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

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

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).
Survey Panel Design

- **Types**
  - Probability
  - Nonprobability

- **Sampling**
  - Rotating
  - Continuous

- **Incentives**
  - Guaranteed Incentive
  - Lottery

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

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.

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
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

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

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

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
**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%

**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)

**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

**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
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

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

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

Thank you!

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