


 Graduate NYC!
College Readiness & Success

GRADUATE NYC!

Academy for Leaders in the Field of College Transition

Graduate NYC! Academy for Leaders in the Field of College Transition

 The City University of New York

Data Analysis and Interpretation

June 1, 2012

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Revisiting Day 3

Assumptions, Inferences, and Jumping to Conclusions

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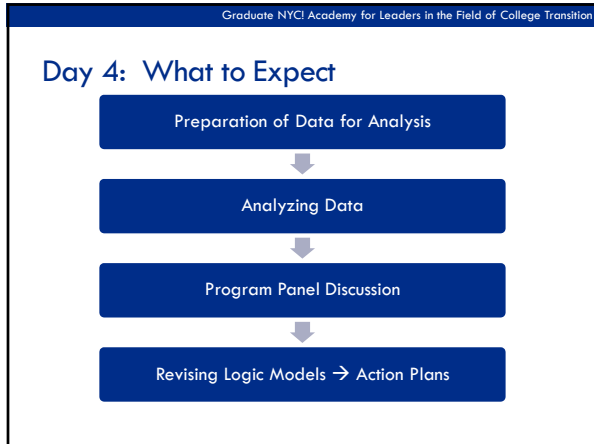
Surveys, Focus Groups and Interviews

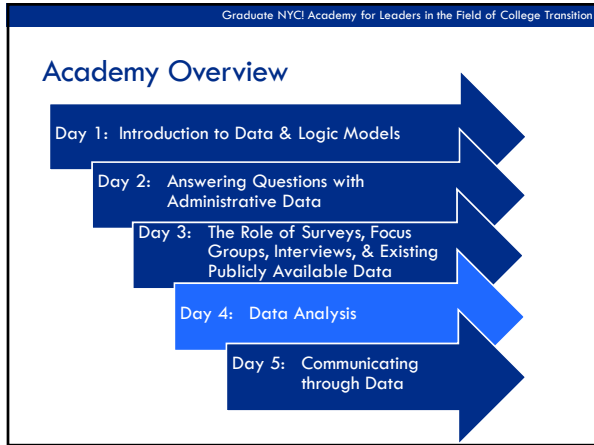
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Answering Questions with Publicly Available Data

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CUNY Data Reports: OIRA






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DATA MANAGEMENT & PREPARATION FOR ANALYSIS

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Graduate NYC Academy for Leaders in the Field of College Transition



Data Analysis and Interpretation

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Data Analysis is...

...the process of systematically applying statistical and/or logical techniques to describe and illustrate, condense and recap, and evaluate data. According to Shamoo and Resnik (2003) various analytic procedures “provide a way of drawing inductive inferences from data and distinguishing the signal (the phenomenon of interest) from the noise (statistical fluctuations) present in the data”.

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Common Program Questions

- Is the program reaching its target population?
- How are students being served by my program?
- What is the high school graduation rate for students in my program?
- Did the high school graduation rate change across years?
- What is the college enrollment rate for students in my program?
- Does college enrollment differ by gender?
- Does need for remediation differ by level of program participation?
- Does the program decrease the likelihood of remediation?
- How do students feel about their college experience?
- How did students evaluate their experience in a program workshop?

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Is the program reaching its target population?

Program Goal: 50% Male Participation

| Participant ID | Gender | |
|----------------|--------|--|
| 5482 | M | |
| 3521 | M | |
| 5621 | F | |
| 2584 | F | |
| 8952 | M | |
| 2436 | F | |
| 7862 | F | |
| 7259 | F | |
| 9341 | M | |
| 1584 | F | |

Total Male: 4
Total Female: 6

% Male: 40
% Female: 60

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How are students being served by my program?

| Participant ID | Contact Hours | |
|----------------|---------------|--|
| 9341 | 1 | |
| 2436 | 5 | |
| 5482 | 7 | |
| 1584 | 7 | |
| 2584 | 8 | |
| 8952 | 9 | |
| 7862 | 10 | |
| 3521 | 12 | |
| 5621 | 15 | |
| 7259 | 50 | |

Contact Hours

Mean: 12.4
Median: 7.5
Mode: 7

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What is the high school graduation rate for students in my program?

