

# IMPLEMENTING AND ASSESSING HIGH IMPACT PRACTICES

---

The 2014 ASSESSMENT INSTITUTE  
October 19, 2014  
Indianapolis, IN

Michele J. Hansen, Ph.D., Executive Director Office of Student Data, Analysis, and Evaluation

Sarah S. Baker, Ed.D., Associate Dean of Academic Affairs

Kathy E. Johnson, Ph.D., Dean, Associate Vice Chancellor for Undergraduate Education  
Division of Undergraduate Education and University College, IUPUI

[WWW.IUPUI.EDU](http://WWW.IUPUI.EDU)

## Implementing and Assessing High Impact Practices

---

Michele J. Hansen, Ph.D., Executive Director Office of Student Data, Analysis, and Evaluation  
Sarah S. Baker, Ed.D., Associate Dean  
Kathy E. Johnson, Ph.D., Dean, Associate Vice Chancellor for Undergraduate Education  
Division of Undergraduate Education and University College, IUPUI

Assessment Institute  
October 19, 2014  
Indianapolis, IN

### 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.

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

LEAP



## 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

## 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



## 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.

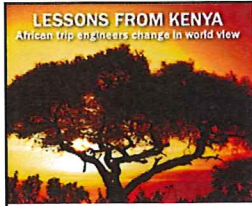
## **6. Occur in Context of Coherent, Academically Challenging Curriculum**

- Infused with opportunities for active, collaborative learning.
- Students better understand themselves in relation to others and the larger world.



## **Guiding Questions for Implementing HIPs to Facilitate Student Learning and Success**

1. How might conditions and activities be scaffolded to facilitate student learning?
2. What are useful pedagogical strategies to facilitate deep approaches to student learning such as reflection, analysis, and integration?
3. How might faculty be supported in this work?



- 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)

## RISE Video

- Students reflecting on experiences with RISE classes.



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



## Guiding Questions for Implementing and Sustaining HIPs on Your Campus

1. How might opportunities for ALL students to participate in high-impact practices be expanded?
2. Who might need to be engaged in efforts to institutionalize high impact practices on your campus?
  - a. Why are people in these roles so important?
3. What processes or structures could facilitate the work (e.g., retreats, summer institutes)?
4. What cross-culture collaborations exist or are needed for HIPs to be implemented or expanded?
5. What leadership is necessary to sustain efforts?
  - a. Is it necessary to have a separate office or persons in charge of HIPs?

## 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



## 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?

High Impact Practices: Promoting Engagement and Student & Academic Affairs Collaboration, ACPA Annual Conference, March 27, 2011  
Jillian Kinzie, Associate Director NSSE Institute for Effective Educational Practice

## 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??

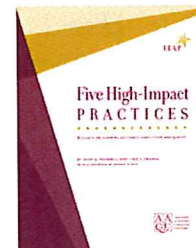
High Impact Practices: Promoting Engagement and Student & Academic Affairs Collaboration, ACPA Annual Conference, March 27, 2011  
Jillian Kinzie, Associate Director NSSE Institute for Effective Educational Practice

## 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”

## 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 Service Learning Programs

- Create opportunities for structured reflection.
- Ensure that faculty connect classroom material with the service experience.
- Require enough service hours to make the experience significant.
- Focus on the quality of the service, ensuring that students have direct contact with clients.
- Oversee activities at the service site.

*J.E. Brownell and L.E. Swaner (2010)*

## 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.

*J.E. Brownell and L.E. Swaner (2010)*

## What Is The Cumulative Impact Of Participation In Hips Experiences On Learning Outcomes?

- Students who participated in multiple high impact practices (5-6) had higher gains in all areas compared to students who did not participate in any or 1-2 or 3-5 HIPS.
- When students in the same underserved group participate in a HIP, scores on learning outcomes are significantly higher than when they do not.
- Students who participated in Service Learning had highest gains.

<http://www.aacu.org/meetings/annualmeeting/AM13/documents/McNairFinleyPPT.pdf>

## 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"

<http://www.aacu.org/meetings/annualmeeting/AM13/documents/McNairFinleyPPT.pdf>



## The Conditional Nature of HIPs on Student Learning Outcomes: Some Findings

- Students in lowest 3<sup>rd</sup> of ACT scores benefitted the most from cooperative learning experiences
- There was a negative relationship between experiencing cooperative learning environments and positive attitude toward literacy for students in the top two thirds of ACT distribution.
- High Impact/Good Practices are most strongly related to learning outcomes for students who enter post-secondary with the greatest opportunity for growth.
- Interactional diversity had net positive influences with all three outcomes, and was the only high impact/good practice dimension to have a significant positive link to critical thinking skills.

Seifert, T., Gillig, B., Hanson, J., Pascarella, E., & Blatch, C. (2014). The conditional nature of high impact/good practices on student learning outcomes. *Journal of Higher Education*, 85(4), 531-564.

