Evaluating the VIP Consortium

Presentation at the VIP Consortium Meeting

May 14&15, 2015

Atlanta, GA
Evaluating VIP: Combination of Efforts

- Individual VIP Site Evaluation Efforts
- Equal Measure: Helmsley Portfolio Evaluation
- VIP Consortium Evaluation Team
VIP Consortium Evaluation Team

• Georgia Tech, School of Public Policy
  • Julia Melkers
  • Gordon Kingsley

• University of Michigan
  • Lisa Lattuca, School of Education
  • Shanna Daly, College of Engineering

• Boise State, Institute for STEM and Diversity Initiatives
  • Donna Llewellyn
VIP Consortium Evaluation Team: Our Charge

- Develop a foundational evaluation framework for the VIP Consortium that is adaptable and scalable
- Develop evidence-base of VIP Consortium impacts
- Liaison with Equal Measures in developing evaluation scope, shared learning
- Provide feedback to VIP Consortium and site leadership, and Helmsley staff

Formative
- Areas of concern
- Opportunities
- Recommendations

Summative
- Early developments
- Outcomes and impacts
- Evidence
Learning from Evaluating VIP At GATech

1. Regular surveys of students in VIP
   a. Student VIP experience, self-reported skill development, and feedback
   b. Social capital/knowledge networks
   c. VIP team dynamics and capacity
   c. Human capital, career goals and support

2. Institutional data analysis
   a. VIP enrollment and persistence patterns
      • Variation across terms and demographics
   b. Performance and advancement
VIP Consortium Team: A Tiered Evaluation Approach

**Years 1-3**
- Coordinated collection of student survey data across three (+?) sites
- Faculty Surveys
- Institutional Analysis (Case studies)
- Other institutional data
- Other Schools?

**Years 4-6**
- Coordinated Student Survey (all sites)
VIP Evaluation Components

VIP Consortium Outcomes

Students
Faculty
Teams
Institutions
Leadership
Sustainability
VIP Development and Outcomes: A Continuum

- Start-Up & Implementation
- Early Outcomes
- Later Outcomes

*Increasing in magnitude*
Across Sites:
Understanding VIP Institutional Development

How well is VIP working, and to what end?

Sites:
• What institutional factors matter for the success of VIP?
  • Barriers? Facilitators? Resources and support? Institutional effects?

Consortium:
• How is the VIP Consortium developing on each campus, as well as across campuses?
• What is the added value of the Consortium for institutions, faculty, and students?

Administrators interviews  VIP Faculty interviews
Observation  Document Review

How well is VIP working, and to what end?
### Comparison of Institutional Questions in the VIP and Equal Measure Evaluations

<table>
<thead>
<tr>
<th>VIP Evaluation Proposal</th>
<th>Equal Measure Portfolio Evaluation</th>
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<tbody>
<tr>
<td>How is the VIP Consortium developing on each campus, as well as across campuses?</td>
<td>The “network-level” line of inquiry: Examines the work within the networks and institutions, with the primary intent of documenting changes at the network, institution, and department levels and to a lesser extent on STEM faculty and student levels</td>
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**VIP Evaluation Proposal**

- How is the VIP Consortium developing on each campus, as well as across campuses?
- What institutional factors matter for success?
- What is the added value of the Consortium for institutions, faculty and students?

**Equal Measure Portfolio Evaluation**

- The “network-level” line of inquiry: Examines the work within the networks and institutions, with the primary intent of documenting changes at the network, institution, and department levels and to a lesser extent on STEM faculty and student levels
- The “portfolio-level” line of inquiry: Focuses on the structure of the overall portfolio and the network characteristics that result in strong adoption and scaling of the Trust’s postsecondary STEM active learning strategy
Subgroup and Across Sites: Understanding Impacts on Students & Faculty

How well is VIP working, and to what end?

- **(Teams)** How well do teams function in the VIP environment?
  - Multi-layered view: Leadership? Management? Cross-team effects?

- **(Students)** How is VIP changing the student learning experience and outcomes?
  - What matters most in this process? Do some benefit more than others? Which aspects of the VIP approach have the most impact on outcomes?

- **(Faculty)** How effective is VIP in attracting faculty with “fit”? What are VIP impacts on faculty?
  - Faculty interest, motivation, productivity, interaction, learning, retention?

- **(Comparison)** How is the VIP experience different from other project-based approaches?
  - How does what students and faculty do and gain in VIP compare to project-based and traditional approaches?

