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Improving Lives Through Research®

Enhancing Policy Relevance of System-level Outcome Studies: Harnessing Stakeholder Wisdom to Define and Measure Post-Secondary Success

AEA 2020

Session Chair: Leslie Goodyear, Education Development Center (EDC)

Presentation 1: Jill Feldman, Westat; Nancy Sherman Shapiro, University System of Maryland

Presentation 2: Jennifer Flynn, Jill Feldman, Rachel Crowley, Westat

Presentation 3: Tara Dunderdale, Jill Feldman, Jennifer Flynn, Westat

Presentation 4: Dewayne Morgan, Karen Feagin, University System of Maryland

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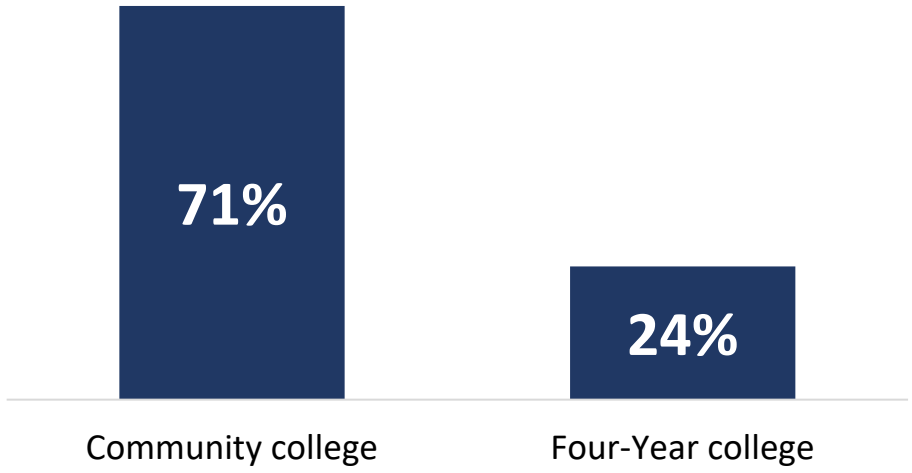
Contextual Wisdom: Understanding Relevant State and Federal Policies Surrounding the Study

Nancy Shapiro
University System of Maryland

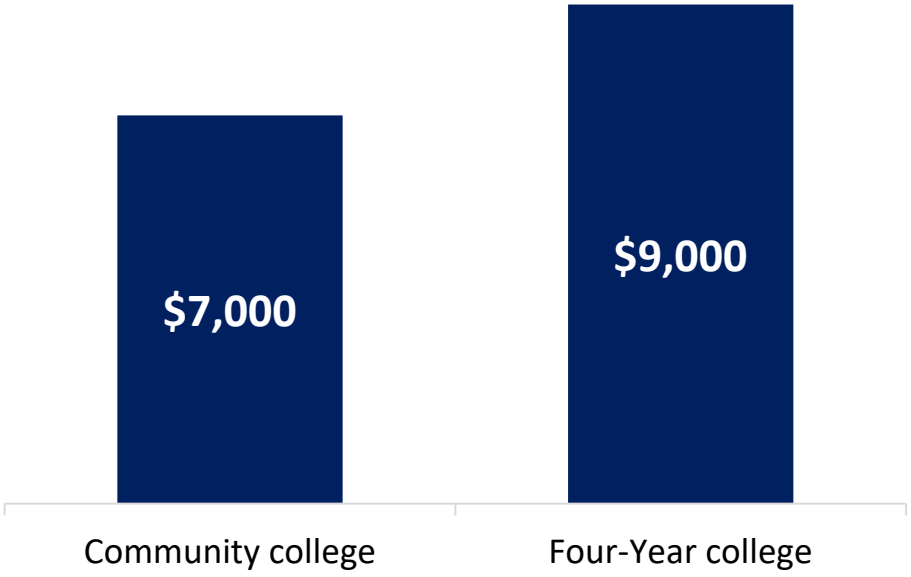
Jill Feldman
Westat

What problem were we trying to solve in Maryland?

Students testing into developmental math in Maryland



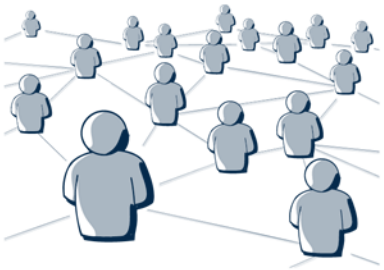
Cost of Developmental Education (per student per year)



What is the USM and why did this land in our lap?