## The Conditional Nature of HIPs on Student Learning Outcomes: Implications

- *"Failing to test for conditional effects runs the risk masking the relationship between student background characteristics and how students experience and engage in college, thus misestimating the relationship between high impact/good practices and measures of student learning."*
- As institutions allocate resources to improve learning experiences for all students, it is essential to make decisions based on the extent to which certain practices may benefit some students more than others.



Seifert, T., Gillig, B., Hanson, J., Pascarella, E., & Blatch, C. (2014). The conditional nature of high impact/good practices on student learning outcomes. *Journal of Higher Education*, 85(4), 531-564.

## What to do?

- Consider small pilots and using random assignment.
- Design studies with matched comparison groups.
- Communicate limitations of assessment and provide details so replication possible.
- Consider Context – How do you define success for YOUR students on YOUR campus?
- Set standards for excellence or quality.
  - Example: 85% of students participating in service learning intervention will score at least 4 out of 5 on critical thinking test or rubric.

## Assessing High Impact Practices

## Stakeholders

- Students
- Faculty
- Staff
- Advisors
- Peer Mentors
- Students
- Program Administrators
- Upper-Level Administrators
- Community Members
- Who else?



53

## Some Purposes of Assessment

- Determine if HIPs are attaining intended goals.
- Determine if students learn content.
- Enable students to assess own strengths.
- Allow more opportunities to improve student learning and HIP programs.
- Help institution demonstrate accountability or determine worth and value of HIP programs.
- Make data-based decisions.

54

## Framing Questions for Assessment

- 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?



## Developing Assessment Questions

1. Of interest to key audiences?
2. Answer to question yields important information? (not "nice to know", but provide information that might inform action or address substantive issues concerning the program)
3. 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)
4. 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)
5. Is it feasible to answer this question, given available financial and human resources, time, methods, and technology?





## 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)

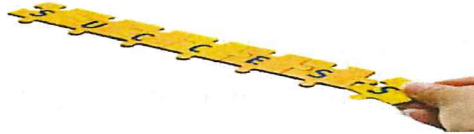
Characteristic	Definition
a. Valid	i. The data are reproducible. Repeated assessment yields the same data.
b. Reliable	ii. The data answers important questions, and is not generated simply because it is easy to measure.
c. Authentic	iii. The data contributes to improving teaching and learning.
d. Relevant	iv. The assessment simulates real-life circumstances.
e. Effective	v. The data accurately represents what you are trying to measure.

## 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				

[http://cpr.iub.edu/uploads/AAC&HIPS\\_2012%20high%20impact%20practices%20worksheet%20Kinzie.pdf](http://cpr.iub.edu/uploads/AAC&HIPS_2012%20high%20impact%20practices%20worksheet%20Kinzie.pdf)

## 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.

## Criterion-Referenced and Norm-Referenced Assessment

### Norm-Referenced

- Compares students with others.
- Does not say anything about the ideal or intended levels of students' performances, only about which students are better than others.
- Example: Students participating in First Year Seminar have a significantly higher retention one-year retention rate compared to nonparticipants.

### Criterion-Referenced

- Students' performances are judged against pre-set criteria as specified in the intended learning outcomes.
- Informs instructors how well the intended learning outcomes have been achieved by students.
- Explicit criteria are essential which provide clear learning goals to students.
- Example: 85% of students perform at "effective" or "very effective" levels on scoring rubric for Critical Thinking.

## 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.

## 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/>*

LEAP



Association  
of American  
Colleges and  
Universities

## History of the VALUE rubrics

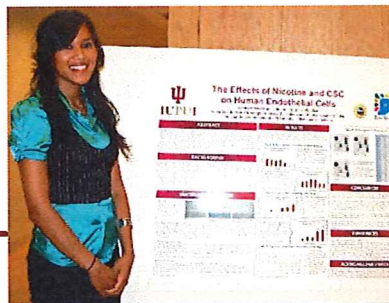
- How were they developed?
- How are they used?
- Can they be modified?

- To Download: [www.aacu/value](http://www.aacu/value)



## Advantages of the VALUE rubrics

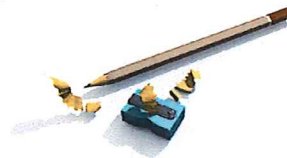
- Connects assessment with students' own work from high-impact learning experiences
- Illustrate what students DO with their knowledge
- Faculty and other experts have spent a great deal of time establishing benchmarks, milestones, and capstone-level performance
- Faculty can see what worked, and what didn't work – informing better assignment design





## Calibration Procedure

- Close reading of the rubric to identify potential ambiguities
  - Discussion results in agreement on interpretation of language
- Practice scoring
  - Read student work and score
    - It is critical that each participant supports decision to assign score on specific reference to work sample



