

Implementing and Assessing High Impact Practices

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Workshop Overview

- Describe what constitutes a High Impact Practice.
 - Describe the theories and pedagogies supporting High Impact Practices.
 - Examine the implementation of High Impact Initiatives on other colleges and universities.
 - Explore how to implement or expand High Impact Practices on your campus
 - Discuss research conducted and assessment approaches on High Impact Practices
 - Discuss and develop plans for assessing High Impact Practices on your campus.
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What Constitutes a High Impact Practice?

The Impetuses

- Pascarella and Terenzini—
 - Impact of college is largely determined by quality of effort and level of involvement in academic and non-academic activities (1991)
- AAC&U's—*College Learning for the New Global Century* (LEAP, 2007)
- Kuh (2008)—positive effects of participation in high-impact activities as measured by National Survey of Student Engagement (NSSE)

High Impact Practices

Through the LEAP initiative, AAC&U has published research on a set of widely tested teaching and learning strategies and programs that—when done well—have substantial educational benefits, especially for traditionally underserved students. The elements of good teaching and learning embedded in these practices can be applied in many settings, including in traditional classrooms as well as special programs, and in co-curricular settings.

- ★ First-Year Seminars and Experiences
- ★ Common Intellectual Experiences
- ★ Learning Communities
- ★ Writing-Intensive Courses
- ★ Collaborative Assignments and Projects
- ★ Undergraduate Research
- ★ Diversity/Global Learning
- ★ Service Learning, Community-Based Learning
- ★ Internships
- ★ Capstone Courses and Projects



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What Constitutes High Impact Practices?

- Intentional
 - Connections/integrations
 - Educationally purposeful activities (in and out of class)
 - Highly interactive
 - Deeper approaches to learning
 - Application
 - Analyzing/synthesizing
 - Reflection and analysis
-

HIP Benefits and Outcomes

High Impact practices are positively associated with:

- Persistence and GPAs
- Deep approaches to learning
- Higher rates of student-faculty interaction
- Increases in critical thinking and writing skills
- Greater appreciation for diversity
- Higher student engagement overall

High Impact Activities

5 minute colleague conversation:

- What should constitute a HIP?
- Which of the HIPs do you think makes the biggest contribution to your students' learning and success?
- Does your campus have a distinctive HIP?

What are the Theories and Pedagogies Supporting High Impact Practices?

Characteristics of HIPs that make them effective with students

Practices Increase Odds That Students Will:

1. Invest time and effort
2. Interact with faculty and peers about substantive matters
3. Experience diversity
4. Get more frequent feedback
5. Discover relevance of their learning through real-world applications
6. Experience a context of coherent, academically challenging curriculum

Six Conditions That Mark High Impact Educational Practices

**From: Using High Impact Activities to Maximize Student Gains ,Todd Chamberlain, Indiana University Center for Postsecondary Research
NSSE Webinar, June 23, 2009**

1. Time on Task

- **Activities demand that students devote considerable time and effort to purposeful tasks.**
 - **Most require daily decisions that deepen students' investment in the activity.**
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2. Faculty & Peer Interaction

- Nature of activities puts students in circumstances that essentially demand that they interact with faculty and peers about substantive matters over a period of time.

3. Interaction with Diversity

- Participation increases the likelihood that students will experience diversity through interaction with people who are different from themselves.
 - Students are challenged to develop new ways of thinking & responding to novel circumstances.
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4. Frequent Feedback

- May be faculty, internship supervisors, peers, others.
- Close proximity may provide opportunities for nearly continuous feedback.

5. Connections Between Learning Context & Real World Settings

- Opportunities for students to see how what they are learning works in on and off campus settings.

6. Occur in Context of Coherent, Academically Challenging Curriculum

- Infused with opportunities for active, collaborative learning.
 - Students better understand themselves in relation to others and the larger world.
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Implementation of High Impact Initiatives on other Colleges and Universities.

