**WERA 1010:** Improving Data Quality from Sample Surveys to Foster Agricultural and Community Development in Rural America

**Annual Meeting**

**Tuscon, Arizona**

**February 19-21, 2025**

**ATTENDEES**:

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Meeting Notes

# DAY 1: February 20, 2025

### 8:30 - 9:00 am – Introductions

* Katie M will take notes in Google doc and share; others can edit
* Recognize Don Dillman, retirees, welcome new members
* Everyone goes around and introduces self

### 9:00 am - 12:00 pm - State Report Outs

##### Utah State University (Jessica Schad)

* Director of Community & Natural Resources Institute - Utah People and Environment Poll
* Current surveys
  + Utah Soil Producer Health Survey (NRCS conservation grant)
    - Experiments on soil health in farms
    - Economics, background and attitudes
    - Surveyed crop producers, including both crop and livestock producers, both mail and online, 4 waves, early 2024
    - Experiment: $2 bills vs stickers
      * Explored creative incentive solutions – Crumbl cookie certificate? (alumni created company)
      * Stickers by [madebyfell](https://madebyfell.com/collections/sticker) (company that has made national park stickers), design with Utah locales, color; willing to do at cost (total $0.98/sticker)
      * Randomly assign people to $2 bill vs. sticker
    - Examine: respondents from purchased (DTN - private vendor) & Extension lists
      * Working with Agronomy faculty who had extensive Extension list
      * Do response rates differ? Characteristics differ?
  + Utah People & Environment Poll (UPEP)
    - Statewide survey in 2023, mail/online, 4 waves
    - Probability sample
      * Over sample rural populations
    - Interdisciplinary faculty & student collaboration (anyone can add questions, including students from survey methods class)
    - Public and academic reach
    - Second iteration in 24/25
      * Experiment: sticker vs $2
    - Proposal: transition to panel?
* SHP: $2 (21% response rate) vs sticker (14%); a significant difference (p<0.05)
* DTN (<https://www.dtn.com/>) vs. Extension department sample [around 3000 in frame]
  + How many duplicates? 741 out of 4819 (15.4% of sample)
  + Did response rates differ? Not much (17.6% for DTN vs 17.1% for Extension)
  + How did characteristics differ? TBD
    - Really comparing Extension frame vs. DTN sample – think about how to assess this
  + Discussion – challenge with DTN is a lot of undeliverables
  + DTN - does not make the sample frame information available - only provides the final sample
* UPEP and Students
  + Graduate students and one undergraduate
  + Feedback on faculty proposed questions; 5 proposed own questions to add (all provided feedback to each other)
  + Prep: stamping envelopes, sampling plan, formatting and wording of mailings, checking Qualtrics
  + Data collection: response tracking, data entry
  + Dissemination: research/policy briefs, theses, dissertation chapters, peer-reviewed papers
    - Report for governor/legislature
    - Newspaper articles
    - Disseminate beyond academia
  + How to do IRB? - have students get training, and there is an IRB covering the survey
* UPEP: $2 (12.8% response rate) vs sticker (10.0%); some survey responses still coming in
  + $2 bill benefits - token, novelty ($2 even performed better than $5 in a case); not necessarily about the monetary amount
  + Discussion - what about two $1, do people think $2 is fake?
    - Think compared two $1 vs one $1 – no difference. But sending something better than nothing. Incremental increases don’t help much). Look at AAPOR study that tested increments.
  + Physical drop ins and pick ups - anecdotally show that people are excited about this format
  + Note - sending something is still better than sending nothing (extensive margins)
    - Incremental increases are not as effective (intensive margin)
  + Discussion - any issue with university or funder (USDA specifically?) not letting us send money as incentive? – seems to be more from university side, hoops to jump through. Account for money that is not used or sent back. May need to justify with IRB.
* UPEP Panel
  + Useful data and information for researcher and policymakers
  + BUT expensive and slow to conduct representative probability surveys
    - Online panels (i.e., Amazon Mechanical Turk) not an adequate substitution
  + UPEP 2.0: Utah People and Environment Panel
    - People selected using probability methods, but asked to take probability surveys
    - Would have key info on people initially that could use to sort/subset
    - Partner with UNH Survey Center (Granite State Poll and Panel)
    - Randomly select Utah adults (sample of 20,000, 3-5% onboard rate)
      * Another example from Montana State - texted 200,000 people, less than 1000 signed up
      * Drop out if not periodically asked to participate
    - Short survey request then ask to join panel
    - Test incentives (lottery, post-incentive, points [after take certain number of surveys, can earn gift card]) - to maintain people in panel
      * Increasing cash from lottery for continuing participation in the panel
      * Discussion - ethics of price of payment per hour of work. If paid, does it need to be minimum wage or higher rate?
      * Selection might be a problem when incentives are high
    - Have grant proposal in right now to fund this
    - Online panels - examples of people using chatGPT for open-ended questions. This could be a problem.
  + Articles published
  + Avemegah, E., Gu, W., Abulbasher, A., Koci, K., Ogunyiola, A., Eduful, J., ... & Ulrich-Schad, J. D. (2021). An examination of best practices for survey research with agricultural producers. *Society & Natural Resources*, *34*(4), 538-549.
  + Ulrich-Schad, J. D., Li, S., Arbuckle, J. G., Avemegah, E., Brasier, K. J., Burnham, M., ... & Wilke, A. (2022). An inventory and assessment of sample sources for survey research with agricultural producers in the US. *Society & Natural Resources*, *35*(7), 804-812.

##### Iowa State University (Katie Dentzman, Sam Mindes, and Zhengyuan Zhu)

* Katie Dentzman
  + Survey diary study - Abby presented last year - each keep track of how many surveys received
    - Survey sponsor breakdown - companies I was a customer of was the highest category, organizations you are part of, professional associations you are a part of
    - Higher completion based on higher perceived impact on society and perceived impact on you
    - Maybe continue and expand? Grant proposal? - Continued interest in this, someone that could pursue.
    - Looking at how many surveys (organic) farmers get or other groups of interest in survey work in continuation of the diary survey work
    - Perhaps add in part with follow-up (with incentive) to non-respondents to ask why they did not respond - Joe has incorporated this into ongoing crop netting survey.
  + Counting proportions of women farmers - in the 2017 Census of Agriculture
    - If principal farmer is a woman, defined as a woman-owned farm. But USDA said need to estimate proportion of farmers on farm that are women.
    - Challenge to define this - 56% of farms have at least one woman, but lower if look at day-to-day decision makers, even lower for livestock and/or land use decision makers
    - Only 9% of farms are only women
    - Categorical - only women (9%), only men (38%), mixed gender (53%)
    - Do these different ways of representing lead us to different conclusions? Yes, e.g. mixed gender farm is more likely to produce vegetables, but this was not apparent in another way of splitting gender.
      * Women only or Men only are not more likely to produce vegetables
      * Suggestion to split mixed gender into male- and female-dominant subgroups. Have looked at, but thorny methodological issue. Recommendations to USDA about how to collect and use data are challenging.
    - USDA has limited access to some variables, e.g. same-sex marriages in farm owners. USDA claimed there were some data quality issues.
      * Received 50 sample questionnaires out of 2 million fielded
      * Katie found 40% issues in classification - father son relationship could be confused with partners
      * Invited to re-write the questionnaire
    - Have access to other variables as well, looked at some diversity variables. This is also a next step.
    - Next Census of Ag sent in 2027, need input by 2026. But hesitant about how much input can be made given current political climate.
  + Neonicotinoid use (pesticide used in potatoes among other things, think harmful to pollinators). Do consumers want farmers to use this? Regulated?
    - Considering using Prolific (for consumer survey - <https://www.prolific.com/> ), not Mechanical Turk (<https://www.mturk.com/> ). If anyone has experience with consumer surveys, reach out!
* Sam Mindes
  + Current projects
    - Farmer survey - Iowa Soybean Association
      * Evaluation of NRCS conservation drainage program (ISACD)
      * Role: socioeconomic impact analysis of participation
      * Data collection methods: pre-implementation survey, post-implementation survey repeated every 6 months; ad-hoc interviews 3-5 per year
      * Mixed method (web/mail), small scale (R1 was Qualtrics only)
      * Challenges
        + Don’t have access to contact list (ISA must label/mail envelopes)
        + Lower than hoped response rate (~20%)
        + Using PIN to track longitudinally
      * Pivots in process
        + Use ISA-branded envelopes
        + Shorter/streamlined survey (~15 min -> ~5 min)
        + Shorter/revised cover letter
        + Paper survey sent with follow-ups
        + Follow-up interviews
      * Will send 82 surveys next round, some of which are pre- and others post-implementation. Will grow over time.
      * Participants have to enter PIN on survey.
      * Discussion of 1 vs 2 pages (same cover letter, unique pin on separate slip of paper) vs unique letters – depends on how mail merge is handled
      * IRB - need to see updates to cover letter?
        + No, as long as exempt and not changing overall focus.