- Collective review of scores
  - Scores reviewed to determine level of consensus
  - Facilitator leads line-by-line discussion of scoring, asking for evidence to support each score used
  - Following discussion, participants invited to change scores

## 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.

## 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.



## 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.

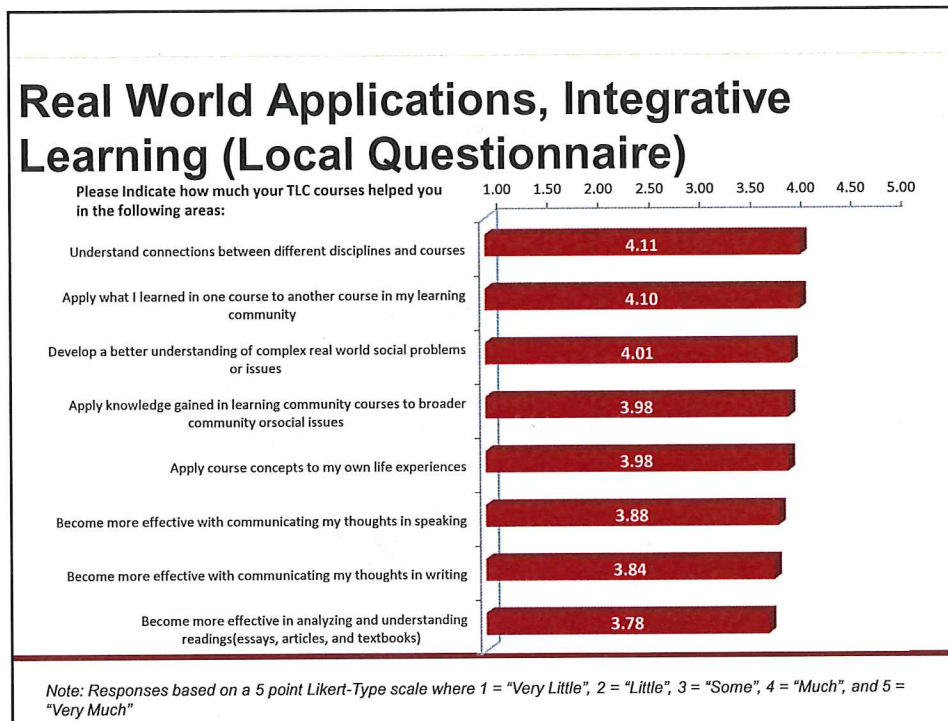
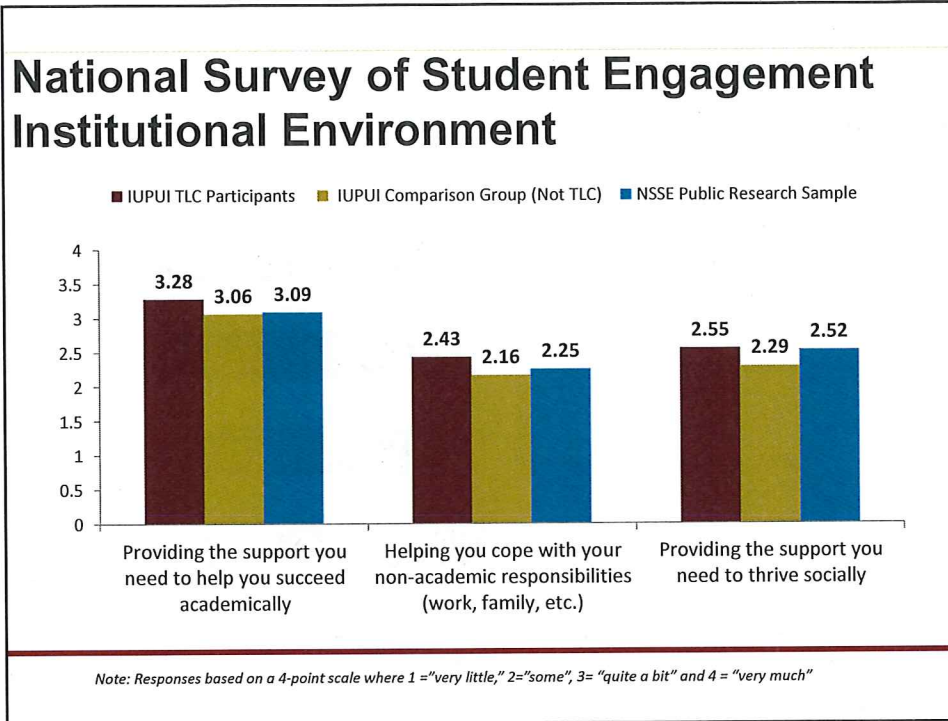
## Concrete Examples of Assessing HIPs

