research...

- An important question
- An approach to answer the question
- Data collection
- Analysis
- Report

-Gary R. Pike (2000)



# Critical Questions About Programs

- What are programs providing and for whom?
- Are they meeting the needs of students?
- How can the program be improved?
- Is the program, course, or service improving student learning?
- Where is learning satisfactory?
- Which approaches produce the most learning for which students?

- Do program impacts vary across different groups of intended beneficiaries (males, females, undergraduates, first-generation students, Latino students) and over time?
- Are there any unintended effects of the program, either positive or negative?
- Is the program worth the resources it costs?
- Can the changes in outcomes be explained by the program, or are they the result of some other factors occurring simultaneously?

# Measuring Student Learning

- Grades
- Exams, tests, papers, course assignments
- Standardized tests
- Self-report questionnaires
- Narratives
- Portfolios
- Interviews
- Focus groups

# Direct Measures of Learning

Assignments exams, projects, papers

# Indirect Measures

Questionnaires, inventories, interviews

- Did the course cover these objectives?
- How much did your knowledge, skills, and abilities increase?
- Did the teaching method(s) help you learn?
- Did the assignments help you learn?

# Planning for Assessment

# Essential Assessment Planning Steps

- Develop Definitions, Goals, and Plans
- Identify Purpose of Assessment
- Articulate Goals and Understand the Program Theory
- Identify and Involve Stakeholders
- Identify Valid Key Indicators
- Determine Data Collection Procedures
- Determine Research Design and Assessment Methods
- Analyze Data and Produce Reports
- Ensure Use of Results
  - Adopted from Posavac and Carey, 2002; Palomba and Banta, 1999

# Classroom Assessment

- Establish goals and student learning outcomes.
- Design assignments.
- Encourage student motivation.
- Design the course.
- Communicate with students about their work.
- Use student classroom work as well as other measures for assessment in departments or general education programs.
  - Barbara E. Walvoord

# Planning for Learning and Assessment

## T.W. Banta

<p>1. What general outcome are you seeking?</p>	<p>2. How would you know it (the outcome) if you saw it? (What will the student know or be able to do?)</p>	<p>3. How will you help students learn it? (in class or out of class)</p>	<p>4. How could you measure each of the desired behaviors listed in #2?</p>	<p>5. What are the assessment findings?</p>	<p>6. What improvements might be based on assessment findings?</p>



# UC Strategic Planning/Assessment Template

General Outcome Goal or Objective	Expected improvements or changes	Implementation strategies (what is being done to achieve the outcome goal or objective)	Measures (what measures, would provide evidence of whether the changes have occurred)	Methodology (How is information being collected, analyzed, and disseminated)	Findings (what are the results?)	Improvements (what has been or is being done to adjust processes based on findings?)

# **Take Inventory of Existing Assessment Information**

- **Grades in courses**
- **Course exams**
- **Student surveys**
- **Faculty surveys**

# Underlying Theories Guiding Many First-Year Programs

## ❖ Academic integration:

- The development of a strong affiliation with the college academic environment both in the classroom and outside of class. Includes interactions with faculty, academic staff, and peers but of an academic nature (e.g., peer tutoring, study groups) (Nora, 1993).

## ❖ Social integration:

- The development of a strong affiliation with the college social environment both in the classroom and outside of class. Includes interactions with faculty, academic staff, and peers but of a social nature (e.g., peer group interactions, informal contact with faculty, involvement in organizations) (Nora, 1993).

# Underlying Theories Guiding Many First-Year Programs

## ❖ Academic Self-Efficacy

- Students' evaluation of their competence to successfully execute academic tasks necessary to reach desired outcomes (Zajacova, Lynch, Espenshade. 2005; Bandura, 1993).

## ❖ Social Learning Theory

- "Human behavior can be learned observationally through modeling: from observing others one forms an idea of how new behaviors are performed, and on later occasions this coded information serves as a guide for action." (Bandura, 1977, p. 22).

# Assessment Approaches

- Seek involvement of key stakeholders in planning, implementation, and deployment.
- Select outcome measures that are valid, reliable, aligned with course goals and learning outcomes.
- Understand what processes lead to particular outcomes: the why and the what.