- USM is the **most diverse public system** in the country
  - Serves **170,000** students
  - **Institutionally** and **geographically** diverse

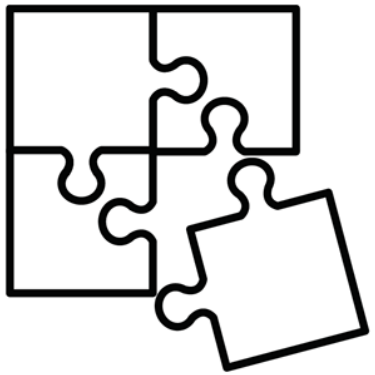


- Acts as a **"convener"** within and across the system



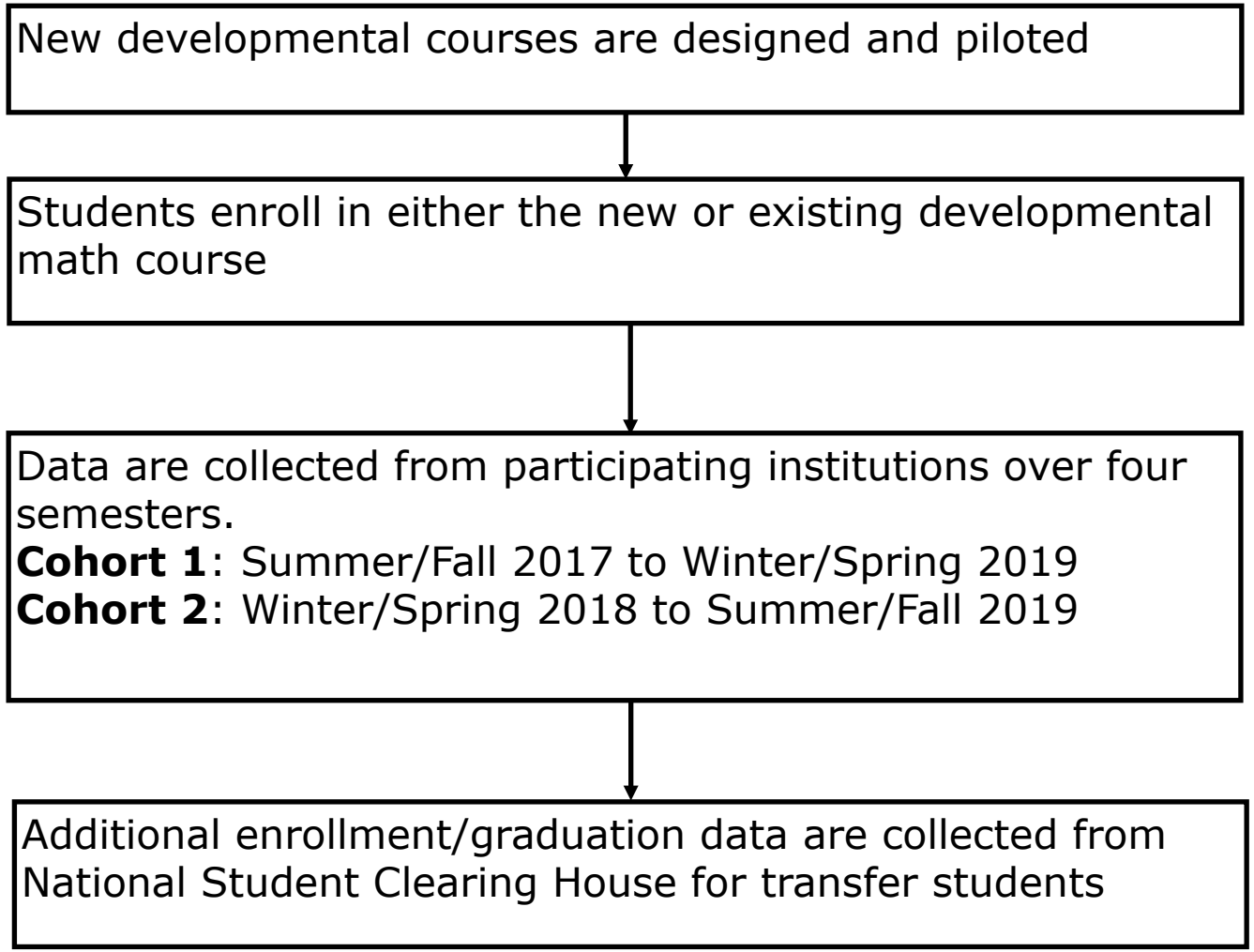
- Had an existing **P20 Policy Office** and access to **federal grant money**