---

### ***Reminder - Markers of HIPs Done Well***

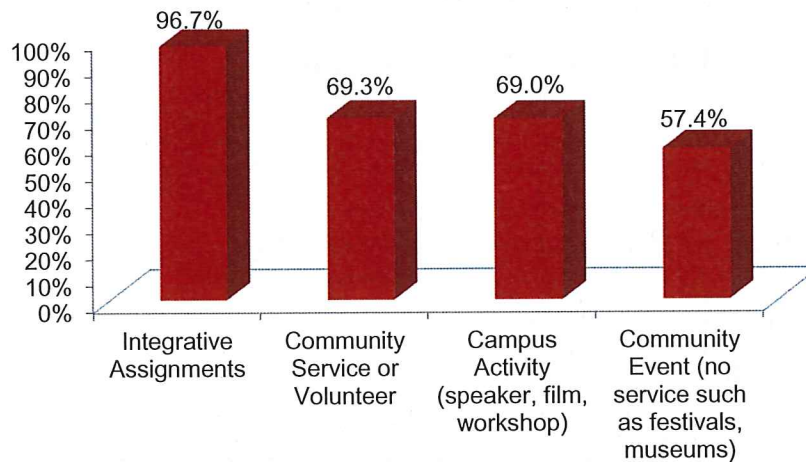
- Expectations set at appropriately high levels
  - Significant investment of time and effort
  - Interactions with faculty and peers
  - Experiences with diversity
  - Frequent and constructive feedback
  - Periodic and structured opportunities for reflection
  - Relevance through real-world applications
  - Public demonstration of competence
- (Finley & Kuh, in press; Kuh & O'Donnell, 2013; Kuh, 2008)





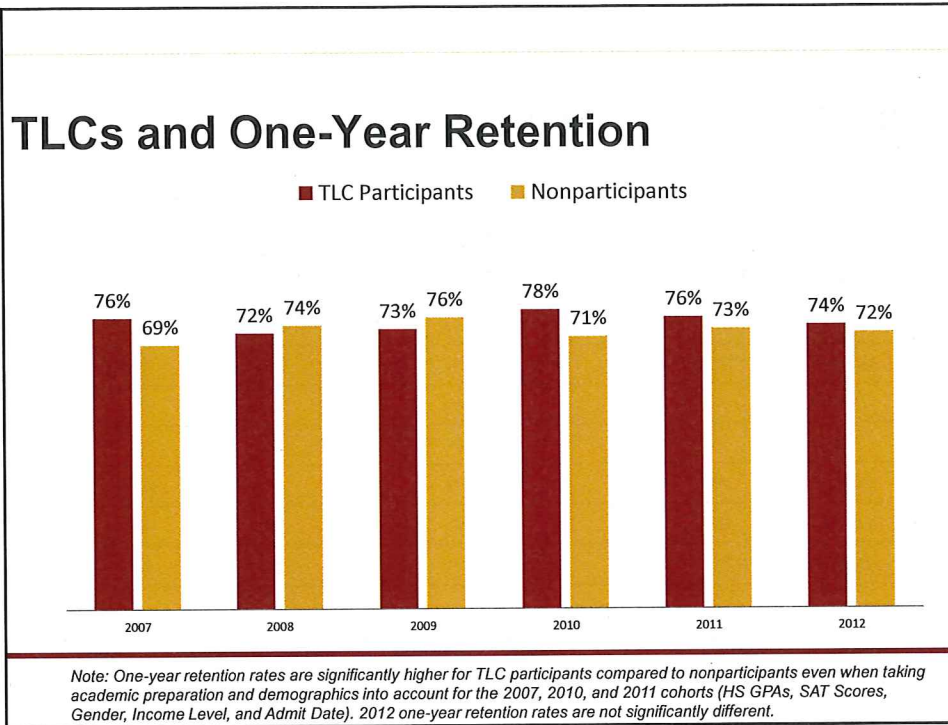
## Engaging Experiences

% TLC Students Participating in...



## TLC End-of-Course Questionnaire

- **Sense of Belonging and Community  $\alpha = .88$** 
  - “Form one or more friendships that I will maintain after the Semester”
  - “Feel a sense of belonging at IUPUI”
- **Integrative Thinking and Learning  $\alpha = .91$** 
  - “Understood connections between different disciplines and courses.”
  - “Develop a better understanding of complex real world social problems and issues.”
- **Peer Interactions  $\alpha = .73$** 
  - “Discuss ideas from the TLC courses with peers outside of class”
  - “Exchange ideas with a student whose views were different from your own”
- **Communication Skills  $\alpha = .81$** 
  - “Became more effective with communicating my thoughts in writing.”
  - “Became more effective with communicating my thought in speaking.”
- **Faculty Interactions (only 1 item)**
  - “Discussed course topics, ideas, or concepts with a faculty member outside of class”