IRB requirements likely differ by university

Some universities don’t need research information forms or consent forms

* + - * + What about if do experimental component? Still no most likely.

IRB might be needed if one is thinking about a research idea on the topic?

* + - VoLL + outage impact survey for NSF grant
      * Goal: partnering with local utility to understand impacts of electrical outages
        + Interested in human costs, in addition to economic
        + Preparedness and planned actions for outages
        + Inform utility on where/how to build resiliency into electric network
      * ~15-20 minute Qualtrics survey
        + Includes LBNL’s ICE [interruption cost estimator survey] 2.0 survey - CoLL/WTP (willingness to pay) estimates
        + Additional questions developed with utility input
      * DSample - sending to all individuals in utility area
      * Distributed by utility: email, app, push notification, text, mail (?)
      * Additional questions on scenarios, demographics, work-from-home, outage experience, impacts of past outages, etc.
      * ICE survey - 3-4 have scenarios with start/end time. You say how household would adjust, how disruptive, how much would cost, how much pay for backup service
      * Challenges
        + All ICE questions (10-15 min) must be included
        + VoLL questions are complex to answer - multiple outage scenarios, ask about costs and WTP
        + Want to add items for our RQs - potential survey fatigue
        + Incentives are random drawings for bill credit
      * Discussion - how to measure survey fatigue?
        + Don’t answer last questions? [LBNL wants Sam’s questions at the end]
        + But have to make it to the end to enter name for survey drawing.
        + Suggestion to add estimated time to completion (as experiment?) and see if this affects drop-off.
        + Suggestion - Add progress bar?
    - Survey of rental property owner for NSF grant
      * 15-20 minute Qualtrics and paper survey
      * Goal: understand rental property owners decision making and assessment of risk in the context of crises - natural disasters, economic crises
      * Administered in 9 cities, anticipate ~1200 responses (5% RR) from ~7,300 email and ~18,400 mail invites. Will have follow-up interviews
      * Survey details - vignette experiment (3x2) factorial in web-survey; predictive modeling to identify likely residential RPOs - avoid vacant/inactive and short-term rentals
      * Challenge - no good sampling frame of residential RPOs
        + No comprehensive sampling frame exists in most jurisdictions
      * Approach
        + Use complete registry (Minneapolis) as training data
        + Develop predictive model for probability of rental status
        + Apply model across multiple cities to create probability-based frame
      * Paper - <https://bit.ly/3X9BCzx>
      * Model specifications
        + Binary classifier using logistic regression
        + Predictor variables - property characteristics, owner characteristics, geographic characteristics (ACS-tract level data)
        + Cross-validation using a 5-fold split on Minneapolis data
      * For the 2025 sample, adjusted predictors using a random forest model
      * Performance metrics - 94.5% specificity (false positive control); 67% sensitivity (true positive rate); prioritized specificity to minimize frame errors
        + Trade off between cost and unbiasedness of the survey response;
        + lack of understanding with random forests models could be one challenge
      * Sampling strategy - probability-based selection, stratify by ownership type (corporate/individual), disproportionate allocation (2:1); within-stratum random selection
        + Model results - 3000 in a city and 100 in another
      * Will present more results next year
      * Question about using eviction information to improve model? Will check if already in there
    - Survey of Iowa and Arizona residents as pilot data for AFRI proposal
    - Exploring survey burden with methods students
    - Regional housing survey with the NCRCRD
* Zhengyuan Zhu
  + Mapping conservation practices via deep learning
    - Paper at <https://doi.org/10.1080/29979676.2024.2401756>
    - Labuzzetta, Charles J., and Zhengyuan Zhu. ”Mapping Conservation Practices via Deep Learning: Improving Performance via Hillshade Imagery, Sampling Design, and Centerline Dice Loss.” Statistics and Data Science in Imaging 1.1 (2024): 2401756.
    - Motivation: soil and water conservation practices
      * Conservation practices implemented within agricultural fields reduce erosion and nutrient runoff into waterways
        + Tillage practices, residue management, crop rotations, grassed waterways, conservation buffer, contour farming, terraces, others…
      * Understanding through ML and deep learning techniques
    - Iowa BMP mapping project - GIS database of over 1 million best management practices (BMPs) installed in Iowa (2007-2010). Project required intense human labor investment, taking over 4 years to complete
    - Objective - develop automatic image segmentation to detect BMP and other land cover/use for environmental monitoring and conservation management
    - Approach - based on U-Net, deep learning method
      * Segments pixels of image into multiple classes
    - Challenge - very little literature addresses uncertainty quantification for U-Net
    - Innovation - subsample conformal prediction methods under covariate shift to quantify uncertainty in image segmentation, which addressed the lack of exchangeability between training and testing data in existing method and provide valid UC
    - Training, testing, and validation data
      * Partition Iowa into .5 mi2 grid
      * Sample 1500 cells PPS (probability proportional to size) sampling using % area of grassed waterway in each cell as size
      * Collect 1 m LIDAR and 2007-2010 Ortho CIR imagery for each sampled cell as input, binary “ground truth” mask of grassed waterway from BMP mapping project as output
      * 1000 training, 500 testing
      * A subset of testing results are reviewed by local extension officer to determine the ground truth
    - U-Net derived BMPs match pretty well - reasonable accuracy. Experts reviewed discrepancies. Compared the human identified data with the DL data outcomes with the help of experts. DL recognizes some areas that humans can miss and vice versa
    - Next step - quantifying uncertainty
    - Want to do another round, need to find a student.
  + Updates on Iowa Nutrient Reduction Strategy Farmer Survey
    - The Flux of Agricultural Conservation: Understanding Changes in Iowa Farmers’ Adoption of Cover Crops and No-till over Time, minor revision,

5-year survey of Iowa farmers from 2015-2019 - measure farmer knowledge, attitudes, and behavior related to nutrient management and nutrient loss into waterways, and changes in these over time

