Building on Tradition: Approaches to More Inclusive Data Analysis

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Agenda

- Discussion of challenges and why we're all here
- Asking inclusive questions, especially demographics
- Disaggregating, make sure everyone counts in your counts
- Comparisons, reference groups, and looking within
- A pitch for person-centered approaches
- Responsible aggregation, when small is too small
- Weathering the sceptics
- Final discussion, thoughts, and questions

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What brings you to this session today?

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Why We're Here

- Data is an invaluable and powerful. We strive to use this power for good!
- The way we collect, analyze, interpret, and share data about populations can perpetuate limited understanding of already marginalized groups.
- Whether we are preparing internal documents or conducting research, we have a responsibility to be conscious of the ways that we engage in this work.
- *Every voice matters*

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Asking Inclusive Questions

- Gaining an understanding of marginalized groups requires asking questions that are relevant to that group
  - Centering their experiences
  - Using their language
- Demographics questions are a foundation of our work
  - Identity is increasingly complex for today's students
  - There is no "right way" to ask any identity question

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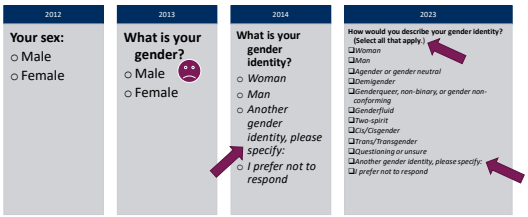
A Gender Identity Journey



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Disaggregate Your Data

- There is danger in relying on the results of the "average" student in our analyses of results. The average student is likely reflective of majority populations. This masks the experiences of our most vulnerable, populations.
- Identifying more specific information can better inform data use. It's easier to know where to start making improvements when you have a more specific direction. Improvements for small populations are likely improvements for all!
- Talking about the experiences of often silenced students can go a long way in providing a sense of care and support

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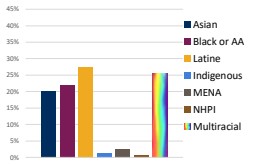
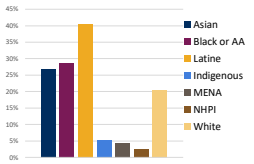
Students of Color

Student selects at least one key indicator, each student *represented only once*



Student selects at least one key indicator, possibly *represented more than once*



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Rethink Your Comparisons

- After you disaggregate, then what? Making comparisons between subgroups is a common strategy for analyzing and presenting data. It is natural for researchers and audiences to wonder—is that "normal"? Is that high? Is that low? Is that better or worse than other students?
- Unfortunately, this may implicitly position certain groups as normative. For example, when looking at sexual orientation, straight students are often held as the norm to which other groups are compared which implies that the experiences of straight students are "normal" or what should be achieved by other students

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Comparison Options

- Think carefully about your reference group, who does and doesn't get included, and take note of what information the audience listens to
- Consider creating a normative reference *before* looking at your data and results, determine benchmarks for what you want *all* students to achieve
- Effect coding compares groups to the average of the overall group. But this may essentially compare minority groups to majority
- Consider focusing on comparisons within marginalized subpopulations
- Think about presenting all findings on one group at a time instead of comparing directly across all groups. ("Today we're going to focus on our Latine students!" Etc.)

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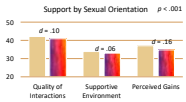
Variable- and Person-Centered Approaches

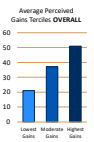
Variable-Centered Approaches

Comparisons focus on looking at relationships between variables: putting people into groups and examining results by group



Person-Centered Approaches

Comparisons focus on identifying groups of people based on their similarities in experience



	Lowest Gains	Moderate Gains	Highest Gains
LGBQ+	32.5	31.6	35.9
Straight	38.6	29.8	31.6
Asexual	47.6	29.1	23.3
Bisexual	37.6	30.4	32.0
Gay	34.2	29.2	36.6
Lesbian	35.2	30.5	34.2
Pansexual	41.1	28.9	30.0
Queer	44.2	29.2	26.6
Questioning	32.5	31.6	35.9

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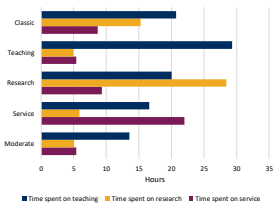
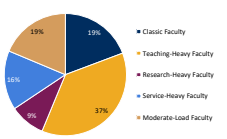
Cluster Analysis





Knowing that around one-quarter of these faculty are each a) full-, b) Associate-, c) Assistant-, and d) Lecturer or Instructor-level faculty, can start interesting conversations!

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Responsible Aggregation

- Yes, we just told you to disaggregate.
- But sometimes disaggregation might cause more harm or not be usable
  - Identifying individuals
  - Repercussions for small groups
  - Sophisticated analyses
- Acknowledge the limitations of your groupings; say what you can about groups before dropping or aggregating
- Avoid ambiguous "other" groups, or at least thoroughly explain why the grouping makes sense. Don't default to conventional norms like "Asian + Pacific Islander" without further explanation.
- Transparency in methodological choices with attention to limitations and future research plans can turn less inclusive analyses into more inclusive conversations.

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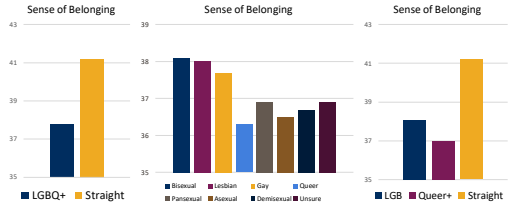
Group Based on Outcome Similarity



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Inevitable Sceptics

- People expect to see results based on statistical comparisons with statistical significance, but that's difficult to do with small populations
- Although larger numbers may be necessary for statistical significance and generalizability, focusing your audience on percentage differences, effect sizes, and descriptives are still legitimate ways to have conversations about small populations
- People can be dismissive of small population results because "well…, there aren't really that many of them…"

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Reset Expectations

- You may need to do a lot to reset expectations before presenting anything to especially critical audiences
- Remember the goals of statistics (prediction, generalization, etc.), is that what we're really doing here? Maybe it's time to let go of significance stars?
- Maybe use a theoretical or methodological framework to guide you and set a tone for your purpose and results (but do be careful with critical frameworks like Quantitative Critical [QuantCrit])
- It might help to give a quick reminder that we're all educators…

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Final thoughts and questions?

Thanks for joining us!

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