### 2011 TLCs and One-Year Retention

	Variable	B	SE	Wald Statistic	95% CI	p	Odds Ratio
Step 1	H.S GPA	1.15	.13	77.37	2.44, 4.06	.000	3.15
	SAT Score	.00	.00	2.21	1.00, 1.00	.137	1.00
	First Generation	-.10	.10	1.03	.74, 1.10	.310	.90
	Female	-.01	.10	.01	.81, 1.21	.932	.99
	Low Income	-.18	.10	3.34	.68, 1.01	.068	.83
Step 2	H.S GPA	1.17	.13	79.33	2.48, 4.14	.000	3.21
	SAT Score	.00	.00	2.51	1.00, 1.00	.113	1.00
	First Generation	-.11	.10	1.30	.73, 1.09	.255	.89
	Female	-.02	.10	.04	.80, 1.20	.835	.98
	Low Income	-.18	.10	3.11	.69, 1.02	.078	.84
	<b>TLC</b>		<b>.28</b>	<b>.11</b>	<b>7.16</b>	<b>1.08, 1.63</b>	<b>.007</b>

TLC participants have 33% better odds of being retained compared to non-participants (based on the odds ratio).

## Deep Learning

- The dependent variable deep learning was comprised of three different scales. Reliability analysis was conducted for higher-order learning ( $\alpha=.83$ ), integrative learning ( $\alpha=.73$ ), and reflective learning ( $\alpha=.83$ ).
- The data file was then split into freshman and senior students so the analysis could be conducted on these two populations separately.

*Tom Hahn, Research Associate, Center for Service and Learning, Indiana University-Purdue University Indianapolis (IUPUI)*

## Higher Order Learning Questions ( $\alpha=.83$ )

During the current school year, how much has your coursework emphasized the following mental activities?

*Never, Sometimes, Often, Very Often*

Applying theories or concepts to practical problems or in new situations

Analyzing the basic elements of an idea, experience, or theory, such as examining a particular case or situation in depth and considering its components

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

Synthesizing and organizing ideas, information, or experiences into new, more complex interpretations and relationships

*Tom Hahn, Research Associate, Center for Service and Learning, Indiana University-Purdue University Indianapolis (IUPUI)*



## Findings

- An independent-samples t-test evaluated differences in reported deep learning skills between students who participated in one or more service learning courses and those students who did not participate in service learning courses.
- Deep learning skills of higher-order learning, integrative learning, and reflective learning were all higher for both seniors and freshman who participated in service learning course(s).

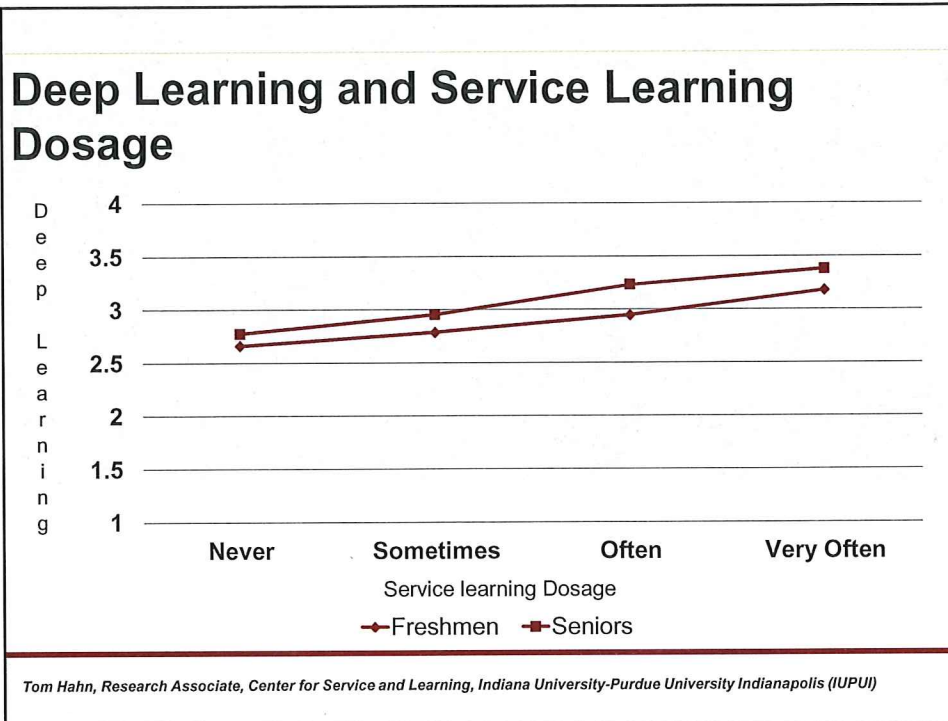
*Tom Hahn, Research Associate, Center for Service and Learning, Indiana University-Purdue University Indianapolis (IUPUI)*