* + - Survey sent to 18,728 Iowa farmers, with 9367 completes
    - Sample based on watershed, cover most of Iowa (rotation panel design, sample same watershed in consecutive years)
    - Recent publication - The Flux of Agricultural Conservation: Understanding Changes in Iowa Farmers’ Adoption of Cover Crops and No-till over time, *Society and Natural Resources* (minor revision, hope it will come out this year)
      * Highlighted complex and dynamic nature of conservation practice adoption among farmers
      * Captured fluidity of farmers’ decisions, emphasizing need for more nuanced and targeted policy interventions
      * Requires policy interventions that address regional and spatial differences in conservation practices (one size fits all is not going to be useful)
    - Plots - one-year transition probability of cover crop; of no-till (some back and forth between categories – not a one-way street)
      * Discussion - How to define “adoption”? Running qualitative studies in Penn State to understand how much adoption takes place (instead of just adopt or not adopt)
  + Other survey projects
    - Sun, Hao, Emily Berg, and Zhengyuan Zhu. ”Multivariate small-area estimation for mixed-type response variables with item nonresponse.”Journal of Survey Statistics and Methodology 12.2 (2024): 320-342.
    - Small area estimation for multivariate mixed-type responses
      * Sun, Hao, Emily Berg, and Zhengyuan Zhu “Multivariate small-area estimation for mixed-type response variables with item nonresponse.” *JSSAM* 12.2 (2024):320:342.
      * Many surveys collect information on discrete characteristics and continuous variables, i.e., mixed-type variables
      * Small-area statistics of interest include means or proportions of the response variables as well as their domain means, the mean values at each level of a different categorical variable
      * Zhu and team propose a multivariate mixed-effects model for mixed-type response variables subject to item nonresponse
      * Applied to a survey of pet owners and an erosion dataset from the National Resources Inventory survey with improvements over existing approaches
    - NIJ project on measurement of community perception [have funding, starting this year]
      * FUSE: Fast Unbiased Small-area Estimation for Timely Measurement of Community Perceptions of Policing and Public Safety
      * 3 year project funded by DOJ National Institute of Justice
      * Proposed a three stage small-area estimation approach which leverages multiple data sources and statistical techniques to meet the goal of measuring such perceptions in a timely manner and with a high degree of spatial detail
      * Will report the outcome in future WERA meetings
      * Currently in process of getting IRB approval

##### South Carolina Report (Pierce Greenberg and Jason Kosakow)

* Overview of the Richmond Fed’s surveys [Federal Reserve Bank of Richmond]
  + The US Federal Reserve system - 2 purposes when created by Congress (1923): controls price levels (e.g. inflation) and employment levels
    - Monetary policy discussions - each fed reserve bank represents the specific region they are a part of
  + Decentralized system; 12 reserve banks; system is nonprofits owned by federal reserve banks; work together, but different organizations and separate from board of governors in DC
  + About the Fifth Federal District business surveys
    - Covers the southern mid-Atlantic states
    - Administered monthly
    - Do not produce official national statistics
    - Survey participation is voluntary
    - Mix of convenience and probability sample
    - Phone and web based surveys (missed if they have mail)
    - Cannot provide monetary incentives
  + Recruitment process: outreach to business -> accept/decline invitation; if accept -> FRBR registrs their information -> FRBR sends them an email with link to survey -> business decides to participate
    - Research tries to understand how to build panel
* Testing motivation-based vs social exchange communication strategies in email survey recruitment [paper]
  + Kosakow, J., & Greenberg, P. (2024). Testing Motivation-Based vs. Social Exchange Communication Strategies in Email Survey Recruitment. *Social Science Computer Review*, 08944393241308509.
  + Based on Don Dillman’s work (presented at AAPOR)
  + Assumptions about web surveys & online panel recruitment
    - Internet is a convenient mode for recruitment and administration
    - There is oversaturation among potential respondents due to email fatigue and survey fatigue
    - Web surveys are becoming more prevalent in academic, non-profits, and business settings (especially when sampling frames are available)
    - Lack of research on how different communication strategies within email surveys and recruitment influence important factors like open rates and response rates
  + Figure - Points of measurement in email recruitment (source - “Why do people participate in Web surveys? Applying survey participation theory to Internet survey data collection” Keusch 2015)
    - Base on number of people who open email as denominator (subject line measurement, email message measurement -> conversion rate)
      * Panel management include sending a newsletter and other strategies used
  + Created messages tailored to reasons for participation [non-monetary perks for participating]
    - Access to data and other benefits
    - Influence economic policy
    - Make their communities better
  + Subject lines
    - Stay Up to Date on Economic Conditions: Survey of North Carolina Businesses
    - Inform Economic Policy: Survey of North Carolina Businesses
    - 2 others
  + Example text (email segment) for each of the four communication strategies - tried to use language from previous open-ended responses
    - Discussion - how to do when trying to reach different language groups? Should include something about English/Spanish options available in subject line given limited characters
  + Email test
    - Recruiting methodology - Administered via Qualtrics
    - Coverage - manufacturing firms in North Carolina (headquarters and single-location companies)
    - Sampling list - commercial vendor specializing in the manufacturing sector
    - Timeframe - initial email Oct 31, 2023; follow-up email Nov 29, 2023
    - Sample balancing - firm size, region, and “high quality” email address
  + Sample size - a little over 1200 overall
  + Hypotheses
    - Tailored appeals in subject line will lead to higher open rates compared to generic social exchange theory
    - Tailored appeals in message body will have higher response rates compared to generic social exchange theory
    - Effectiveness of tailored approaches in boosting response rates will mirror the salience of each appear
  + Issue with measuring if emails have been opened
  + Findings
    - Social exchange subject line had the highest open rate (50%) vs for access to data and other benefits (42.4%, lowest) [stat sig.]
    - Social exchange email content had highest conversion rates (7.2%) vs for access to data and other benefits (2.9%, lowest) [stat sig.]
  + Remarks
    - The social exchange messaging performed best
      * Individuals prefer to know why you are contacting them early.
      * Establishing trust in email outreach is difficult. Incentives serve as an act of trust.
    - The explicit incentive messaging (access to data) performed worst
      * Volume of emails received is overwhelming
    - Message importance varies person-to-person
* Research on the effectiveness of rural specific communications in mail outreach
  + Will “rural” communications influence rural business owners’ mail response?
  + There is evidence that written communications in appeal matter.
  + Greenberg and Dilman (2023) in rural West Virginia
  + Basic social exchange appeal outperformed a highly tailored pre-suasion approach
  + Idea - rural communications could matter. There is a growing body of literature on “place-based” identity and its role in politics and public opinion. There is also growing recognition that urban-rural political ideologies are diverging - in ways that are contextual.
  + Methodological challenges
    - How to define “rural” businesses from sampling frame?
      * Many potential ways - county type (RUCC code), metropolitan/non-metropolitan, etc.
      * Richmond Fed interested in specific CBSAs (core-based statistical area) - but smaller metros do not have true non-metropolitan areas, but a mix of county types
      * Within CBSAs, differentiated between urban and non-urban
      * Urban areas are defined as encompassing 2000 housing units or 5000 people, residential and business identity – but def not great
      * We placed the cut-off for “rural” at urban areas less than 25,000 population and non-urban areas
        + There could be some boundary problems
        + Could try to control for this in results
      * Later got funding to add West Virginia
    - How to conceptualize “rural” communications?
      * Example text - standard and rural versions of communications
      * Mention get fewer responses from businesses outside of large cities
  + Theory - why would we expect rural communications to resonates with rural business owners/managers?
    - Social exchange theory
    - Leverage salience theory
    - Rural identity
  + Barriers to implementation
    - Mailing scheduled for early October
    - Sept 27, 2024: Hurricane Helene devastates two of our study areas: Greenville, SC and Asheville, NC
    - Drop Asheville, NA and delay Greenville
    - Got additional funding to do West Virginia, pushed things back a bit
    - Sampling frame and groupings - sent ~ 350-750 to each group
    - Mailing procedure
      * Mailed surveys the week of Dec 9
      * Timing not ideal with holidays (businesses may be busier around holidays)
      * USPS overloaded - mail may be delayed
  + Disappointing results
    - Sign up rates < 1% in each group
  + Discussion
    - Without an incentive, these results are perhaps expected - survey vendor reported results were not far off from other business mailings
    - Maybe timing hurt us
    - Could focus on more contacts to help increase response and/or send postcard
* Next steps and feedback requested!
  + More funding for mailings this spring
  + Where help is needed
    - How to improve methodology to get more usable data (within limitations of the Richmond Fed)?
    - How to improve the measurement of “rural?”
    - How can we improve conceptualization of “rural communication?” What are other relevant theories/literature/studies?
* Questions/discussion
  + Do people understand what a “business panel” is (or a panel in general)?
  + Issues with asking people to use personal vs business phone?
  + Could include information slip? Not part of cover letter so it doesn’t get too long. Is putting logo of Fed useful if people don’t know what it is? Maybe add Clemson logo to make it seem more legitimate? Research on diminishing returns the further you get from university. But does not feel appropriate for this study given Clemson’s limited involvement.
    - Do people know what the fed reserve is or does
  + Mention confidentiality in cover letter (not there now).
  + Idea of starting with a very short survey and then at the end ask if people would be willing to participate in more surveys like this
  + Including some pre-mailing information to ask people to look out for information that will come
  + Add more bolded text to cover letter?
  + Rural version has more words - shorten it/make similar length?
  + A little confusing about sign up for panel vs. take survey (e.g. mention how long survey will take). Maybe call it a “research study” instead?
  + Think about if email will go to spam if use word survey - there might be a site where you can check things like this.
  + “Rural” as a subjective view - moving from a big city to start a business versus moving from a small town to a larger town
  + Include a question on whether people self identify as rural and then use the data to compare to the methodology finally chosen to define the rural area. Could also be used to address future communications in the style that a respondent specified.
  + If interested in self-perception, seems important to ask people. Consider adding questions.
  + Be careful of phrase “rural business” - does this have implications?