Common goals

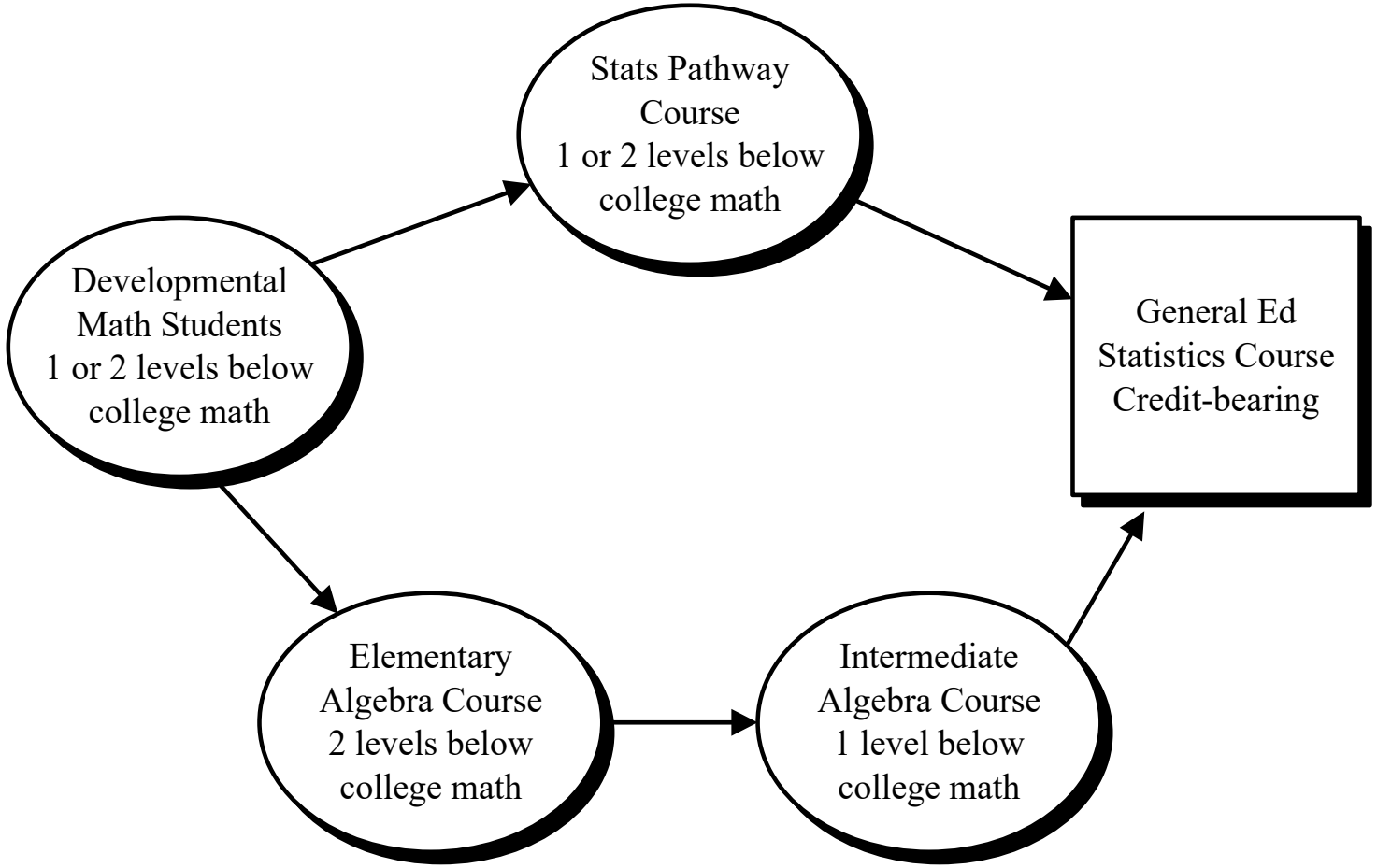


- **Reduce time spent** in developmental/remedial math
- Increase the percentage of 1st year students successfully completing **developmental math** and **general education math**
- **Develop math pathways** to place students in more appropriate courses for their educational goals and degree program area
- Provide **better advising** for incoming first-years to support other goals