| Participant ID | HS Grad? | Grad Date | |
|----------------|----------|-----------|--|
| 9341 | Y | 7/1/2011 | |
| 2436 | Y | 7/1/2011 | |
| 5482 | | | |
| 1584 | N | | |
| 2584 | Y | 9/1/2011 | |
| 8952 | Y | 7/1/2011 | |
| 7862 | Y | 9/1/2011 | |
| 3521 | | | |
| 5621 | N | | |
| 7259 | N | | |

% Grad (July): 30
% Grad (Total): 50

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Did the high school graduation rate change across years?

| Participant ID | 2010 Cohort HS Grad? | Participant ID | 2011 Cohort HS Grad? |
|----------------|----------------------|----------------|----------------------|
| 9341 | 1 | 7845 | 1 |
| 2436 | 1 | 6524 | 1 |
| 5482 | 0 | 2945 | 1 |
| 1584 | 0 | 1563 | 1 |
| 2584 | 1 | 8465 | 0 |
| 8952 | 1 | 1564 | 0 |
| 7862 | 1 | 2156 | 1 |
| 3521 | 0 | 5814 | 1 |
| 5621 | 0 | 4532 | 1 |
| 7259 | 0 | 2135 | 0 |

2010 HS Grad %: 50

2011 HS Grad %: 70

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What is the college enrollment rate for students in my program?

| Participant ID | 2011 Cohort HS Grad? | Fall 2011 College Enrollment |
|----------------|----------------------|------------------------------|
| 7845 | 1 | 1 |
| 6524 | 1 | 1 |
| 2945 | 1 | 0 |
| 1563 | 1 | 0 |
| 8465 | 0 | 1 |
| 1564 | 0 | 0 |
| 2156 | 1 | 0 |
| 5814 | 1 | 1 |
| 4532 | 1 | 0 |
| 2135 | 0 | 0 |

2011 HS Grad %: 70

2011 College Enrollment %: 57

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Does college enrollment differ by gender?

| | Female | Male |
|---------------------|--------|------|
| Enrolled in College | 45 | 50 |
| Did Not Enroll | 13 | 42 |

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Does the need for remediation differ by level of program participation?

| Participant ID | Contact Hours | # Remedial Classes |
|----------------|---------------|--------------------|
| 7845 | 35 | 1 |
| 6524 | 26 | 0 |
| 2945 | 3 | 3 |
| 1563 | 35 | 0 |
| 8465 | 2 | 2 |
| 1564 | 6 | 3 |
| 2156 | 25 | 1 |
| 5814 | 9 | 2 |
| 4532 | 13 | 2 |
| 2135 | 23 | 1 |

Minimum Contact Hrs: 2
 Maximum Contact Hrs: 35
 Mean Contact Hours: 17.7
 Correlation: -0.87

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Does the need for remediation differ by level of program participation?

Minimum Contact Hrs: 2
 Maximum Contact Hrs: 35
 Mean Contact Hours: 17.7
 Correlation: -0.87

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Does the program decrease the likelihood of remediation?

Why is this such
 a difficult
 question to
 answer?

How do students feel about their college experience?



<http://www.youtube.com/watch?v=OzXsX2rBFxw>

How do students feel about their college experience?

- Familiarize yourself with your data
 - Distinguish good data from bad
 - Do these data help clarify or answer any of my evaluation questions?
- Focus the analysis
 - Review your evaluation goals
 - Identify key questions to help guide your analysis
- Categorize the information
 - Identify themes or patterns
 - Organize into meaningful categories
 - Preset categories
 - Emergent categories
- Identify patterns within or between categories

How did students evaluate their experience in a program workshop?

- Assign each survey a unique ID number
- Create a tracking sheet to monitor returned surveys
- Column Headings
- Coding single-response close-ended items
- Coding "Select all that apply" items

How did students evaluate their experience in a program workshop?

- Describe and summarize quantitative information from your survey about your sample
 - # of Respondents
 - Mean
 - Frequencies
 - Percentages
 - Cross-tabulations
 - T-tests: paired vs. unpaired
 - Correlations
 - Chi-Square Test

What are some common survey analysis issues?

- Collapsing across response options (e.g. combine all "agree" and "strongly agree")
- Combining similar items to form scales
- Missing data
- Range restriction
- Incomplete surveys
- Reporting open-ended items

How do I know if my results are significant?

- Statistical Significance
 - Differences between groups are not occurring by chance
 - Note: statistically significant differences can be found even with very small differences if the sample size is large enough.
- Practical Significance
 - Asks the larger question about whether differences are meaningful or important