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Surveys  | Focus groups  | Institutional data
Design notebooks?  | Other?
Multiple Sources of Data

Data Sources:
- Graduate Surveys
- Student Records
- Student Surveys
- Faculty Surveys
- VIP and Institutional Documents/Records
- Faculty, Student, Admin Interviews

VIP Student Data
- Self-, Faculty- and Peer-Reported Data
- Institutional Context Data

Confidentiality of evaluation data
Human Subjects Protection (IRB Approved)
Full VIP vs Subgroup

Years 1-3
- Coordinated collection of student survey data across three (+?) sites
- Other Schools?
- Common student/VIP program metrics
- Faculty Surveys
- Institutional Analysis (Case studies)
- Other institutional data

Years 4-6
- Coordinated Student Survey (all sites)
What, where and when? Timeline

• Summer 2015
  • VIP Sites – Interviews, possible site visits
  • Data foundations – VIP and institutional data
  • Student and faculty survey development
  • Refinement of 3 year evaluation plan

• Fall and Spring 2015/16
  • Student Survey (Limited: GATech, Michigan, Boise State)
  • Faculty Survey (August and May)
  • Compilation and analysis of data across sites

• Years 2 and 3
  • Continuation of above
  • Refinement of data instruments for dissemination/coordination across sites
  • Continued refinement of evaluation plan, planning for second round

• Periodic
  • Video calls re: evaluation across sites
What will we need from you?

• Cooperation and access
• Honest and thorough input
• Updates on evaluation efforts at your sites

• Contact with local data or evaluation person
• Faculty contact lists
• Liaison to/facilitation of institutional research office contacts
• (looking forward) IRB agreements
• Other?
Two Evaluation Lines of Inquiry

• The “network-level” line of inquiry:
  • Examines the work within the networks and institutions, with the primary intent of documenting changes at the network, institution, and department levels and to a lesser extent on STEM faculty and student levels

• The “portfolio-level” line of inquiry:
  • Focuses on the structure of the overall portfolio and the network characteristics that result in strong adoption and scaling of the Trust’s postsecondary STEM active learning strategy
The Portfolio: Partners Included in the Evaluation

- Association of American Colleges and Universities (AAC & U)
  - 1,300 institution association of various school types
  - 20 network sites
  - Professor cultural competence
  - Computer and information sciences

- Yale
  - 25 cohort 1 network sites, 20 cohort 2 network sites
  - Center for Scientific Teaching leads
  - Introductory biology course redesign: Microbes to Molecules

- WestEd
  - 13 California community colleges
  - Literacy Initiative’s Reading Apprenticeship project
  - Discipline-specific literacy and problem-solving techniques for community college faculty

- University of Washington (UWash)
  - 2 campus state university system
  - 12 network sites
  - Consortium to Promote Reflection in Engineering Education (CPREE), lead
  - Reflective practice
  - Introductory engineering courses

- Association of American Universities (AAU)
  - 62 institution association of leading public and private research universities
  - 8 network sites
  - Pilot projects for more effective STEM instruction that can inform the development of a framework for widespread use

- California State University (CSU)
  - 23 campus state university system
  - 8 network sites
  - Gateway course redesign
  - Summer bridge program

- Georgia Tech
  - 13 network sites
  - Vertically Integrated Projects (VIP) program
  - Undergraduate students team up with faculty on research projects
Network-Level Lines of Inquiry

**Elevate STEM retention agenda through identifying and promoting evidence-based policies and practices across member colleges**

Integrate STEM retention agenda with institutional change initiatives (e.g., framework for RBIS adoption, programming for non-classroom supports, and realignment of criteria for tenure)

Support faculty in receiving professional development; provide departmental incentives for adopting RBIS (e.g., rewards for excellent teaching)

Adopt RBIS (e.g., reflective practice, inquiry-based learning activities, formative feedback, and small-group activities) to improve the quality of STEM teaching and learning

**Seven Contextual Factors Influencing Implementation**

**Primary Roles**

**Sharing across stakeholder groups**

**Data use for continuous improvement**
Network-Level Evaluation Questions

- What evidence do we have that networks are adopting a STEM completion agenda?
- To what extent does the postsecondary STEM active learning strategy affect change in participating STEM departments and institutions?
- What contextual and environmental factors facilitate or impede these levels of change?
Portfolio-Level Evaluation Questions

• What factors facilitated or impeded **take-up and scaling** of the Trusts’ investment at the network and **institutional** levels (where applicable)?
• What are the **implications of these factors** on the Trust’s future investments in higher education?
• In what ways have the Trust’s grants been most and least successful in advancing the STEM agenda?
• How effective are different network and institutional approaches?
• What bundle of interventions demonstrates the greatest impact in improving STEM retention?
Data Sources

- Network lead interviews – every three to six months
- Case study visits – six across portfolio
- Learning community meetings and group calls
- Document review – reports, proposals, research, white papers, etc.
- Secondary data collection and analysis – drawing from evaluation findings
Discussion and Questions?