### 1:30 - 5:00 pm - State Report Outs

##### Montana State University (Greta Linse)

* About us
  + University core facility at Montana State Universit - Bozeman
  + Enable data collection, cleaning
  + Staff - Director Eric Raile (political science); facility manager Greta Linse (math and statistics); 7 undergraduate students; staff research scientist
  + Funding - primarily fee for service; social data is supported by Montana INBRE and is an element of its Data Science Core
  + Clients throughout MSU and beyond, with over 225 projects to date
  + Clients have included those associated with the State of Montana government, nonprofits, etc.
* Goals - advance survey science research
* Community Health Needs Assessment Surveys
  + Client: Montana Office of Rural Health
  + Part of compliance for rural hospital IRS non-profit tax requirements
  + Between 6-10 communities surveyed every year
  + Each community surveys up to 800 residents [probability sample if > 800 people in community]
  + Response rates are typically between 18-25% [consider this good]
  + About 2% complete the survey online (link and QR code provided)
  + 5 weeks to complete; have tried follow-up postcards, but don’t seem to help
* Montana Extension Surveys
  + Various projects across extension services, including:
    - Food preservation knowledge and habits survey analysis
      * Provided consultation support to researcher in data cleaning and weighting post survey
    - Diagnostic lab user satisfaction survey
    - Teacher professional development preferences
      * Published via social media since did not have frame; concerns about data coming from real people
    - Antibiotic use for beef producers and veterinarians
      * Not a probability sample, on hold because of funding
* Idaho Dairy Community Perceptions
  + Stratified random sample of several zip codes with a dairy presence
  + Working in conjunction with researchers at University of Idaho through an external firm
  + Goal is 500 responses (a little less than 400 right now)
  + Survey booklet, follow-up postcard, with online completion option only through QR code access
    - Some QR codes were coming mangled through the mail
* H5N1 in US Dairy Cattle
  + Survey of sample of veterinarians nationally
  + Stratified sample of large and small animal vets
  + Sampling frame provided by client
  + Email was considered but due to shared practice email addresses were disregarded
  + Goal is a 10% response rate, currently at 11% with data collection ongoing
  + Purpose: how to frame risk messaging and narratives?
* Considerations of state survey research
  + Survey weighting
    - Better handle on new survey weighting methodologies
    - How do surveys by text message with 2% response rates get weighted?
    - What methods are you using? (anything based on mode?)
    - Should mode be considered when survey weighting?
    - Potential research topic: survey weights and random forest methods [potential topic for Greta’s PhD]
  + Online responses
    - Dealing with bots and GenAI written responses
      * In which types of surveys are we most likely to have to deal with this?
      * How to detect/deal with? By hand? Duplicates?
    - Non-probability samples and panels
    - Reporting of response rates
    - Blended samples (online panel + probability samples) - response rates and margins of error
    - Hidden populations - sampling car resident populations (unhoused, snowbirds)
      * Snowball sample, or put QR codes out in public - but these don’t seem to be good approaches
      * Login code/verification needed so know respondent is a real human?
  + Facility challenges
    - University closed the on campus print shop
    - Move printing the small jobs in house
    - Large jobs are contracted with an external printer
    - Students are under paid compared to other on campus jobs
    - Post office changes could drastically affect our best way to collect data
    - Maintaining access to census data for population information for survey weighting
  + Public perception concerns
    - Confusing demographic questions with “DEI”
      * Open-ended gender vs multiple choice
        + Has open-ended gender been a problem (people write in nonsense)? - anecdotally from the group, no; and not a ton of non-response
      * Race
      * Getting more refusal for these questions
    - Will public perception of surveys continue to degrade?
      * Attitudes toward research will percolate to attitudes toward surveys
    - Attacks on higher education institutions impacts on future survey research
      * A lot of funding is contingent
  + Research and grant concerns
    - Unknown future for universities and grant funded projects
    - Researchers need help with program evaluation
    - Will there be a continued need for statistical consulting/analysis assistance
    - Should we advertise not for our projects but to increase the public perception of our value
* Summary
  + - Continuing business as usual but trying to prepare for drastic changes in the future
    - Thoughts, suggestions, collaborations!
* Discussion
  + Weighting – Katie Walsh report will be publicly available in next few weeks, about hunter population - cell weighting versus raking. Has created some excel resources that can be shared
  + How to assess how big of an issue public perceptions are? Could add questions to survey
    - Run phone surveys among non-response - Katie Walsh found that University related distrust was not a major issue among anglers in three states
  + Some concerns with time of year - December, USPS stops processing BRM and slow, particularly in smaller towns