## IUPUI Freshman

Construct	# of Items	Mean (Overall) N=524	Mean (Service Learning) N=305, 58%	Mean (No Service Learning) N=219, 42%	Mean Difference (SL and No SL)	Reliability	Effect Size	Sig.
Higher Order Learning	4	3.05	3.09	2.99	.10	.83	.08	.085
Integrative Learning	5	2.62	2.75	2.43	.32	.73	.27	.000*
Reflective Learning	3	2.72	2.82	2.58	.24	.82	.16	.000*

\*p<.05, 2-tailed significance

*Tom Hahn, Research Associate, Center for Service and Learning, Indiana University-Purdue University Indianapolis (IUPUI)*



### Implications

- Results contribute evidence of student learning at the institution level
- Findings are consistent with prior research on participation in service learning and improved student outcome measures (Astin et. al., 2000)
- Provide a rationale for institutions to support faculty who engage with the community partners to develop service learning courses

Tom Hahn, Research Associate, Center for Service and Learning, Indiana University-Purdue University Indianapolis (IUPUI)

## HIP Program Fidelity

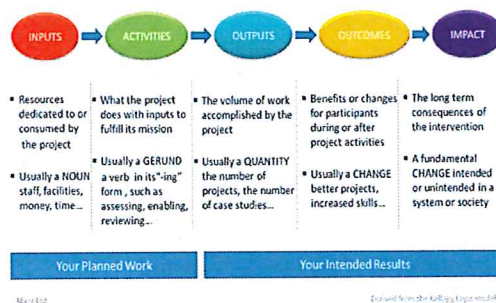
- Fidelity is defined by Webster as “the quality or state of being faithful, the accuracy in details, exactness.”
- HIP program fidelity assessment offers another level of detail about the program as implemented by examining the degree to which interventions are implemented as theoretically planned.
  - Poor Fidelity Examples
    - LC implemented with no integrative learning assignments.
    - SL implemented with no structured reflection.
- It is not possible to test the effectiveness of an intervention if the intervention failed to be implemented as planned (Scott & Sechrest, 1989).

## A logic model is...

- A depiction of a program that shows what the program will do and what it will accomplish.
- A series of “if-then” relationships that, if implemented as intended, lead to the desired outcomes
- The core of program planning and assessment.
- A clear logic model illustrates the purpose and content of the program and makes it easier to develop meaningful assessment questions.

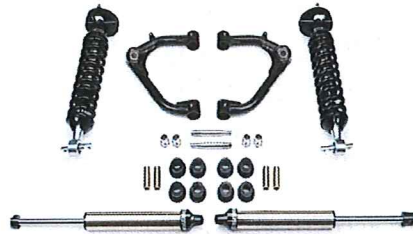
What are Inputs, Outputs, Outcomes and Impact?

The Logic Model Approach



## Logic model may also be called...

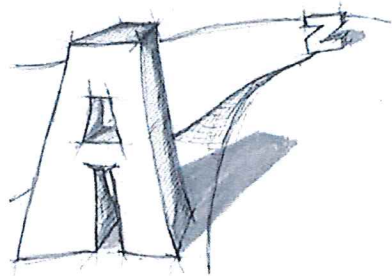
- Theory of change
- Program action
- Model of change
- Conceptual map
- Outcome map
- Program logic



Program Development and Evaluation University of Wisconsin - Extension

## Why bother to do a logic model?

- Focus on and be accountable for what matters – OUTCOMES
- Provides common language
- Increases understanding about program
- Makes assumptions EXPLICIT
- Supports continuous improvement
- Promotes communications
- Guides and helps focus work
- Leads to improved planning and management
- Increases intentionality and purpose
- Helps to identify important variables to measure; use evaluation resources wisely



<http://www.uwex.edu/ces/pdande/evaluation/evallogicmodel.html>

Program Development and Evaluation University of Wisconsin - Extension



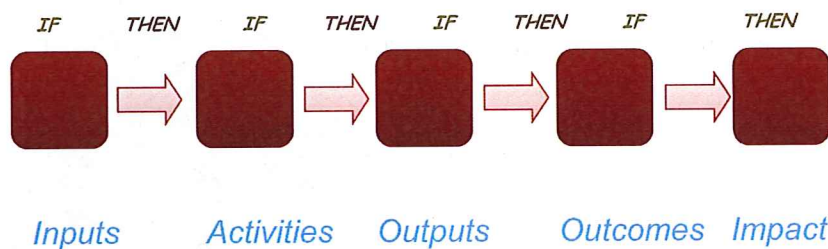
## Logic Model Components

- **Inputs** – Human, financial, organizational, and community resources a program has available to do its work
- **Activities** – The processes, tools, events, technology, and actions that are an intentional part of the program implementation
- **Outputs** – The direct products of program activities; may include types, levels, and targets of services to be delivered by the program
- **Outcomes** – Specific changes in program participants' behavior, knowledge, skills, status, and level of functioning.
- **Impact** – The fundamental intended or unintended change occurring in organizations, communities, or systems as a result of program activities