# Assessment Approaches

- Employ qualitative and quantitative methods.
- Employ multiple measures from different sources.
- Employ summative and formative approaches.
- Take steps to ensure results are linked to planning and decisions.

# Effective Assessment Plans

- Includes comprehensive assessment activities to determine if each major objective is attained (student learning outcomes, academic success, attitudes, behaviors, etc.)
- Proposes instruments that are valid, reliable, and aligned with intended student learning outcomes and proposed curricula (e.g., assessment and curricula are carefully aligned).
- Includes direct as well as indirect measures of student learning.
- Includes measures designed to assess cognitive, affective, and social outcomes.
- Includes a combination of quantitative and qualitative methods.
- Employs research designs with acceptable internal validity (e.g., research designs such as pre-post with appropriate comparison groups).
- Uses built-in points of contact with students.
- Contains summative and formative assessment components.
- Involves faculty in assessment planning.
- Contains sustainable assessment procedures.

# Qualitative and Quantitative Approaches



# Quantitative and Qualitative Methods

- Multiple Methods and Measures are Employed to Assess Program Components and Outcomes
- Complementary Techniques
- Work Best in Dialogue

# Qualitative Assessment

- Brings Awareness Of Program Implementation Differences
- Provides In-Depth Understanding of Student Responses and Interactions
- Represents Part of a Long Term Strategy of Formative Evaluation

# Qualitative Assessment

**Qualitative strategies should not be considered merely ancillary components to an assessment process.**

**We believe that some of the best assessment strategies are mixed method in design; employing a variety of both qualitative and quantitative strategies that....**  
***work in and with one another.***

# Qualitative Assessment

**“To capture participants’ in their own terms one must learn their categories for rendering the explicable and coherent - the flux of raw reality.**

**That, indeed, is the first principle of qualitative analysis.” (Lofland, 1971)**

**“In qualitative inquiry the researcher is the instrument!” (Patton, 2002)**

# Qualitative Assessment

Qualitative findings grow out of (3) main types of data collection:

- **In Depth Open-ended Interviews:**
  - Interviews yield direct quotations from people about their experiences, opinions, feelings, and observations.
- **Direct Observations:**
  - Descriptions of peoples activities, behaviors, actions and the full range of interpersonal interactions and organizational processes.
- **Written Documents:**
  - Document analysis including program records, correspondence, and open-ended written responses to questionnaires and surveys. (Patton, 2002)

# Coding Types

***Open Coding*** – Data is broken down, conceptualized, and the initial stages of categorization begin.

***Axial Coding*** – allows for similarities and relationships among codes to become apparent.

***Selective Coding*** – this process allows for the development of core categories, ‘the central phenomenon around which all other categories are integrated’.