##### New York Report – Cornell University (Katie Walsh)

* Cornell’s Center for Conservation Social Sciences (CCSS) [previously HDRU]
  + Largely a survey-based lab
  + Conduct quantitative and qualitative social science focused on human dimensions of natural resource management since the early 1970s. 75% FTE Aide & undergrad RAs
  + Long-term partnership with NYSDEC Bureau of Wildlife
  + Current funded projects also from USDA APHIIS, USDA NIFA, DOE, NSF, and NYS Dept of Ag and Markets
* A comparison of survey methods to collect game harvest data
  + The New York State Department of Environmental Conservation (DEC) monitors small game harvest through an annual survey of small game hunters.
  + DEC may rely more heavily on online surveys in the future.
  + In 2023, CCSS staff compared mixed mode to online-only approaches for collecting data on small game hunters
  + Implementation:
    - Mixed-mode - every winter, staff in DEC send 3-question screening postcard to random sample of licensed hunters. ID 700-800 people who report they hunt small game and are willing to participate in harvest survey. DEC maintains a 3-year running sample of small game hunters. Total sample in 2023 was 2341, 1033 of whom provided an email and asked to participate online. Remaining were surveyed via mail. 753 completions (34% response rate)
    - Online only - sent survey invitations to 50,000 randomly selected licensed hunters in NYS (inclusive of all hunters). 4 wave emailing approach. Deliverable set of 47,206 records, 8288 completions (17.6%); but 38.5% (n=3191) of respondents were small game hunters
      * Concerns about survey fatigue
  + Results were comparable
  + Experiment about embedding first Q in email invite message
    - Response rate was 10% higher when the first question was embedded (do you hunt small game, yes or no)
    - Will pitch do do 50% of this in next approach
    - Had to reorder for IRB since this first Q appears before informed consent
  + Report will soon be publicly available, Katie W will share
* Survey of licensed anglers in the Great Lakes: Sample acquisition - it was a rough road!
  + Low response rate project
  + Creating data sharing agreement to get list of licensed anglers was a real challenge
  + Could not get sample from Michigan DNR - Cornell Sponsored Programs & Michigan DNR could not agree to data-sharing agreement contract terms
    - Said they would have to pay for credit monitoring if there was a data breach for upto 2 years, even though not considered PII by Cornell
  + 2000 licensed anglers each from Ohio, New York, Wisconsin (split sample - political affiliation question)
  + Utilized 4-wave mailing approach
  + Overall response rate 12.5%, higher by mail than by web
  + Wisconsin Anglers split sample - political affiliation Q (with - 11.2% RR, without 11.7%); 5 point scale of political affiliation from very liberal to very conservative; question at end of the survey
* Random sample from NYS property tax rolls: targeting landowners of property desirable for large-scale solar
  + High response rate project
  + Criteria
    - Property owners of 30 acres or more
    - Tax classifications including rural, agricultural, vacant, etc.
    - Within 1.5 miles of electrical transmission lines or within 3 miles of electric substations
  + 4 wave mail survey implementation (with QR code) in Oct 2023
    - Adjusted total response rate 41.2% (of respondents, online 19%, mail 81%)
* Nonrespondent phone interview trends
  + It is becoming more time-consuming and costly to conduct non-respondent telephone interviews to assess non-response bias
    - Non-working/bad telephone numbers
    - Viewed as spam call
    - Schedule to complete calls is limited (sometimes did up to 4 calls, managed with Google sheet)
  + Less confidence that the responses are actually representative of nonrespondent population
  + Review recent non-respondent phone interview data from Voxco CATI software we use and plan for upcoming project to assess non-respondent phone interview trends
  + List of recent non-respondent phone interview projects
    - Projects: small game harvest (separate for mail and web); fisher trapping (separate for mail and web); antlerless deer (separate for mail and web); large-scale solar (web & mail); aquatic invasive species control (web & mail)
    - Sometimes only have 1-4 weeks duration to follow up
    - How long did someone need to be on phone to get one completed interview? Depends on quality of phone number. Range 11-81 minutes.
    - Example: ⅔ of people in aquatic invasive species control project didn’t even remember getting survey, despite 4 contacts
  + Survey trends - in the process of building a dataset of phone interview data from 289 HDRU/CCSS reports (1976-2004) to assess nonrespondent phone interview trends.
* Discussion
  + How do you do mail survey implementation? Katie W uses booklets - envelope with cover letter, complete is booklet. Then there is a resealable label at edge of booklet. Then business reply is on the back so they can drop in the mail. Seems to work well, except have to individually apply the resealable labels at the edge. Want to find efficiencies.
    - Greta - just use 8.5x11 pages of paper, run through folding machines, standard reply envelopes; sometimes printing company can do folding
    - Anil says they do the same approach
    - Jessica S uses 8.5x11 envelopes, so bigger pages to print initially that get folded. So they get a bigger more noticeable packet.
  + Jessica G - is it worth it to do all the phone calls? Is it to get more completes? Or to find ineligibles?
    - Will stay the course, because want to test differences between respondents and non-respondent populations.
    - But software and labor are expensive.
    - Nonrespondent phone interviews are actually more valuable than having them complete the survey (and often they just say they will complete the survey as an out)
    - Jessica G mentions using this to improve response rate if remove ineligibles (estimate this based on nonrespondent interviews)
    - What about texting as a mode rather than calling? Can also do better times during the day (not 5-8 pm, when phone calls occur)
      * If it is a person clicking the button, apparently this is ok. Have to get on a registry. Ok for academic, non-political reasons.
    - Have company match addresses to phone numbers for nonresponse follow-up, about 55% can be matched.
    - What to do with non-respondent/respondent comparison? Sometimes adjust weights, always discuss context in report.