Please Review Handout For Examples and Links

IUPUI Students are Challenged to Complete 2 or More RISE Experiences

Research

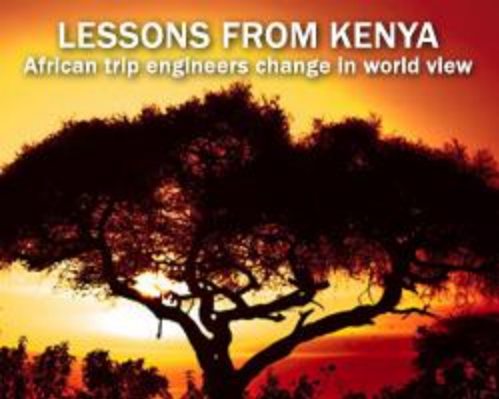


International Experience

Service Learning



Experiential Learning



- RISE packages a long tradition and commitment to experiential learning (EL) outside the classroom at IUPUI. Experiences correspond well to 'high impact practices' (Kuh, 2008)
- RISE "brands" IUPUI degrees as unique and in touch with "Employer Identified Skills" for new graduates (AAC &U, 2007)



Volunteer & Service Opportunities



RISE Video

- Students reflecting on experiences with RISE classes.



<http://vimeo.com/ucvideo/rise>

Framework for Assessment of RISE

- Registrar provides annual data regarding transcript designations
- Institutional Researchers help to assess outcomes related to student success
- Assessment of student learning (see handout)
 - Faculty assess students' level of competence aligned with IUPUI Principles of Undergraduate Learning
 - Prompts to guide student reflections are provided (students encouraged to respond in electronic portfolio)
- Currently developing fidelity checks for RISE courses



How to Implement or Expand High Impact Practices on Your Campus

5 minute colleague conversation:

- How might opportunities for ALL students to participate in high-impact practices be expanded?
 - What cross-campus collaborations exist or are needed for HIPs to be implemented or expanded?
 - What leadership is necessary to sustain efforts (e.g., is it necessary to have separate office or persons in charge of HIPs)?
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Recommendation: Examine HIPs on your Campus

1. How often are students experiencing high-impact practices?
2. Do all students have an equal likelihood of participating?
3. Are these practices done well?

Educationally Effective Institutions and High Impact Practices

- Weave experiences into courses, and require
- Introduce HIPs to students early – pre-school and orientation - and reinforce in advising
- Craft short term study abroad, “mini-HIPs”
- Emphasize HIPs relevant to the educational environment – i.e., Urban institutions emphasize internships
- Encourage pilots & support faculty development
- Bridge curriculum and co-curriculum

Recommendation: Make it possible for every student to participate in at least two high impact activities

One in First Year

- First Year Seminars
- Learning Communities
- Service Learning

One Later in Major

- Study abroad
- Student-faculty research
- Field placement or internship
- Capstone project

Who Participates in High-Impact Practices?

WHO DOES NOT!

- Student populations
 - Under-represented students
 - Transfer students
 - First-generation students
 - Veterans
 - Nontraditional/Adult learners
-

Considerations for Expanding Engagement in HIPs

- Historically underrepresented students benefit substantially from HIPs, yet not all take part
 - First-generation, racial-ethnic groups, underrepresented students, transfer students, returning adults
- Introduce HIPs early and often -- get experience on students' radar
- Explore students' assumptions about practices
 - (who participates, cost, demands, etc.) – debunk myths
- How might student affairs & academic affairs work together to make these experiences more widespread?

Potential Challenges

- Beneficial for all students, yet not all take part – differences by major, racial-ethnic groups, transfer status, first-generation
- How to ensure more widespread participation?
- Maximizing the “compensatory effects” (for underserved students)
- How to ensure underserved student participation?
- Cost
- Getting experience on students’ radar
- Institutional impediments
- What else??

Examples of Research and Assessment of High Impact Practices

Please Review Handout For Examples and Links

2007 LEAP Report

- “These active and engaged forms of learning have served only a fraction of students”
 - This is particularly significant when considering the demographics of such participation: “New research suggests that the benefits are especially significant for students who start farther behind. But often, these students are not the ones actually participating in the high-impact practices”
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J.E. Brownell and L.E. Swaner (2010)

- Examined: Learning Communities, First-Year Seminars, Service-Learning, Capstone, Undergraduate research
- Outcomes
 - Higher GPA/grades
 - Gains in writing, critical thinking, reading, integrative thinking, research skills,
 - Higher rate of civic engagement, gains in commitment to social justice, multicultural awareness
 - Increased retention and persistence
 - Ease of college transition
 - Higher rate of graduate school
- Are there conditions under which positive outcomes are more likely to be found, and, if so, what design and implementation strategies should practitioners employ to maximize the impact of these practices?