Program Development and Evaluation University of Wisconsin - Extension

## Series of If-Then Relationships

*Underlying a logic model is a series of "if-then" relationships that express the program's theory of change*

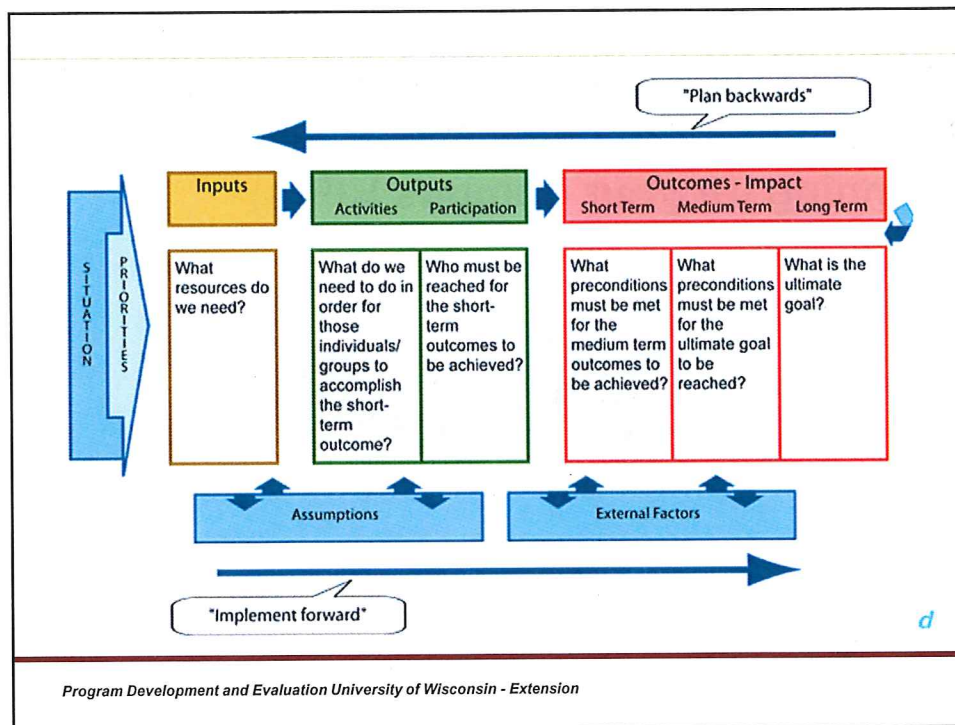


## Logic Model Template

- 1. INPUTS: resources, contributions, investments that go into the program
- 2. OUTPUTS: activities, services, events and products that reach people who participate or who are targeted
- 3. OUTCOMES: results or changes for individuals, groups, communities, organizations, communities, or systems
- 4. Assumptions: the beliefs we have about the program, the people involved, and the context and the way we think the program will work
- 5. External Factors: the environment in which the program exists includes a variety of external factors that interact with and influence the program action.

<http://www.uwex.edu/ces/pdande/evaluation/evallogicmodel.html>

Program Development and Evaluation University of Wisconsin - Extension



## Checklist for Effective Assessment Plans

- Includes comprehensive assessment activities to determine if each HIP 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.

## Contact Information

- Sarah S. Baker: [ssbaker2@iupui.edu](mailto:ssbaker2@iupui.edu)
- Michele J. Hansen: [mjhansen@iupui.edu](mailto:mjhansen@iupui.edu)
- Kathy E. Johnson: [kjohnso@iupui.edu](mailto:kjohnso@iupui.edu)