##### Penn State University (Anil Kumar Chaudhary)

* Project 1: Promoting Effectiveness of Extension Program Evaluations Through Understanding the Accuracy of Outcomes Self-Reported Measures
  + Self-reported measures (e.g., pre-post surveys) are predominantly used to capture outcomes
  + Subjective estimate of participant’s knowledge, attitudes, behavior, or practices
  + Assumption – self-reports represents actual knowledge or behavior of individual
* Even with mixed results on self-reported measures capturing outcomes they are widely used due to (Kormos & Gifford, 2014; Sallis & Saelens, 2000; Tarrant & Cordell, 1997):
  + Ease of use
  + Ability to collect data from larger audiences at low-cost
  + Flexibility in data collection
  + Easy to collect data on behaviors that are hard to observe on a large scale otherwise
* Literature questioned reliability of self-reported measures due to:
  + Under and over-reporting of knowledge and behaviors due to social desirability bias
  + The subjective nature of self-reports
  + The possible effect of limited cognitive understanding and memory on the accuracy of self-reported behaviors (Kormos & Gifford, 2014)
* Self report (pre-post surveys)
* Need for study
  + ​​The objective of this research project was to test the validity of self-reported measures used by three Extension programs in three states (Pennsylvania, Florida, and North Carolina). Specifically, we wanted to:
  + Test the relationship between subjective (perceived) and objective constructs
  + Assess whether subjective and objective knowledge scores predict the perceived behavior change
* Data Collection
  + Selected 3 Extension programs in 3 Extension systems
    - Master Gardeners - University of Florida Extension System - UF partner
      * Pretest and post test surveys measuring subjective knowledge and perceived behavior change; 58 pretest and 41 posttest, 34 response pairs [Likert scale questions]
      * New tools to measure perceived versus actual change
    - Cook Smart Eat Smart - NC extension partner
      * Pretest and post test surveys measuring subjective knowledge, objective knowledge, and perceived behavior change; 69 objective knowledge pairs, 58 perceived knowledge pairs, 53 cooking behavior pairs [Likert scale questions]
    - Dining with Diabetes - Penn State Extension
      * Pretest, post test and follow-up surveys measuring subjective knowledge, objective knowledge, and perceived behavior change; food and exercise log
      * Used methods such as asking another person in the household to answer the questions (like husband, partner, parent,etc)
      * Ask to keep a food log and exercise log (for 3 random days)
  + Data analysis - standard stat methods (paired t-tests, regression)
  + Published paper with results in Florida
  + Florida
    - Master Gardeners (paired t-test) - yes, significant results between pre and post test
    - Subjective and objective knowledge are correlated post intervention but not pre intervention
    - Only subjective knowledge before training was a significant predictor
    - Sample size varied from 60 to 80
  + NC - subjective and objective knowledge were not significant predictors
  + Pennsylvania - preliminary findings
    - Pre tests, post test, and 6 week follow up test
    - Significant difference between subjective knowledge - pretest, posttest, and follow-up test
    - No significant difference between objective knowledge - pretest, posttest, and follow-up test
    - Significant difference in subjective behavior - pretest, posttest, and follow-up test
    - Issues in Penn - ran the pre test and the post test was conducted by educators - led to poor response rates in the post test
* Conclusions
  + Significant difference in subjective, objective knowledge (except Pennsylvania), and subjective behavior over time periods
  + Across states and programs, some subjective and objective knowledge measures [...]
* Project 2 - Water Quality with Plain-sect community [Amish - no technology]
  + Understanding drinking water quality, agricultural practices, human, and animal health
  + Pick-up drop-off method
    - 54 surveys distributed with 33 complete (61.1% return rate) {this was related to the 6 week follow up test}
    - Reached out to almost all of 100 farms, got 54 agree to participate
  + More details will be shared next year
  + A lot of work to build trust with local stakeholders/community
  + Used snowball sampling method starting with focus group
    - Non response due to social structure and worry about being recorded
  + Hook was free water testing to get people to talk to researchers
  + Sample size = 100 farms and 54 agreed to complete with 33 complete (61% return rate)
  + Validated questionnaire from community leaders - low literacy rates impacted response with matrix type questions being hard - asked to change to yes and no format
* Questions for the group
  + Some incomplete responses, most in follow-up. How to create index (e.g. for perceived knowledge) with a lot of blanks? Still have some useable data.
    - Could try imputing if drop-off is random
    - How to check missingness in the data - using item or demographic information
    - Same instrument between all 3 waves. Lots of people don’t complete the follow-up, but pre- and post-test are ok.
    - If it is not a validated instrument
      * Use item sub-response as long as it is below a particular value (determined by researcher?)
      * Use the mean of the measure
      * Percentage of items completed
      * Check if it related to any specific demographics that matter
* Publication - Joshi, A., Diaz, J., Chaudhary, A. K., Jayaratne, K. S. U., & Galindo, S. (2024). Enhancing effectiveness of Extension program evaluations by validating the trustworthiness of self-reported measures of Extension program outcomes. *Advancements in Agricultural Development*, 5(4), 59-71.

##### Missouri (Hua Qin [not present] and Garima Srivastava)

* No presentation

##### Washington State University (Jessica Goldberger, Edem Avemegah, and Beth Prosnitz [not present])

* Jessica: Farmer surveys - past, present, and future
* Conducting farmer surveys can be challenging
  + Time constraints
  + Survey fatigue
  + No perceived benefits
  + Mistrust of outcomes
  + Limited Internet access
  + Anonymity and privacy concerns
  + Survey design issues (complexity, length)
  + Survey timing (planting, harvesting, weather events)
  + Negative past experiences
  + Cultural and communication challenges (e.g. Spanish-speaking?)
* Farmer survey work (2002-present)
  + Grad school (2002-2004)
    - Upper midwest corn and soybean growers
    - Mail only
  + First years at WSU (2006-2009)
    - WA wheat growers
    - WA/ID certified organic farmers
    - Mail only
  + Bulk of WSU career (2009-2016)
    - WA apple growers, WA/OR per growers, CA walnut growers, PNW potato growers, PNW grain/forage growers
    - Mail and web
  + Present day and beyond (2024-)
    - CA strawberry growers (in progress) - with Beth P.
    - WA potato growers (in prep) - with Edem
    - Mail and web
  + What have response rates been like over this period? Declining from ~50% to ~10% (strawberry survey)
  + Can’t keep doing surveys if get 10% response rate
  + Advice on how to move forward given low RR. Know lots of good data will come from qualitative work.
    - Potential way forward to consider
* Strawberry project
  + Strawberry growers’ decisions regarding plastic mulch end-of-life management
  + In-depth qualitative data collection
  + Survey of California strawberry growers - including Cal Poly, have Driscoll on advisory board, CA strawberry commission
  + Mail and web survey
  + Mailing list of 1014 CA strawberry growers, email addresses for ~85% of list
  + Timeline
    - Nov/Dec 2024 - two mailings with survey booklet, one reminder postcard, four emails with link to web survey
    - Mid-Jan 2025 - 9% response rate
    - Late Jan/Feb 2025 - Phone calls to 200+ nonrespondents
      * Increase completion rates or analyze the non respondents
    - Early March 2025 - final mailing with survey booklet, final email reminders with link to web survey
    - Early April - close survey
    - April 2025 - data cleaning / descriptive statistics
    - May 2025 onwards - data analysis / presentations / papers
  + Dispositions - 73.4% no response; only 25 completes on paper; 56 web completes (46 English, 10 Spanish); 21 partial completes - not sure if will be useable
  + What to do to get more responses? Causing anxiety, also for how it relates to potato project with Edem
* Potato Project
  + Insect pest management decision-making on US potato farms
  + WSU team + ISU team (4 sociologists!)
  + Two primary areas of interest for WSU team:
    - Potential phase-out of neonicotinoids…
    - Use of WSU Potato Decision Aid System (WSU Potato DAS) tool
  + Mailing list options for first survey
    - ~1000 recipients of WSU potato alert emails
      * Diverse group tied to potato industry
      * 40% in support toles / 20% outside WA
      * No control over list / no tracking ability
    - 216 subscriptions of WSU-Potato DAS (decision aid system)
      * Biased (pro-technology) group
      * 60% active users of WSU-DAS
      * No control over list / no tracking ability
      * [survey asks questions about this decision aid system tool]
    - ~200 WA potato growers
      * WA State Potato Commission list + other names
      * Email addresses for ~80% of list
      * Control over list / tracking ability
  + Ideas for improving response rates
    - Use extension agents (or educators) to visit farms to try to get people to participate
    - Strawberry low RR may not apply to potatoes because different context - WA, smaller, could emphasize University partnership to local region
    - Make the survey look like it’s coming from WA State Potato Commission? Not a possibility
    - Since the universe is 200, Pick-up and drop-off method? 90% of growers are in Columbia basin
    - Growers are big companies. Who is actually on the email list? Seems to be owners of farm, and personal email not general info. But don’t know how they screen their email.
      * Includes list of owners, people within certain companies and some general emails as well
    - Use the extension email information when designing “reply to” or some “name recognition”
    - Have never used incentives, probably would not be effective. Don’t want to offend people by undervaluing their time.
    - Survey burden is a real challenge - USDA asks a lot of these pops.
* Edem: Postdoc at Washington State University; previously GRA at South Dakota State University and Utah State University
* Area: Understanding farmers’ behaviors and attitudes, best management practices for surveys of ag
* Survey Experiment: South Dakota Farmers - Paper: Avemegah, E., Gu, W., Abulbasher, A., Koci, K., Ogunyiola, A., Eduful, J., ... & Ulrich-Schad, J. D. (2021). An examination of best practices for survey research with agricultural producers. *Society & Natural Resources*, *34*(4), 538-549.
  + Effects on response rate based on mode
  + $2 pre incentive increased response rate, so did providing multiple modes
* Survey Experiment: Chesapeake Bay Watershed Farmers
  + Incentive improves response rate - 0 to $2 has a significant improvement in response rates
  + Difference between $2 and $5 was not statistically significant?
  + Color vs print (plain) postcard. Plain was slightly higher response rate.
  + Did sending additional copy of survey increase response rate? How about chance of winning $200 gift card? Sending additional copy of survey was more useful than lottery.
  + Other additions to branding - have a logo that goes through all the material
  + Discussion about lotteries - tell people what chance they have of winning? Jessica S says in general lotteries don’t work well.
  + Jessica G - idea of looking at regression of RR over time by farmer surveys in particular