Within Undergraduate Research Programs

- Encourage faculty to provide mentoring, rather than just program oversight, and attend to the quality of the mentoring relationship (balancing challenge with support).
- Provide opportunities for “real-life” applications, whether through publication, presentations, or project implementation.
- Offer intentionally designed curricula that enhance students’ research skills and build those skills over time, including prior to intensive undergraduate research experiences.

Students Define High-Impact Learning (based on Student Focus Group Results)

- Collaborative group work
- Sharing ideas/Communicating knowledge
- Engaging with people from diverse backgrounds
- Connecting learning across disciplines
- Hands-on learning (internships, research projects)
- Community engagement (service learning)
- Real-world application
- Connect to lived experience of the student
- Asking questions
- Caring professor

“You learn it, you apply it, and then you explore it”

Assessing High Impact Practices

Pair and Share (5 minutes)

- How will you know which students are participating in HIPs?
 - How will you know whether your high impact practices are effective?
 - How might we assess student learning associated with these experiences?
 - How might you determine which HIPs are most effective for which groups of students?
 - How might you determine which HIPs are most effective for particular disciplines, and at which points in time?
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Assessing the Quality of High Impact Practices

- “To engage students at high levels, these practices must be done well”
- If high-impact practices have differing effects, we need to know the variability of impact not only across practices, but also between permutations of the same practice.

