



# ADVANCE Institutional Data



Using Institutional Data to  
Create Institutional Change

# ADVANCE Cooperative Agreement (10/10/2001)

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- “Awardee will maintain a uniform database of quantitative indicators of activity and progress. NSF will provide general guidelines for the collection of data in order to provide coordination across ADVANCE Institutional Transformation projects and to establish the basis for evaluation of the ADVANCE program.”
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<b>Outcome</b>	<b>1</b>	<b>2</b>	<b>3</b>
<b>1. # and % of women faculty in science/engineering by department</b>	<b>9</b>		
<b>2. # and % of women I tenure-line positions by rank and department</b>	<b>9</b>		
<b>3. Tenure promotion outcomes by gender</b>	<b>4</b>	<b>5</b>	
<b>4. Years in rank by gender</b>	<b>8</b>	<b>1</b>	
<b>5.a. Time at institution and b. attrition by gender</b>	<b>9,5</b>	<b>0,3</b>	<b>0,1</b>
<b>6. # of women in S &amp; E who are in non-tenure-track positions (teaching and research)</b>	<b>5</b>	<b>3</b>	<b>1</b>
<b>7. # and % of women scientists and engineers in administrative positions</b>	<b>8</b>	<b>1</b>	
<b>8. # of women S &amp; E faculty in endowed/named chairs</b>	<b>5</b>	<b>4</b>	
<b>9. # and % of women S &amp; E faculty on promotion and tenure committees</b>	<b>7</b>	<b>2</b>	
<b>10. Salary of S &amp; E faculty by gender (controlling for department, rank, years in rank)</b>	<b>6</b>	<b>3</b>	
<b>11. Space allocation of S &amp; E faculty by gender (with additional controls such as dept., etc.)</b>	<b>4</b>	<b>2</b>	<b>3</b>
<b>12. Start-up packages of newly hired S &amp; E faculty by gender (with additional controls such as field/department, rank, etc.)</b>	<b>3</b>	<b>4</b>	<b>2</b>

# Outline

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- **Alice Hogan, NSF:** History of data requirement, indicator choice
  - **Janet Malley, University of Michigan:** Example(s) of using indicators to effect institutional change
  - **Virginia Valian, CUNY-Hunter College:** Challenges of collecting some indicators
  - **Lisa Frehill, New Mexico State University:** Possibilities for standardization across institutions
  - **Jennifer Sheridan, University of Wisconsin-Madison:** Discussion and wrap-up
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# Summary: ADVANCE site experience with indicators

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- Positive experiences of using indicators to create institutional change
  - Data collection challenges
  - Standardization
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# Using indicators to create institutional change

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- Process of collecting the data itself
    - Communication tool used to highlight problems with real data across the institution
    - Strong relationships with “data keepers”
    - Improve institutional reporting capacities, e.g.,
      - Centralize collection and reporting of data
      - Create a standardized letter of offer/aid in collection of start-up data
      - Improve individual-level accounting of space allocation
    - Make aware that “someone is watching”
    - Fixing errors in the databases
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# Using indicators to create institutional change

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- # and % of women in S&E
    - Highlight low numbers of women of color in ADVANCE departments
    - Low numbers of women full professors led to development of programs aimed at the promotion from associate to full process
    - Breakdown by unit assists program in identifying areas of greatest need
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# Using indicators to create institutional change

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- Attrition by gender
    - Highlights very large difference made when one woman leaves compared to one man—due to low numbers
    - Changes in retention practices
  - # of women S&E faculty in endowed/named chairs
    - More active searching for women chairs
    - More publicity around nominating women, education efforts
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# Using indicators to create institutional change

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- # and % of women S&Es in administrative positions
    - New nomination procedure
  - Salary of S&E faculty by gender
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# Using indicators to create institutional change

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- Evaluation of ADVANCE initiatives
    - # and % women faculty
    - Attrition by gender
    - # and % women in administrative positions
    - Salary of S&E faculty by gender
    - Tenure promotion outcomes
    - Space allocation by gender
    - Startup packages by gender
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# Using indicators to create institutional change

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- Additional suggested indicators
    - “New Hire Report” (Proportion of new hires who are women)
    - Space quality indicators
    - Race/ethnicity/nationality
    - Recruitment statistics—gender composition of short lists, offers
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# Challenges of Data Collection

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- Easiest indicators

- ★ # and % women faculty in S&E by dept./dept. and rank

- # of women in S&E in non-tenure-track positions

- ★ # and % of women S&Es in administrative positions

- ★ # of women S&E faculty in endowed/named chairs

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# Challenges of Data Collection

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- More difficult, but gathered primarily from centralized data sources
    - ➡ Tenure promotion outcomes by gender
      - Years in rank by gender
      - Time at institution by gender
      - ★ Attrition by gender
      - ★ Salary of S&E faculty by gender
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# Challenges of Data Collection

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- Most difficult

- # and % of women S&E faculty on promotion and tenure committees
  - ➡ Space allocation of S&E faculty by gender
  - ➡ Start-up packages of newly hired S&E faculty by gender
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# Challenges of Data Collection

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- Time and expense of gathering data
    - But, once procedures in place, great benefits
  - School-level data more challenging because cooperation of more people is involved
  - Requests for individual-level data for making personal cases of inequity
  - Dismissed by some due to low Ns
  - Confidentiality issues for some indicators
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# Standardization Across Institutions

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- ADVANCE sites felt all of the indicators would be valuable to standardize across institutions if possible
    - # and % of women faculty in S&E
    - Tenure promotion outcomes
    - Attrition by gender
    - # and % of women in non-tenure-track positions
    - # and % of women in administrative positions
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# Standardization Across Institutions

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- Most indicators would be easy to adjust collection to fit into a standardized reporting structure
    - Space allocation, start-up are the exceptions
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