##### Idaho State University (Kenny Wallen - virtual)

* WERA-1010 Website
  + Draft: <https://sites.google.com/view/wera1010?usp=sharing>
  + Kenny will send rubric for us to self-report info, give headshots, etc. after meeting to update on website
* WSU Social & Economic Sciences Research Center
  + Continue to coordinate and collaborate with Lena Le and Thom Allen on survey research methods curriculum, graduate courses, and professional development workshops
    - Wallen, K. E., & Le, L. (2024, March). Introduction to survey research design and practice. Workshop instructor at the annual meeting of the Idaho Chapter of The Wildlife Society, Coeur D’Alene, ID, USA.
    - Invited Lecture. (2025, March). Practicum in survey research (SOC 525). Washington State University of Idaho, Pullman, WA USA.
      * Don’s course. Still ongoing.
* Current Projects
  + Idaho Land Exchange Public Opinion Survey: Valley County, ID
    - ABS survey being implemented in county with 75% seasonal resident and second homes
    - Sampling, printing, and mailing via Marketing Systems Group
  + Idaho Fish and Game Department
    - White-tailed deer hunter opinion survey
    - Goose management hunter opinion survey
    - Black bear management hunter opinion survey
    - Hunting and advanced technology opinion survey
    - Hunter education program evaluation survey
    - Governor's wildlife partnership tag opinion survey
    - Motorized hunt rule opinion survey
    - Fishing regulations opinion survey
    - License fee snap poll
* Relevant Publications and Reports
  + Wallen, K. E., Hammell, A. E., & Dentzman, K. E. (2025). Diary method to assess survey invitation frequency and survey experience. Survey Practice.
  + Detoeuf, D., de Lange, E., Ibbett, H., Gupta, T., Monterrubio Solís, C., Mavakala, K., Capatani, M., Kretser, H., Milner-Gulland, E. J., Brittain, S., Newing, H., Fariss, B., Spira, C., Eyter, H., DeMello, N., Wallen, K. E., Thornton, S., Bennett, N. J., & Choo, L. L. (2025). Gap analysis of social science resources for conservation practice. Conservation Biology. <http://doi.org/10.1111/cobi.14463>
  + Wallen, K. E. (2024). Psychometric adequacy of a survey attitude scale. Survey Practice, 17, 1–9. <https://doi.org/10.29115/SP-2024-0016>
  + Wallen, K. E., Robinson, K. W., Redmond, N. T., Shaw, K. E., & Vaske, J. J. (2024). Reflections on twenty-five years of Human Dimensions of Wildlife: A scoping review. Human Dimensions of Wildlife. <https://doi.org/10.1080/10871209.2024.2364750>
  + Redmond, N. T., Wallen, K. E. (2024). Predictors of carnivore tolerance among census-designated and self-identified rural and urban residents in Idaho, USA. Human Dimensions of Wildlife. <https://doi.org/10.1080/10871209.2024.2413975>
* Discussion - how to do work in touristy/high seasonal area, where permanent residents of county are only ~25%? Want to survey both permanent and seasonal residents. Working with MSG, got a lot of PO boxes because most homes are not occupied.
  + Greta - Big Sky Health Needs survey - pick-up drop-off option? Won’t work here - no time, money
  + Jessica S. mentions a paper - Information for communities with a lot of seasonal residence - Jennings, B. M., & Krannich, R. S. (2013). A multidimensional exploration of the foundations of community attachment among seasonal and year‐round residents. *Rural Sociology*, 78(4), 498-527.
  + Timing seems important - influx of residents around Memorial Day.
  + Price of first class mail will go up in July.
  + Exploring the option for op-eds prior to survey in May and June (get county/city to do some work)
  + Katie W wants to reach out to Kenny to talk about wildlife-related surveys and processes

### 5:00 - 5:30 pm - Topic Discussion: Artificial Intelligence and Machine Learning in Survey Research Potentials, Problems, and Institutional Acceptance

* How are people using AI in survey research?
  + Coding open ended text questions
  + Automating scheduling and reminders - removing logistical burden
* Concerns about privacy and ethics etc
* Katie D - ran a simple experiment and processed the data using AI - but did not answer correctly
* Sam - discussions from OVPR and privacy. What are university policies?
* Are you using some way to silo the data on chatGPT etc (local AI) - Anil mentions work by a student [not sitting on the cloud]
* Using AI for triangulation (chatgpt) after 2 researchers worked on it - research was inconclusive on use
* Regular AI - brainstorming, language correction, improving quality and not for data analysis
* Working on a program for a siloed system which uses AI for the analysis. Data does not leave the university. In initial testing phase. Adding scripts to create more replicability and reproducibility
  + Use it to confirm theories and not generate new ones
* In australia - banks using it for analysis on prices, inflation, wage growth and created forecasts that matched better for normal times
* Zhengyuan - use chatGPT every day to write emails, rec letters, reports, etc. But make sure to test when do analysis, because gets it wrong quite frequently. And changes dynamically - ask at a different time and get a different answer.
* Non parametric tool to analyze data
* Do not use it to ask questions as it tends to not factor in more recent information
* Can simplify use of codes like stata and R
* Use google and other news sources to fact check the chatGPT
* Can use it to gather information from previous years
* Anaka - example - Used google LLM on slides to create exam
* Regular generative AI (chatGPT, Gemini) which do word prediction; newer models can actually query themself if the answer is correct. Then once model agrees, will give result. Why newer models take longer. More refined models. Hard to know what you’re getting since black box and don’t fully know how the model is trained.
* Zhengyuan gives examples of comparing chatGPT vs Gemini vs Deepseek
* UVM asking to use Microsoft CoPilot/test. Oregon State has CoPilot as well. Others have chatGPT.
* How survey respondents might be using AI in panels?
  + Social bias - want to use “right” answer - thought it was a quiz
  + Fraudulent answers - possibly if need to have word count in required answer?
  + Does Qualtrics have an option to restrict pasting?
  + Age might be a determinant to the use of technology
  + Related to idea of bot responses in lower quality surveys, like in Mechanical Turk
  + Anil shares paper - “AI-powered fraud and the erosion of online survey integrity: an analysis of 31 fraud detection strategies” <https://www.frontiersin.org/journals/research-metrics-and-analytics/articles/10.3389/frma.2024.1432774/full>
  + Goodrich, B., Fenton, M., Penn, J., Bovay, J., & Mountain, T. (2023). Battling bots: Experiences and strategies to mitigate fraudulent responses in online surveys. Applied Economic Perspectives and Policy, 45(2), 762-784.
  + One indicator is many Qualtrics surveys that start at exactly all the same time, or filled out in the middle of the night, or IP addresses outside of expected area
  + Add some “gotcha” questions - like on this question, have to pick strongly agree.
  + Are there efforts on guidance about AI in survey research? (at university level or other) How about guidance for teachers (at all levels) about how to use tools.
  + Zhengyuan - department going to hold a workshop in AI and statistics
  + AAPOR - This year is going to have multiple track sessions on AI in survey research (<https://aapor.org/aapor-80th-annual-conference/>)
  + Careful open-ended question prompts may be a good way to detect fraud. But bots are learning.