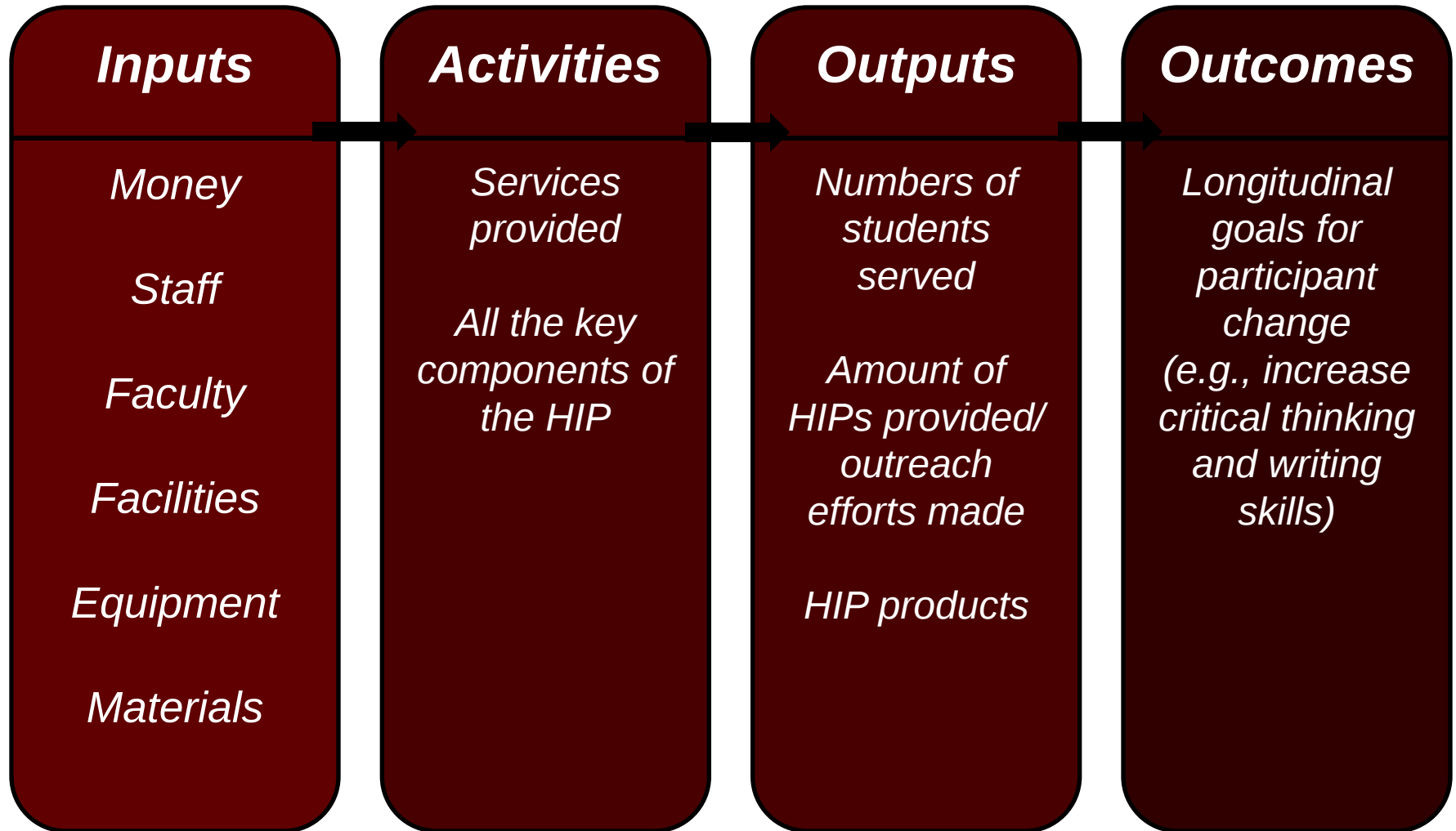
Developing Assessment Questions

1. Of interest to key audiences?
2. Reduce uncertainty or provide information not already available or known?
3. Answer to question yields important information? (not “nice to know”, but provide information that might inform action or address substantive issues concerning the program)
4. Is question merely passing interest of someone or does it focus on critical dimensions of continued interest? (Program theory can help focus on the critical)
5. Would the scope of or comprehensiveness of assessment be seriously limited if this question were dropped? (in some cases assessing every aspect of program less important than addressing a critical issue in depth)
6. Is it feasible to answer this question, given available financial and human resources, time, methods, and technology?

Setting Clear Goals and Student Learning Outcomes

- Understanding HIP Program Theoretical Underpinnings
- Developing HIP Logic or Impact Model
- Articulating HIP Goals
 - Specific
 - Measurable
 - Attainable
 - Results Focused
 - Aligned with Departmental and Institutional Missions and Visions

Logic Model Diagram



Program Theory Design

IF a certain set of resources is available, THEN the program can provide a certain set of activities or services to participants.



IF students participate in HIPs, THEN they will experience specific changes in their knowledge, attitudes or skills.



IF students improve their writing and critical thinking skills, THEN they will be more likely to persist, attain higher GPAs, and earn a degree.



IF enough students change their behavior and learn key concepts, THEN the program may have a broader impact on overall student population.

Sources of Assessment Data

- Inventories
 - Institutional Data
 - Course Level Data
 - Program Specific Data
 - Student and Faculty Surveys or Questionnaires
 - Focus Groups and Interviews
 - Direct Measures of Learning (reflection papers, exams, videos, student e-portfolios)
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High Impact Practices: Inventory

	Learning Community	First Year Seminars	Writing-Intensive Courses	Research w/ Faculty
On Our Campus				
Required for all				
% Students involved				
% First Generation				
% Transfer Students				
% African American				
% Latino Students				
% Asian American				
% other				
% Students 25 years of age or older				

Specific Outcomes to Consider

- Retention and Graduation Rates
 - Engagement Levels (e.g., NSSE)
 - Deep Learning
 - Critical Thinking
 - Integrative Learning
 - Self-Awareness and Reflection
 - Writing Ability
 - Career/Major Decision Making and Commitment
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Planning for Learning and Assessment (T.W. Banta)

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

Specifying Assessment Criteria and Standards

- What criteria will be used to judge the HIP and the standards for success?
- This usually comes after consensus is achieved on the final assessment questions.
- Defined or developed by:
 - Dialogue with stakeholders
 - Literature reviews
 - Key experts
 - Information from other programs, institutions, research, and evaluations.