# ATLAS.ti

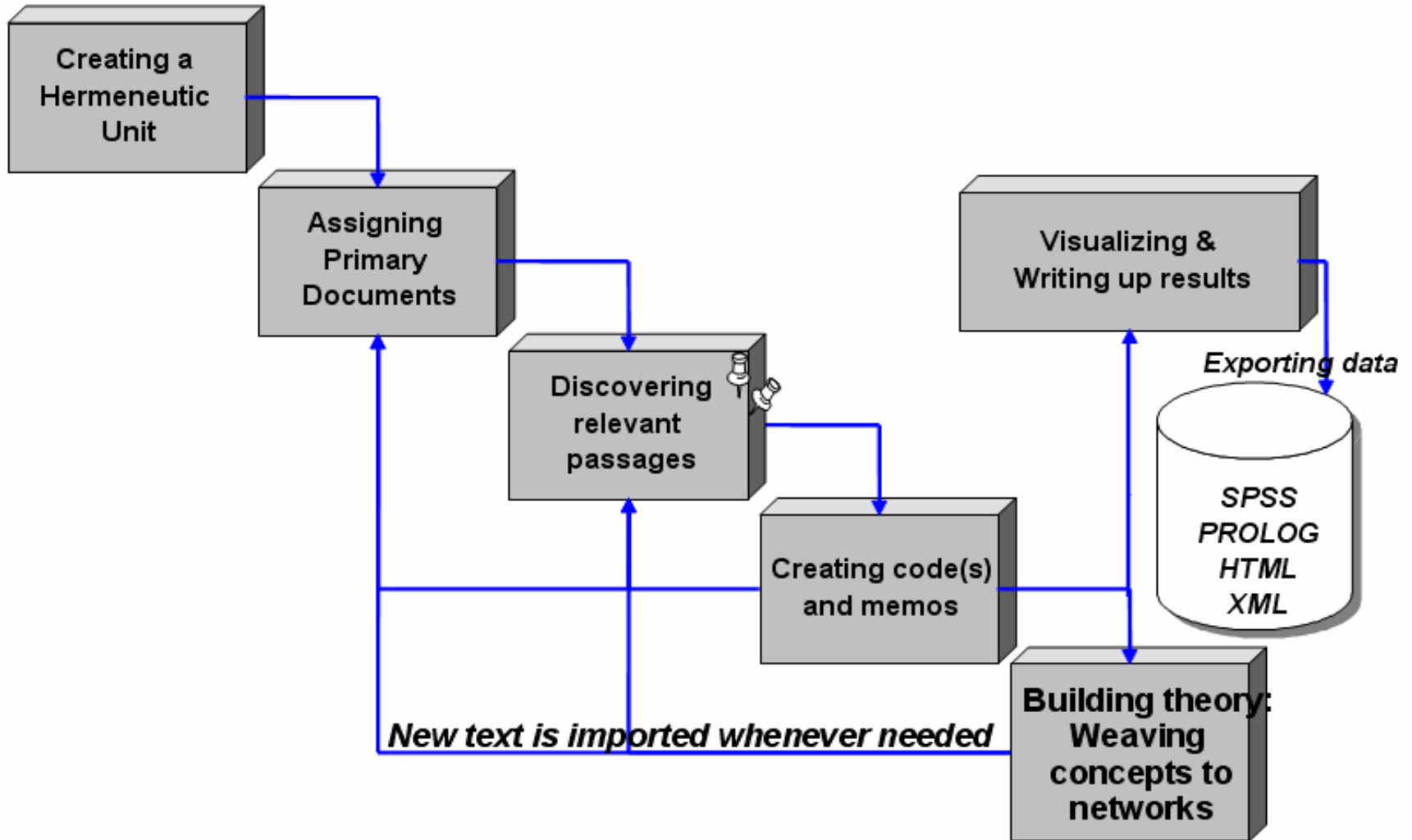


<http://www.atlasti.com/>

**Other Software Programs:**

<http://www.eval.org/resources/QDA.htm>

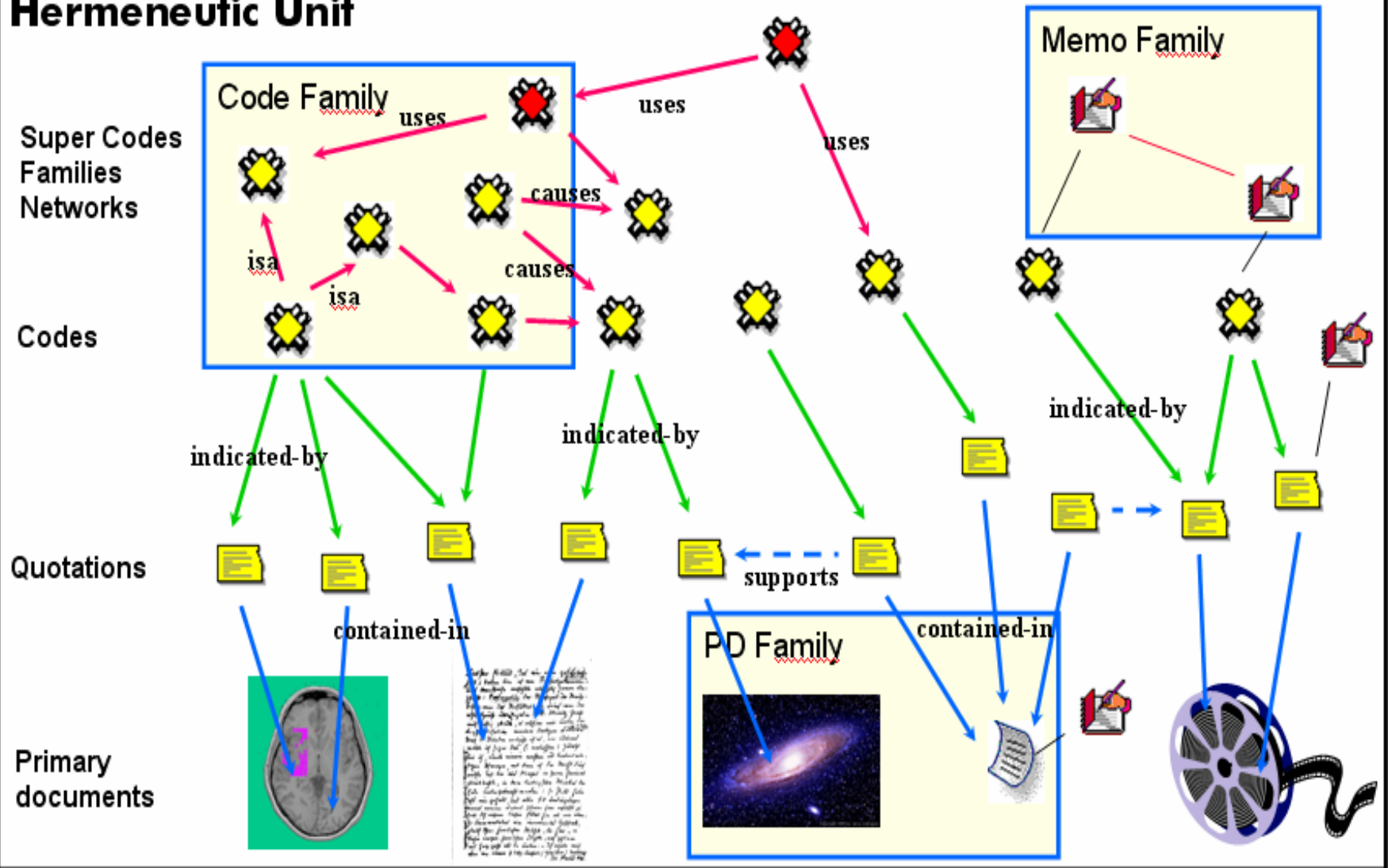
