An Alternative Approach: Using Survey Panels to Inform Assessment

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Background

- Student response rates have declined, while expectation for evidence-based decisions has increased (Zhang, 2010).
- Desire to identify alternative data collection methods by higher education researchers
- Alternative methods from standard survey:
  - Focus groups
  - Public surveys (non-probability sample)
  - Survey panels

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Survey Panel Introduction

- History
  - Used in public opinion, market, and medical research
  - Used in higher education research: national datasets
    - *Baccalaureate and Beyond* and *Beginning Postsecondary Students Longitudinal Study*
  - Not much evidence that specific schools use them to inform campus-level assessment
- Benefits
  - Quick data collection
  - Low administration cost
  - Sampling efficiency

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Panel Data: Definition & Purpose

- A traditional survey panel involves a longitudinal study asking the same individuals the same questions at different times (Goritz, Reinhold, Batinic, 2000).
- "Panel data" can observe changes over long periods of time, such as with college students and their career trajectories.
- Another form of survey panel utilizes a split questionnaire approach by dividing longer surveys into smaller ones (Raghunathan & Grizzle,1995).

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Survey Panel Design

- **Types**
  - Probability
  - Nonprobability
- **Sampling**
  - Rotating
  - Continuous
- **Incentives**
  - Guaranteed Incentive
  - Lottery

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Data Quality Issues

- **Self-selection**- those who commit to the panel may not be representative of the rest of the population
- **Non-response**- can occur at the individual item and/or wave level.
- **Attrition**- panel members may drop out of panel completely
- **Conditioning**- familiarity of instrument may impact responses

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Panel Research

Research suggests:

- **Conditioning** is an issue with knowledge questions but not those related to attitudes, behaviors or expectations.
  - Das, Toepoel, and Van Soest (2011)

- Surveys with multiple components were seen as **burdensome** and individuals were less likely to participate.
  - Apodaca, Lea and Edwards (1998)

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Study Purpose

- Can survey panels serve as a useful tool for campus assessment efforts?
- What are the pros and cons?
  - Recruitment
  - Survey data quality (attrition, missing data, etc.)
  - Scale reliability and validity
- No intention to replace NSSE's standard administration

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Study Details

- 5 institutions recruited for spring 2014 panel
  – Four of five participated in 2013
  – One split their sample (panel / mobile optimization)
- 100 students per school (50 FY & 50 Seniors)
- 70 out of 100+ NSSE questions used to create 8 mini-surveys with 8 to 10 survey items each
- Two day recruitment period:
  – $10 Amazon.com gift card guaranteed
  – One $250 Amazon.com gift card lottery
- New survey each week for about 8 weeks
  – Survey links in emails and special online portal

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Study Details (cont.)

- 5 Schools:
  – Small Private College
  – Small Private University
  – Medium Public University
  – Medium Private University
  – Large Public University (split sample)
  (<5,000 = small; 5-15K=medium; >15K=large)
- Comparisons made 1) between standard and panel administrations for each school; and 2) between the five panel administrations

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Results: Recruitment

- To gauge student interest, compared 1) response to 1st standard recruitment emails and 2) panel registration messages
- Found:
  – 6% to 20% tried to register for panel
  – All schools showed greater interest in panel
    • Small Private College: 20% vs 12%
    • Medium Private University: 6% vs 4%
  – At 4 of 5 schools, seniors more receptive than FYs
  – Gift cards retrieval rates 75% or higher

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Results: Recruitment (cont.)

- Representativeness
  – Panel & Non-Panel members appear similar using enrollment and underrepresented minority status though differences exist by gender
    • Large Public University exception for gender
  – Standard and Panel respondents very similar

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Results: Survey Data Quality

- Panel response rates very high
  - All schools had over 90% for 1st survey
    - Max: 95% for Small Private College
  - Between 72% and 86% for 8th survey
  - Gap between 1st and 8th surveys reflects attrition
    - Smallest: 11% for Small Private College
    - Greatest: 21% for Medium Private University
  - Far exceeds standard administration response of 12% to 34%

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Results: Survey Data Quality (cont.)

- Panel members completed 6.5 surveys on average
  - Min: 5.6 for Large Public University
  - Max: 7.1 for Small Private College
- Mixed results for "completion" (90% of items)
- Panels had nearly 0% item nonresponse
  - Once they start, they finish!
- Total survey duration for 8 surveys about 9 minutes
  - Standard admin about 12 minutes (but 30 extra items)

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Results: Scale Reliability & Validity

- Panel and standard admin results very similar
  - Of 100 comparisons using NSSE Engagement Indicators, only nine showed meaningful and statistically significant differences
  - Large Public University with a stronger research design showed no differences
- NSSE scales mostly found measurement invariant
  - Scores mean the same regardless of admin type
  - Exceptions: senior higher-order learning & supportive environment Engagement Indicators

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Study Limitations

- Potentially different student populations between years

- Incentives differ by administration type

- Selection bias

- Inability to assess engagement by academic major with so few respondents

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Study Conclusions

- Results confirm that survey panels may be one solution to declining response rates (Stern, 2014)
- Panels appear to be attractive to students but incentives probably play an important role with our findings
- Short panel surveys produce minimal item nonresponse though attrition is an issue
- Despite low n, scores originating from panels are comparable to those from standard NSSE administrations

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Panel Implementation Ideas

- Schedule more time for panel registration!
  - 2 days is very compact and requires contacting more students than necessary—use reminder messages
- Incentives probably critical for recruitment
  - Experiment with $1 or $2 per survey or $5 pre-paid to establish trust; $10 could get expensive if you want a lot of data
  - Remember to check with your Business Dept about taxes and any necessary forms for students to complete

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Panel Implementation Ideas (cont.)

- Experiment with number of survey waves
  - More survey items could probably be added to each survey without a serious effect on data quality
- Try rotating panel members to minimize attrition and survey fatigue
- Don't forget to keep scale items together—confirm reliability and validity if it's important enough

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Thank you!

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