MMRI program logic



MMRI theory of action



Goal: Generate rigorous evidence of group differences







1. **Success in developmental math**
   - Passing rates
   - Time to completion
2. **Enrollment and success in college level math**
   - Passing rates
   - Time to completion
3. **College retention**
   - Continuous enrollment
   - Graduation
   - Return rates

Distributed Wisdom: Piloting and Refining the Evaluation

Jennifer Flynn
Jill Feldman
Rachel Crowley
Westat

Building relationships with campus teams



Concerns that arose

Grant requirements that focus on:

- Full-time, first-time students
- Statistics as the outcome course

Diversity of campus pathways:

- Identifying target T and C courses



Addressing the concerns



- Project did a pilot in 2016–17
- We used the opportunity to test the evaluation's data collection processes
- As a result, changes to study inclusion criteria, classes of interest as outcomes, tracking students longer over time

Best practices for engagement

1. Clear and consistent communications
2. Listen carefully to participating institutions
3. Centralize internal and external communication records
4. Minimize responding burden



Expert Wisdom: Defining and Measuring Success

Tara Dunderdale
Jill Feldman
Jennifer Flynn
Westat

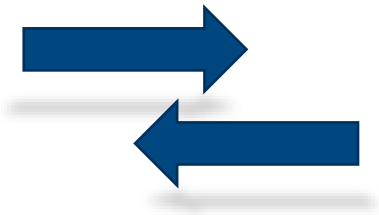
Is our evaluation culturally responsive?



What about part-time or non-traditional students?



What about students who make multiple attempts to pass?



What if students take time off or transfer?

What about part-time or non-traditional students?



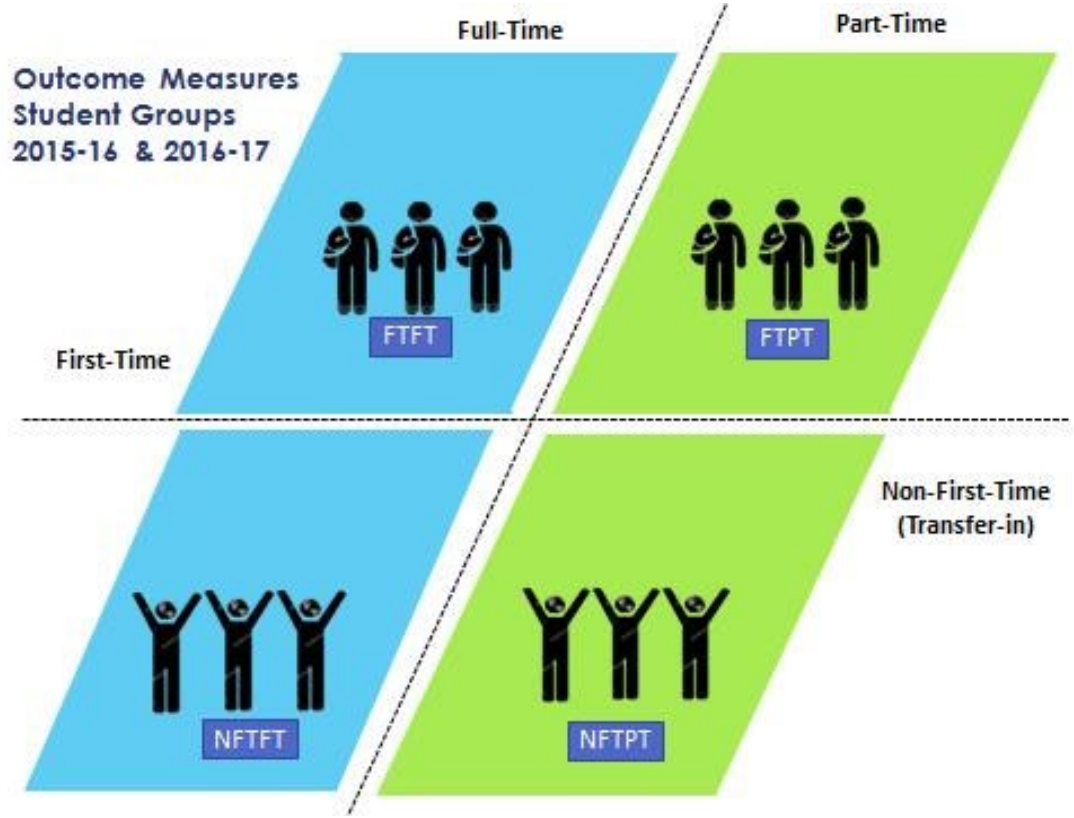
The issue: part-time and non-traditional age students were common at two-year institutions



Who we consulted with: The client and institutional representatives

What about part-time or non-traditional students?