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# ATLAS.ti

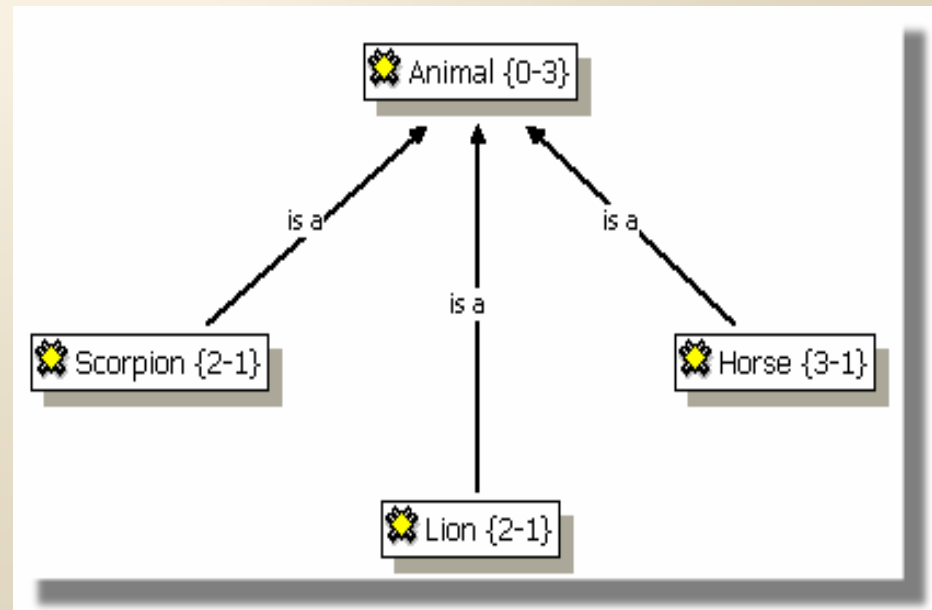
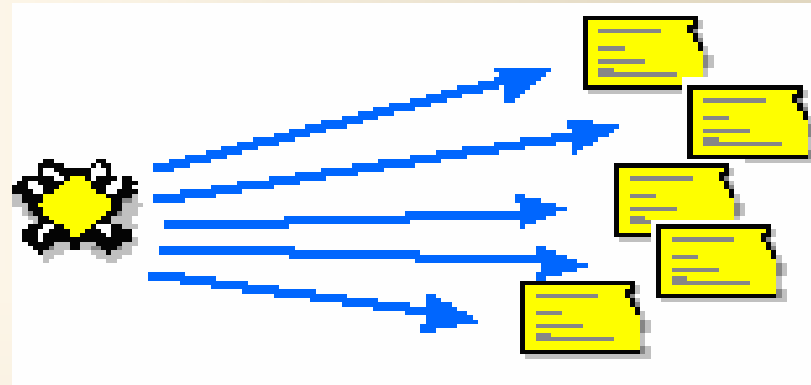
## Hermeneutic Unit