## REFERENCES

- Association of American Colleges and Universities. 2007. College learning for the new global century: A report from the National Leadership Council for Liberal Education and America's Promise. Washington, DC: Association of American Colleges and Universities.
- Association of American Colleges and Universities. 2010. Five high-impact practices: Research on learning outcomes, completion, and quality. Washington, DC: Association of American Colleges and Universities.
- Association of American Colleges and Universities 2011. The LEAP vision for learning: Outcomes, practices, impact, and employers' views. Washington, D.C.: Association of American Colleges and Universities
- Astin, A. W., L.J. Vogelgesang, E.K. Ikeda, and J.A. Yee, 2000. *How service learning affects students*. Los Angeles, CA: Higher Education Research Institute.
- Astin, Alexander W. 1993. *What matters in college? Four critical years revisited*. San Francisco, CA: Jossey-Bass.
- Barefoot, B. O., C. L. Warnock, M. P. Dickinson, S. E. Richardson, and M. R. Roberts, eds. 1998. *Exploring the evidence: Reporting outcomes of first-year seminars, Volume II*. Columbia, SC: National Resource Center for the First-Year Experience and Students in Transition.
- Barr, Robert. B, and Tagg, John. 1995. "From teaching to learning – a new paradigm for undergraduate education." *Change Magazine* 27 (6): 12-25.
- Baxter Magolda, M. B. 1992. *Knowing and reasoning in college: Gender-related patterns in students' intellectual development*. San Francisco: Jossey-Bass.
- Blackhurst, A. E., L. D. Akey, and A. J. Bobilya. 2003. A qualitative investigation of student outcomes in a residential learning community. *Journal of the First-Year Experience* 15 (2): 35–59.
- Boyer Commission on Educating Undergraduates in the Research University. 1998. *Reinventing undergraduate education: A blueprint for America's research universities*. Stanford, CA: Carnegie Foundation for the Advancement of Teaching.
- Boyle-Baise, M., and J. Langford. 2004. There are children here: Service-learning for social justice. *Equity and Excellence in Education* 37 (1): 55-66.
- Bringle, Robert. G., Hatcher, Julie. A. and Holland, Barbara. 2007. "Conceptualizing civic engagement: Orchestrating change at a metropolitan university." *Metropolitan Universities Journal* 18 (3): 57-74.
- Brownell, J. E., and L. E. Swaner. 2009. Outcomes of high-impact educational practices: A literature review. *Diversity & Democracy* 12 (2): 4-6.
- Chickering, Arthur W. & Gamson, Zelda. F. (1987). Seven principles for good practice in undergraduate education. *AAHE Bulletin*, 39, 3-7.
- Clayton-Pedersen, A. R. 2009. Rethinking educational practices to make excellence inclusive. *Diversity & Democracy* 12 (2): 1-3.
- Crews, R. J. 2002. *Higher education service-learning sourcebook*. Westport, CT: Oryx Press.
- Elgren, T., and N. Hensel. 2006. Undergraduate research experiences: Synergies between scholarship and teaching. *Peer Review* 8 (1): 4-7.
- Engberg, M. E., and M. J. Mayhew. 2007. The influence of first-year "success" courses on student learning and democratic outcomes. *Journal of College Student Development* 48 (3): 241-258
- Engstrom, C.M., and V. Tinto. 2008a. Access without support is not opportunity. *Change* 40 (1) 46-50.



- Kuh, G.D. and K. O'Donnell. 2013. *Ensuring quality and taking high-impact practices to scale*. Washington, DC: Association of American Colleges and Universities.
- McCormick, A.C, J.V. Moore III, and G.D. Kuh, 2010. Working in college: Its relationship to student engagement and educational outcomes. In *Understanding the working college student: Implications for policy, administrators, academic affairs, and institutional support*, ed. L.W. Perna, Sterling, VA: Stylus.
- McNair, T. B., S. Albertine, 2012. Seeking high-quality, high-impact learning: The imperative of faculty development and curricular intentionality. Washington, D.C.: *Association of American Colleges and Universities*.
- Pascarella, Earnest and Terenzini, Patrick. 1991. *How college affects students: Findings and insights from twenty years of research*. San Francisco: Jossey-Bass.
- Pascarella, E.T., T.A. Seifert, and C.E.Blaich. 2010. How effective are the NSSE benchmarks in predicting important educational outcomes? *Change* 42 (1): 16-22.
- Pike, Gary R., Schroeder, Charles C, and Berry, Thomas R. 1997. "Enhancing the educational impact of residence halls: The relationship between residential learning communities and first-year college experiences and persistence." *Journal of College Student Development* 38: 609-621.
- Pike, Gary R., and Kuh, George D. 2005. A typology of student engagement for American colleges and universities. *Research in Higher Education*, 46(2): 185-209.
- Russell, S.H., M.P. Hancock, and J. McCullough, 2007. Benefits of undergraduate research experiences. *Science* 316 (5824): 548-49.
- Seifert, T.A., B. Gillig, J.M. Hanson, E.T. Pascarella, C. F. Blaich. 2014. The conditional nature of high impact/good practices on student learning outcomes. *Journal of Higher Education*, 85(4): 531-564.
- Swaner, L. and J. Brownell. 2008. *Outcomes of high-impact practices for underserved students: A review of the Literature*. Washington, DC: Association of American Colleges and Universities.
- Wawrzynski, M. 2014. Promoting high-impact student learning: Connecting key components of the collegiate experience. *New Directions for Higher Education*. 165: 51-62.
- Wellman, J. and R. Brusi. 2013. *Investing in success: cost-effective strategies to increase student success*. Washington, DC: Association of American Colleges and Universities.
- Zhao, C., and G.D. Kuh. 2004. Adding value: Learning communities and student engagement. *Research in Higher Education*. 45 (2): 115-38.
- Zlotkowski, E., . R.G. Bringle, R. Game and E.A. Malloy, . R.G. Bringle, R. Games, and E.A. Malloy, 1999. Pedagogy and engagement. In *Colleges and universities as citizens*, ed . 96-120. Needham Heights, MA: Allyn and Bacon.