Criteria and Standards

Criteria

- Factors that are considered important to judge something
- “the aspects, qualities or dimensions that distinguish a more meritorious or valuable evaluand [object being evaluated] from one that is less meritorious or valuable” (Davidson, 2005)
- Examples: Satisfaction with the program. Learning key concepts, application of concepts.

Standards

- Level of performance that expected at each criterion.
- Standards are subsets of the criteria.
- How good is “good enough.”
- Example: 75% of those students completing the HIP were able to apply content learned.

Absolute Standards

- Standards are absolute and not relative.
- They reflect an amount of knowledge expected of students at various levels.
- Typically multiple levels.
- If overlap with goals of HIP, could be used in assessment.
 - 75% of students will score 95% or above on critical thinking test after HIP program completion.
 - 95% of the students will be “Very Satisfied” or “Satisfied” at end of the HIP experience.
 - 80% of the students participating in HIP will earn GPAs 3.0 or above.

Relative Standards

- Some argue that *absolute standards* are unnecessary when the study will involve comparisons with other groups.
 - Students who participate in HIPs are retained at statistically higher rates compared to matched comparison group of students not participating.
 - Students who participate in HIPs earn higher scores on critical thinking rubric or test compared to matched comparison group of students not participating.

Mixed-Method Approaches

- Allows researchers to:
 - Triangulate findings from multiple sources.
 - Converge or corroborate findings.
 - Strengthen the internal validity of the studies.
 - Create elaborated understandings of complex constructs such as “engagement” or “integrative learning.”

Employ Multiple Methods

1) Direct

- Projects, papers, tests, observations

2) Indirect

- Questionnaires, interviews, focus groups
- Unobtrusive measures

Syllabi, transcripts

Direct Measures of Student Learning

- Require students to demonstrate their knowledge and skills.
 - They provide tangible, visible and self-explanatory evidence of what students have and have not learned as a result of a course, program, or activity (Suskie, 2004, 2009; Palomba and Banta, 1999).
 - Examples of direct student learning measures include objective tests, essays, presentations, classroom assignments, and portfolios.
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Assessment of Student Work: A Direct Measure of Learning

- “No assessment of knowledge, conceptual understanding, or thinking or performance skills should consist of indirect evidence alone” (Linda Suskie, 2009).

Use Authentic, Embedded Assessment

- Goal of many HIPs 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.
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Authentic Assessments

As part of its VALUE (Valid Assessment of Learning in Undergraduate Education) project, AAC&U worked with faculty and other academic and student affairs professionals in an exhaustive process of gathering, analyzing, synthesizing, and drafting institutional-level rubrics for 15 of the LEAP Essential Learning Outcomes.

Each VALUE rubric contains the most common and broadly shared criteria or core characteristics considered critical for judging the quality of student work in that outcome area.

The VALUE rubrics reflect faculty expectations for essential learning across the nation regardless of type of institution, mission, size or location.

For more on the VALUE project, please see <http://www.aacu.org/value/>



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Rubrics Must be Useful for Authentic Assessment of Learning



Ideally, assessment should inform our practice in courses, help us to evaluate curricula, and help us to establish that our students have attained competencies and mastered learning outcomes aligned with our degree programs.



Indirect Measures

- Capture students' perceptions of their knowledge and skills.
- They supplement direct measures of learning by providing information about how and why learning is occurring.
- Students' perceptions of the extent to which courses and assignments have enhanced their achievement of the stated learning outcomes may be obtained by using the following methods: self-assessment, peer-feedback, end-of-course evaluations, questionnaires, focus groups, or exit interviews.

Indirect Measures Example

- ***Themed Learning Community Questionnaire***
(IUPUI Themed Learning Community Program)
 - *Designed to collect feedback from students about their experiences in Themed Learning Communities.*
 - *Feedback used by faculty and instructional teams to improve courses and understand students' perceptions.*

Please indicate how much your experience in the Themed Learning Community helped you in the following areas:

1. Applied what I learned in one course to another course in my learning community.
 2. Understood connections between different disciplines and courses.
 3. Became more effective with communicating my thoughts in speaking.
 4. Became more effective with communicating my thoughts in writing.
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National Survey of Student Engagement (NSSE)

- Students self-report if they have participated in HIPs:
 - Learning Communities
 - Service Learning
 - Research with a Faculty Member
 - Study Abroad
 - Culminating Senior Experience
 - Career Practical Experience “practicum, internship, field experience, co-op experience, or clinical assignment.”