## ATLAS.ti

Methodologically, coding is more than merely indexing data. Coding is simply the procedure of associating code words with selections of data. In ATLAS.ti's framework, the foundation of "coding" is the association between a quotation and a code.

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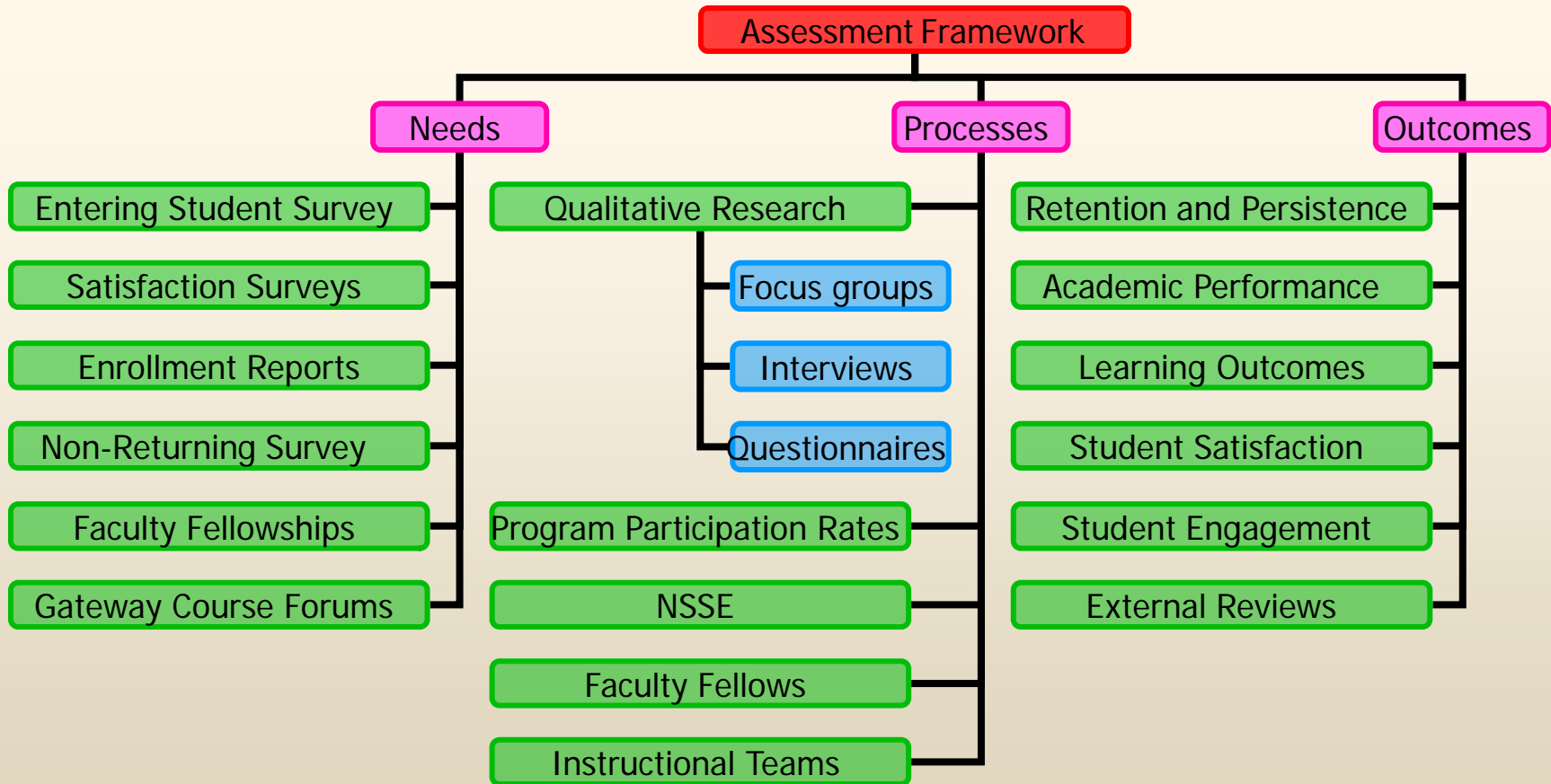
# Quantitative Assessment