What we learned: Changes to IPEDS made inclusion possible.



Source: Jones, G. (2017, October 17). Expanding Student Success Rates to Reflect Today's College Students. NCES Blog. https://ies.ed.gov/blogs/nces/post/expanding-student-success-rates-to-reflect-today-s-college-students

What about part-time or non-traditional students?



The solution:

- Expanded eligibility criteria to include these students
- Added variables to our planned analyses to control for these differences

What about students who make multiple attempts to pass?



The issue: Some students did not pass developmental or credit bearing math on their first attempt but did pass on a repeat attempt



Who we consulted with: The client and the advisory group

What about students who make multiple attempts to pass?

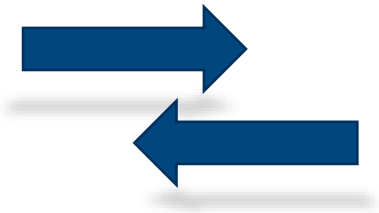
What we learned: Number of attempts to pass is of interest to both institutions and their students. We needed to expand our definition of success.



The solution:

- Revised the research questions
- Adjusted the code book
- Added a component to look at cost implications

What if students take time off or transfer?



The issue: The original research question asked about retention but was narrowly defined



Who we consulted with: The client and the advisory group

What if students take time off or transfer?

What we learned:

- A narrow definition of retention raises equity issues
- Transferability was important to the client and students
- Intermittent enrollment was also of interest



The solution:

- Revised the research questions
- Collected additional data through NSC
- Developed a proxy variable to capture intermittent enrollment

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Practitioner Wisdom: Learning from Experience

Dewayne Morgan
Karen Feagin
University System of Maryland

Goals & objective for monograph of project implementation

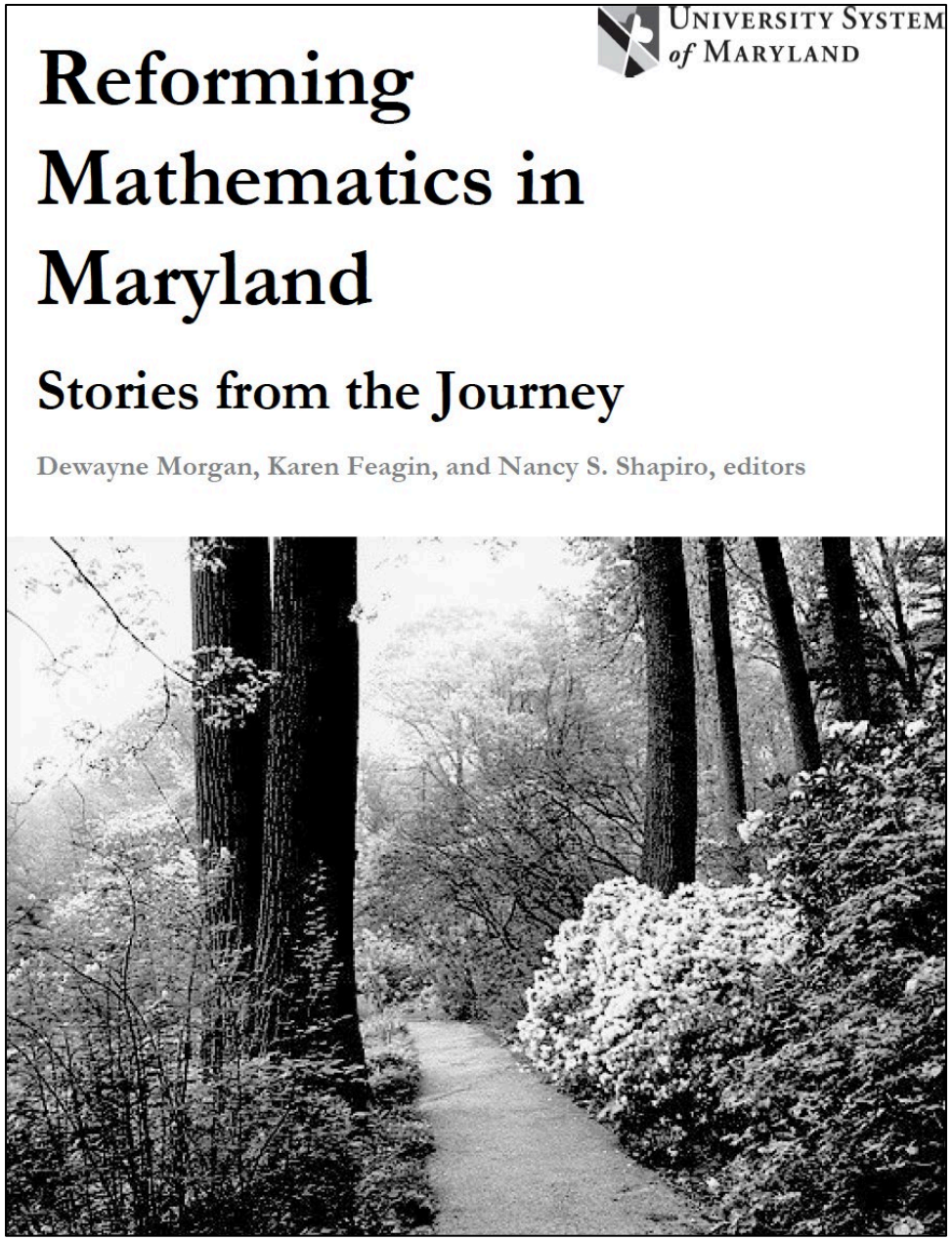
- Showcase diversity of institutions
- Provide context for the large quasi-experimental study
- Space and time for partner institutions to reflect and share
- Platform to more widely disseminate promising practices

