Taking a Closer Look: The Importance of Data Disaggregation in Survey Analysis

AIR Forum 2023

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Survey Research in IR Today

- Often a substantial task for IR professionals

- Important to provide student and staff attitudes, perceptions, use of services (if designed properly)

- Can be a good source of information for policy makers

- Can help position IR to be a valued member of the decision support team
However...

When tasked with the handling of survey analysis, IR professionals have profound responsibility

• Are respondents being accurately represented?
  – If not, who is being left out?
• Are there actionable recommendations grounded in the survey data?
Today’s session will:

- Speak to the value of large-scale survey research
- Pay particular attention to culturally responsive assessment literature and its influence on all aspects of the survey research process
- Demonstrate how disaggregated data can yield more actionable findings across historically underrepresented populations
- Allow the audience to share experiences with their own survey research analysis projects
The WREA Project

- NSF-Funded multi-Institutional Grant to examine the effect of students’ access to work-related experiential activities (WREAs)
- An important facet is geographic location
- Engineering and computer science students at six institutions in GA
- Mixed Methods design to examine perceptions and experiences from students, career center directors, employers, and company recruiters
  - Quantitative survey data from students in spring 2021 and spring 2022
  - Individual interview data from career center directors (2021) and sample of students (2022)
  - Focus group interviews with employers and company recruiters (2021 and 2022)
  - Observations of career fairs (online 2021 & 2022)
- Because project is grant-funded, we had the luxury of working with an external survey center who would assist in the development and administration of the surveys
What is data disaggregation?

• Practice of breaking data into smaller, more manageable/meaningful subpopulations
  – Examples include race, gender, socioeconomic status, etc.

• Gained significant traction in the last decade as data-informed decision-making became more important

• Disaggregation is employed across disciplines due to its usefulness
Origins of Data Disaggregation

• Much of this work is grounded in culturally responsive assessment (Montenegro & Jankowski, 2017).

• Institutions are responsible for understanding their students and the cultural context that they bring with them.

• Goes beyond “diversity” and instead looks at the historical implications of students’ backgrounds (Dowd & Bensimon, 2015).
Why is it Important?

• The actual work involved in data disaggregation is not complicated, but has major results

• Interventions that are implemented based on big-picture data will likely fall short for students who do not have the same experiences as the majority
Equity Implications

• Survey Design
  – What questions are included?
  – Are questions worded in a way that students can understand and answer accurately?

• Data Analysis
  – Are we responsibly thinking through the data beneath the surface level?
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<th>Institution B</th>
<th>Institution C</th>
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## Student Responses by Race

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<th>Racial Category</th>
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<th>Percent of Valid Responses</th>
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<td>Asian</td>
<td>659</td>
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<td>White</td>
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<td>Unreported</td>
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Racial Differences

• Overall, Asian students had the lowest WREA participation rate
• White students reported using their personal network to find WREAs at higher rates than any other racial category
• Students from all underrepresented groups were more likely to be unsure of their major’s requirements in regard to WREAs
Low-income Students

- Far more likely to be first generation students and to have student loan debt
- Began thinking about WREAs at a later point in their academic career
- Did not have the luxury of using personal networks to secure WREAs
- Participated in WREAs at a lower rate (46.8% vs. 58.3%)
Institutional Differences

• Students had different expectations for geographic components of WREAs
• Students at certain institutions benefitted from structures that allowed them to navigate opportunities easily
• Students participated in WREAs at different rates
Computer Science vs. Engineering

- Computer science students placed higher value on remote work and the setting of that work
- Engineering students responded that they developed more as leaders and cultivated professional interpersonal skills
- Computer science students leaned more heavily on online career platforms when seeking out WREAs
Gender

• Because this was a STEM study, we paid particular attention to gender
• For the most part, differences across most variables were negligible
• Women were less likely to report finding WREAs on their own, but were more likely to utilize campus career centers than male students
What do we do now?

- The results reported here are not overly sophisticated
- The disaggregated results were given to institutional partners in the hopes that they are able to identify opportunities on their campus
- Use the findings to guide our project moving forward
Limitations

• Low statistical power
• How much disaggregation is enough?
• Context matters
• Privacy concerns
Your Experiences with Survey Research

• When you design a survey, how do you think about the data you will need to collect?

• What data disaggregation techniques have you employed?
Good Practices For Survey Research in IR

• Understand the literature on survey research, consider relevant theory
• Be knowledgeable about the topic, research design, and analytic methods
• Consider Survey Format
  – Mode of delivery- internet access, accessible across phone & laptop
  – Wording - succinct length of survey, easily understood language
• Communicate with stakeholders to ensure you are collecting appropriate data
• Have a plan and then carry out accurate analysis and reporting
Questions? Comments?

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Thank you!

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