- Conduct quasi-experimental designs employing multivariate analyses of covariance, repeated measures MANCOVAs, and hierarchical regression procedures.
- Conduct analyses to determine program effects on academic performance, retention rates, and DFW rates.
- Describe retention rates and GPAs in defined populations over semesters and years.
- Examine participants compared to non-participants with regard to GPA and retention while adjusting for academic preparation and background differences
- Examine predicted vs. actual retention, course grades, and DFW rates.
- Administer student surveys to assess student needs, satisfaction, engagement, program impacts, reasons for leaving, etc.

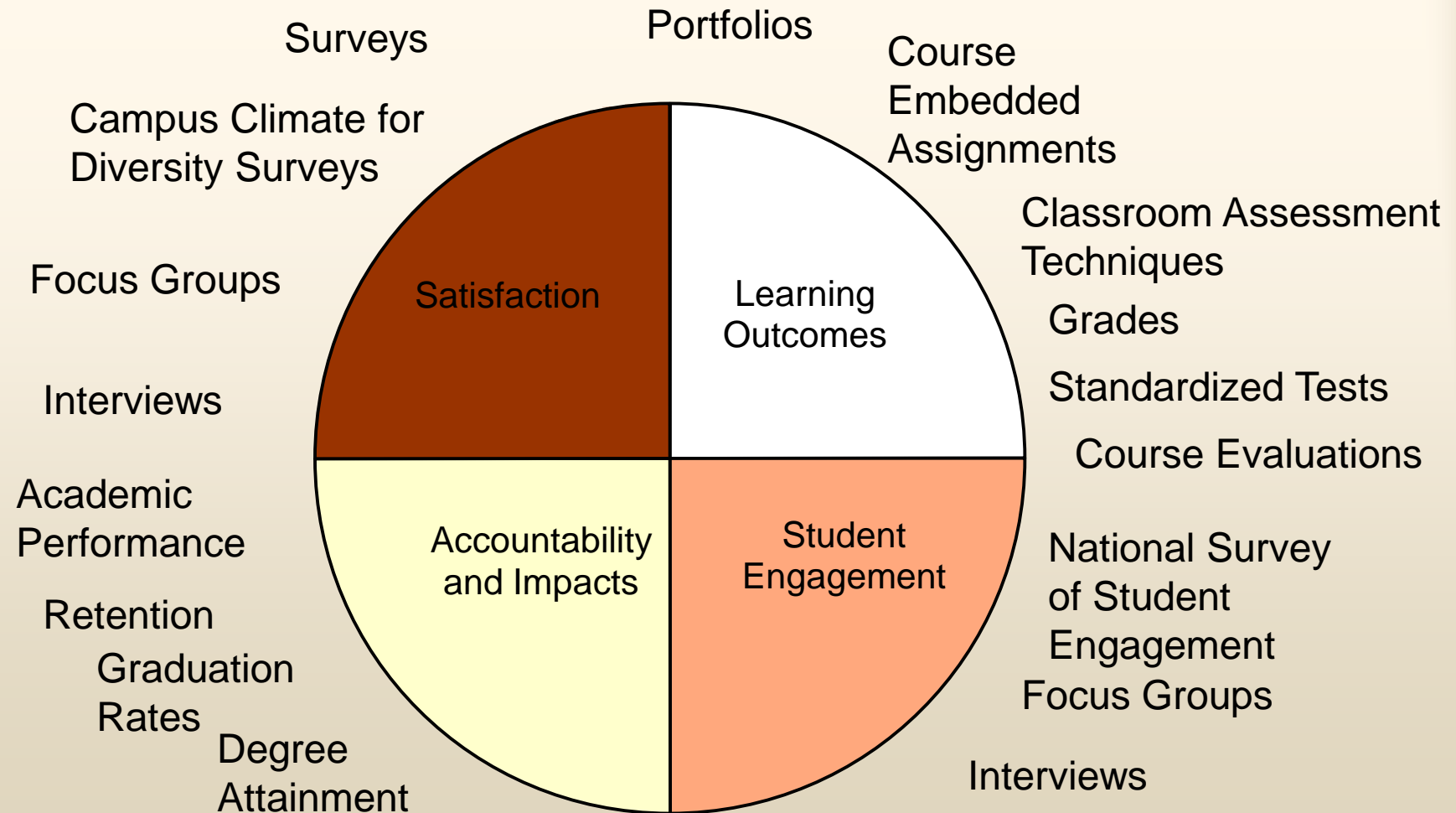
# Limitation

- A noteworthy limitation of these investigations is that students self-select into programs and selection bias may have affected the internal validity of the studies. Thus, the ability to make causal inferences based on the information is limited.