Building the monograph

- Developed a competitive RFP process
- Open to all FITW-MMRI Partner Institutions and Non-Partner Affiliates
- Small stipends for authors
- Two-day writing retreat at secluded location
- Provided Writing Coaches
- Multi-round editing process
- Publication release event

Monograph represents the diversity of higher education in America

- 4 Community Colleges
- 5 4-Year Institutions
- 2 HBCUs
- Open- and Selective-Enrollment Institutions
- Undergraduate Enrollment Ranging from 2,400 to 47,000
- Geographic Diversity:
  - Residential Campuses
  - Commuter Campuses
  - Metro-Urban
  - Rural


University System of Maryland
Reforming Mathematics in Maryland
Stories from the Journey
Dewayne Morgan, Karen Feagin, and Nancy S. Shapiro, editors

Stories From the Journey. . .

Institution Name	Institution Type	Undergraduate Enrollment	Title
Anne Arundel Community College	2-year community college	18,734 (credit students) 7,923 (full-time equivalent)	*A Tale of Two Co-Requisites: Integrating Foundational Skills and Statistics (co-authored by faculty members and administrators from both institutions)*
Montgomery College	2-year community college	22,875 (credit students) 6,864 (FTE)	
Towson University	4-year university	19,818	*How a Statewide "Nudge" Became a Call to Action in One Mathematics Department*
University of Maryland, Baltimore County	4-year university	11,260	*Career-Relevant Mathematics Pathways: On the Road to Student Success*
University of Maryland Global Campus	4-year university	47,253	*Problem-Solving Model and Applications to Real Life: Development of an Alternative Statistics Pathway*
Howard Community College	2-year community college	14,444 (credit students)	*Howard Community College's Pathway to Statistics*
Harford Community College	2-year community college	8,225 (credit students)	*Perfecting the Recipe: Making the Right Decision for a Blend of Content in a Pre-Statistics Course*
Coppin State University	4-year university; HBCU	2,362	*Co-Requisite Statistics Course for Non-STEM Students: Does it Work?*
Morgan State University	4-year university; HBCU	6,026	*Wedded Bliss: Lessons Learned from Uniting Math Placement with Math Pathways*

Implications for future project design and evaluation

- Effective strategy for getting wide-spread support and buy-in to the project's research and evaluation goals
- Design and plan for space and time for practitioners to reflect DURING the process
  - Take authors away from regular physical location
  - Opportunity to hear and share writing progress with authors
  - Choose writing coaches who have experience with this type of writing (different from the type of writing authors may be accustomed to in the disciplines)
  - Set realistic timelines with periodic markers
- Relatively low-cost (financial) with the potential for high payoffs

Questions?

- Questions?
- Comments?