NSSE Deep Learning Items

Higher-Order Learning

During the current school year, how much has your coursework emphasized:

1. analyzing the basic elements of an idea, experience, or theory, such as examining a particular case or situation in depth and considering its components?
 2. synthesizing and organizing ideas, information, or experiences into new, more complex interpretations and relationships?
 3. making judgments about the value of information, arguments, or methods, such as examining how others gathered and interpreted data and assessing the soundness of their conclusions?
 4. applying theories or concepts to practical problems or in new situations?
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Direct Measures

Types	Advantages	Disadvantages
Authentic Course-Embedded: Exams/Tests, Quizzes, Papers, Oral Presentations, Group Work, Assignments .	- Require higher-order cognitive skills and problem solving. -Direct measures are most effective if they are also course-embedded which means the work done by the student is actually work that counts towards a grade. - Authentic and part of already existing faculty and student work (not add-on assessment). - Increasingly the mandate from accrediting agencies.	- Time consuming to develop standardized criteria for evaluating (e.g., rubrics). -Can be difficult to collect and aggregate for a large, public institution.
Electronic Portfolios	-Effective mechanism for collecting and storing student work (authentic direct measures). -Allows for students to reflect on learning experiences. -Allows multiple formats (e.g., paper, video, audio).	- Time consuming to develop standardized criteria for evaluating (e.g., rubrics). -Can be difficult to collect and aggregate for a large, public institution. -Technology can be difficult to develop, use, and navigate.
Locally Developed Exit Exams	- Match local goals. - Aligned with curriculum. - Faculty developed. - Development and scoring processes are informative.	-Difficult to develop valid instruments. -Time consuming to develop.
Commercial Standardized Tests (e.g.,	- Low time investment.	-Expensive.

Indirect Measures

Types	Advantages	Disadvantages
Grades	-Inexpensive. -Relatively easy to aggregate and collect - Available for almost all students. - Good indicator of academic success and progress toward degree. - Can be good proxy for student learning.	-Not standardized -Not ideal measure for determining students' actual knowledge, skills, and abilities. -Grades alone do not indicate if students are able to write well, think critically, problem solve, and apply values and ethics.
Surveys and/or Questionnaires	-Inexpensive -Critical to understand what individuals perceive, know, and think of programs and services -Acknowledges importance of student (or alumni), faculty, and staff opinions --Can provide information about how and why learning is occurring. - Statistical relationships, prediction control, description, hypothesis testing	-Not a direct measure of learning. -Difficult to develop valid instruments. -Low response rates for large sample, web-based surveys. -Do not involve higher order cognitive processes.
Interviews (e.g., senior exit interviews)	-Comprehensive, holistic, richly descriptive. -Provides in-depth information about students'	-May be intimidating, biasing results. -Time-consuming to conduct and analyze data. -May not be representative.

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.
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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 HIP effects on academic performance and persistence rates.
 - Describe retention rates and GPAs in defined populations over semesters and years.
 - Examine HIP 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, cumulative GPAs.
 - Administer student surveys to assess student needs, satisfaction with experiences, levels of engagement (intensity), HIP impacts, reasons for participating, etc.
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Limitation

- A noteworthy limitation of these investigations is that students self-select into HIPs 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 HIPs on academic outcomes 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.

Data Collection Methods

- Quantitative
 - Retention Rates
 - Standardized Test Scores
 - GPAs
 - Behavior checklists
 - Surveys
- Qualitative
 - Focus Groups
 - Interviews
 - Portfolios (can be quantitative if scoring rubrics developed)
 - Naturalistic observation
 - Document analyses
 - Case study

Final Thought

- If HIPs are done well...
- *They have the potential to focus student time and energy in ways that “channel student effort toward productive activities and deeper learning”*

(Kuh, 2007)

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