- It is possible that the positive effects of the programs on academic performance are due to the fact that students who decide to enroll may have differed in substantial ways from students who decided not to enroll and these differences (not the programs or courses) may have caused the positive outcomes.
- Although important variables are treated as covariates in the statistical models, it is difficult to adjust for all possible self-selection factors using traditional statistical techniques and when experimental designs using random assignment are not employed.

# UC Three-Phase Assessment Framework



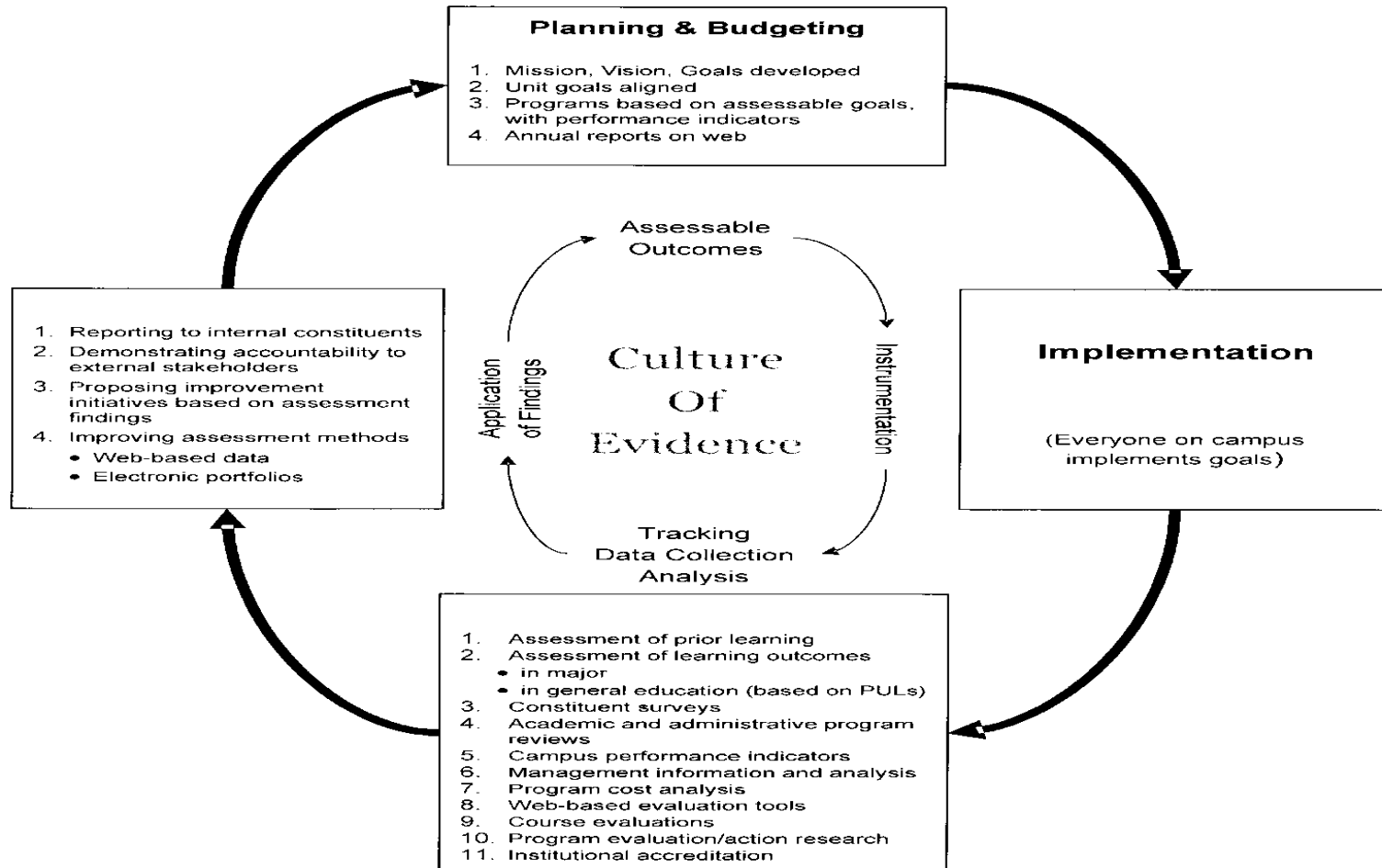
# UC Outcome Assessment Framework: Employment of Quantitative and Qualitative Methods



