


A Quasi-Experimental Multilevel Study Examining High-Impact Practices and Deep Approaches to Learning

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Framework

Bigg's 3P Model of Teaching & Learning

- Presage: student's who participate in high-impact practices
- Processes: high-impact practices as levers for learning
- Product: deep approaches to student learning consisting of reflective & integrative learning as well as higher-order learning

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Literature

- High-Impact Practices & Student Participation
 - Inequities exist among marginalized student populations who participate
 - 2+ HIPs completed by the end of a student's collegiate experience
- Variation in Outcomes achieved by HIPs
 - Imbalance of who benefits from HIPs, and imbalance of who scholars study
- Deep Approaches to Student Learning
 - Increased student gains regarding critical thinking, problem solving, written and verbal skills

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Research Questions

1. Who are the students that participate in two or more high-impact practices?
2. How does participation in high-impact practices relate to deep approaches to learning when controlling for institution type and comparing to like-peers?
3. What differences exist among students' deep approaches to learning when accounting for participation in high-impact practices?

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Data

- National Survey of Student Engagement (NSSE) (2017-2019)- annual survey where students answer items about the time and effort they put toward collegiate activities that research has shown to be related learning and development
- 4-year institutions (n=1,100~) & college seniors (n= 347,000~)

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Measures: Dependent Variables

- RI: Reflective & Integrative Learning**
During the current school year, about how often have you done the following? *Very often, Often, Sometimes, Never*
- Combined ideas from different courses when completing assignments
 - Connected your learning to societal problems or issues
 - Included diverse perspectives (political, religious, racial/ethnic, gender, etc.) in course discussions or assignments
 - Examined the strengths and weaknesses of your own views on a topic or issue
 - Tried to better understand someone else's views by imagining how an issue looks from their perspective
 - Learned something that changed the way you understand an issue or concept
 - Connected ideas from your courses to your prior experiences and knowledge
- HO: Higher Order Learning**
During the current school year, how much has your coursework emphasized the following?
Very much, Quite a bit, Some, Very little
- Applying facts, theories, or methods to practical problems or new situations
 - Analyzing an idea, experience, or line of reasoning in depth by examining its parts
 - Evaluating a point of view, decision, or information source
 - Forming a new idea or understanding from various pieces of information

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Measures: Independent Variables

Dummy Coded

- High-Impact Practices
- First-generation status
- Degree aspirations

Effect Coded

- Race/ethnicity
- Gender Identity
- Sexual Orientation
- Ability Status

Continuous Engagement Indicators

- Student Faculty Interactions
- Quality of Interactions
- Supportive Institutional Environments
- Discussions with Diverse others
- Collaborative Learning

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Analyses

- Descriptive statistics
- Propensity Score Matching (PSM)
 - Logistic model using cut-point 0-1 HIP v. 2+ HIPs
 - Nearest neighbor matching (<.00001)
 - All independent variables used to match
- Hierarchical Linear Model (HLM)
 - Full maximum likelihood
 - Level 2 accounting for ~3% of the variance

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RQ1: Who are the students that participate in two or more high-impact practices?

0-1 HIPs	2+ HIPs
<ul style="list-style-type: none"> • Students of color • Men, Another gender identity • Straight, Another sexual orientation • Students with a mobility impairment, a disability not listed, more than one disability • Physical sciences, social sciences, business, undecided, other majors 	<ul style="list-style-type: none"> • White • Women • Bisexual, queer, questioning • Students with a mental health disorder, no disability • Biological sciences, comm., media, P.R., education, engineering, health professions

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RQ2: How does participation in high-impact practices relate to deep approaches to learning when controlling for institution type and comparing to like-peers?

High-Impact Practice	Reflective & Integrative Learning	Higher-Order Learning
Study Abroad	+++	---
Capstone	+++	+++
Learning Community	+++	+++
Internship	---	---
Service Learning	+++	+++
UG Research	-	

+/- <.05, +/+<.01, +++/---<.001

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RQ3: What differences exist among students' deep approaches to learning when accounting for participation in high-impact practices?

Reflective & Integrative	Higher-Order Learning
Black or African American+++ Multiracial+++ Asian--- White--- Women+++ Straight--- Bisexual+++ Queer+++ Mental health disorder +++ Multiple disabilities +++ No disability --- First-generation +++ Graduate degree aspiration +++	Asian + Hispanic or Latino +++ Native Hawaiian or Other Pacific Islander + White --- Other -- Multiracial --- Women+++ Queer +++ Straight --- Mental Health Disorder + No disability --- First-generation +++ Graduate degree aspiration +++

+/- <.05, +/+<.01, +++/---<.001

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Limitations

- Correlational data & generalizability
- Spectrum of identities & ability to disaggregate
- Self-reported data & chance of multiple submissions

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Discussion & Implications

- Students of color are participating in HIPs proportionally less overall
- HIPs largely promote deep approaches to learning with some exceptions
- Students use deep approaches differently (e.g., White students tended to use them less)
- Intentionally design HIPs to meet differing students' learning needs
- Remove barriers for participation by providing students resources (financial, personnel, etc.)
- What are other highly-impactful practices & which make sense for specific institutions?

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Final thoughts and questions?

Thanks for joining us!

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