# Creating a Culture of Evidence



Planning, Evaluation, and Improvement at IUPUI





# Potential Barriers to Assessment

- Limited time to conduct assessment.
- Limited resources for assessment planning and implementation.
- Limited understanding or expertise in assessment.
- Benefits of assessment are not transparent or perceived to be substantial enough to outweigh costs.
- Don't want to overwhelm the students with completing several surveys and standardized tests.
- Faculty already “assess” in the form of giving grades.

# Overcoming Barriers

- Course embedded authentic assessment.
- Faculty workshops, retreats, release time.
- Scholarship of assessment and publications in disciplines.
- External and internal awards and recognition may outweigh some of perceived costs.
- Easy to access tools and templates (e.g., surveys, questionnaires, rubrics, integrative assignments) to help faculty gather evidence of learning outcomes.
- Improvement of student learning and educational attainment.
- Attract students to institution and retain them.

# Use Authentic, Embedded Assessment

- Goal of many undergraduate programs is for students to become lifelong learners by enhancing students' communication skills, critical thinking, and problem solving abilities.
- With authentic, embedded assessment tasks students are asked to demonstrate what they know and are able to do in meaningful ways.
- Authentic assessment tasks are often multidimensional and require higher levels of cognitive thinking such as problem solving and critical thinking.
- Embedded assessment means that “that opportunities to assess student progress and performance are integrated into the instructional materials and are virtually indistinguishable from the day-to-day classroom activities” (Wilson and Sloane, 2000).
- The end-of-course *Research Paper* in Biology.

# Creating a Culture of Evidence

- Embed assessment within courses.
- Create learning experiences that are designed to produce key learning outcomes identified for the department's or school's graduates.
- Learning results at the course level can flow upward to support program-level assessment and can provide evidence regarding the General Education learning outcomes.

# To Foster Collaboration

- Name interdisciplinary committees
- Read and discuss current literature on learning/assessment
- Attend conferences together
- Bring experts to campus
- Share good practices
- Work together on learning communities

Trudy W. Banta

# http://uc.iupui.edu/staff/assessment/index.asp

Welcome! University College - Windows Internet Explorer

http://uc.iupui.edu/staff/assessment/index.asp

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## University College

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**Faculty & Staff: Research & Assessment**

University College includes numerous support programs, grant initiatives, and academic courses. In order to facilitate on-going communication with the campus community and outside constituencies concerning the effectiveness of all programs in contributing to student success, University College developed a comprehensive assessment plan, which includes qualitative and quantitative methodologies for evaluating particular program components/operations. The three-phase approach model incorporated by University College includes an assessment of needs, processes, and outcomes.

Virtually all of University College's programs, including orientation, advising, student mentoring, learning communities, academic support for gateway courses, summer bridge, and honors are completed in cooperation with other undergraduate schools and units. Assessment results are used to continuously improve programs and to ensure unit mission alignment.



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