# DAY 2: February 21, 2025

### 8:30 - 10:30 am – State Report Outs

##### Oregon State University (Katie McLaughlin)

* Associate professor in the statistics department
  + Works on social science data
  + Director as of January 1st from Ginny
  + Caveat - day to day operations began in October 2024
* About the OSU Survey Research Center
* A few recent SRC projects
  + 2024 Oregon Department of Transportation - Transportation Needs and Issues Survey (done every 2 years for over 20 years)
  + OSU College of Science Undergraduate Matriculation Survey (has interesting incentives)
  + Willamette Valley Farmer Vole Survey (Agriculture survey - impacts of Vole in the Valley)
  + Others…
* Discussion questions
* OSU Survey research center
  + Established in 1973
  + We are a small center housed within the Statistics Department
  + Director (0.5 FTE), currently have 1 faculty research assistant (FRA) and 2 graduate student researchers (GRA)
  + Funding for some salary from College of Science and College of Agricultural Sciences
  + Mainly fee-for-service center, with some research components
  + Comprehensive survey services and statistical expertise - expertise from to design, to implementation to interpretation, report writing, through the process
  + Variety of clients, including
    - Internal to OSU (College of Ag)
    - Other internal to OSU (non-Ag)
    - State and federal agencies - DoT, DMV, Fish and Marine board
    - Some others
    - Works on data across research and campus and meets needs across the group
  + Teach classes on Survey Methods (ST 539) and Sampling Methods (ST 531) at various levels - graduate and undergraduate levels

2024 Oregon Department of Transportation - Transportation Needs and Issues Survey (done every 2 years for over 20 years)

PI - Goal Oregon ODT

* Goal: understand Oregon residents’ opinions on a number of issues related to transportation in Oregon - potholes, tax dollar, stop lights
  + Conducted every other year by OSU-SRC since 2006
  + 2006 and 2008 surveys conducted via telephone, mail, and the Internet
  + Telephone mode was dropped in 2010
  + Mail and Internet continue as the two modes used to collect survey response data

Design:

* + Stratified random sample of household addresses in each of the five ODOT regions
  + on=1500 per region (total sample 7500)
  + Experimental groups utilized to investigate differences in response rates given a mail (All Mail) versus combined web and mail (Web+Mail) mode of data collection
  + Both groups consisted of a sample of 3,750 household addresses, with 750 addresses located in each of the five ODOT regions.
* Implementation:
  + Up to four contact attempts were made to each sampled household.
  + Prenotification (or preletter) was a cover letter on ODOT letterhead introducing the study and the OSU-SRC as the data collection unit. (In May, then first contact, 10 days later, 2nd contact - post card, 4th and final attempt - 4 weeks later for the all mail group with a all replacement packet with cover letter and URL)
  + Up to three additional contacts for all groups were made using OSU-SRC materials/letterhead
* Weighting based on stratified design, different response rates per region, poststratification for nonresponse based on age and education level (selected based on previous research)
* 1328 questionnaires (17.7% response rate, there were not many undeliverables)
* All mail (19.4%) and Web Mail (16.25%)
* Response rates over time and combining all experimental groups - reduced from 25% in 2006 and 18% in 2024.
* Questionnaire has changed over time a little - includes electric vehicles - 93% do not drive EV (only 5% do) - 62% of these said they would drive more if there were more charging stations. Among those without EV, 51% dont want to switch

OSU College of Science Undergraduate Matriculation Survey (has interesting incentives)

PI - college

* Goal: ask newly matriculated freshmen and transfer students in the COS what factors were instrumental in their decision to enroll in OSU-COS
* List of newly matriculated 2024 fall term COS freshman and transfer students obtained in October 2024 - sent out as multiple email blast on a well developed list
  + N=1371
* Contact name, email address, some demographic information such as major, option, transfer status, gender, race, and international status
* Up to 3 email contacts from Associate Director of Undergraduate Student Recruitment’s email address
* Two types of incentives
  + OSU “plushy” or $10 gift card promised to the first 50 respondents (to increased timed responses)
  + Five $30 gift-card winners chosen through random selection at the end of the survey data collection (281/322 respondents agreed to participate)
  + These are run to ensure that students feel that these are anonymous.
  + If they want to be considered for the lottery, they connect to the next survey, which collects their information
  + Is this low or not.
  + October 16th - first email, OCtober 24th - nonr respondents, November the final set.
* Results from the surveys
  + Interest in the subject increases motivation
  + Needed for desired career
  + Career prospects
  + High paying job
  + Lowest - 15% - influence of faculty and advisor and mentor

Willamette Valley Farmer Vole Survey (Agriculture survey - impacts of Vole in the Valley)

Individual PI - Dana Sanchez, Professor, Fisheries, Wildlife, and Conservation Sciences, OSU

* Goal: understand vole impacts on Willamette Valley agriculture
  + Understand farmers’ vole control needs
  + Learn how vole impacts vary across geography, soils, and crop systems
  + Understand crop-specific experiences of vole pressure, damage severity, and investments in control
  + Lots of cross tabs that were needed across multiple occupation types - consultant, versus decision making roles.
* Separate surveys for grower/farmer/manager and agronomist/consultant
* No sampling frame, recruitment via PI’s personal connections and through conferences - not random or representative
* Pictures provided on the animal and the damage it causes - and distinguishing between vole and other groups
* Open from september to March (2025)
* Challenges - long survey, skip and piping logic, slider questions, and multiple matrix types of questions.
* Can generate interesting hypothesis but inference might be harder
* Survey method considerations and different ideas for projects

Methods - types of surveys

1.Extension Evaluation Survey, Sam Angima, Extension (2023, 2024)

2.Oregon Drinking Water Quality Survey, Manuel Garcia-Jaramillo, Environmental and Molecular Toxicology (2024)

3.Evaluating Risks and Benefits of Custom Laboratory Submission Platform, Megan Mobley, Crop and Soil Science (2024)

4.Dairy Farmer Survey, Jenifer Cruickshank, Extension (2024)

5.Harney County Groundwater Survey, part 2, Bill Jaeger, Applied Economics (2024 – present)

6.Idaho Water Quality Study, Steve Dundas, Applied Economics (2024 – present)

7.Forest Dependent Species Evaluation, David Kling, Applied Economics (2024 – present)

8.Sheep Mineral Survey, Massimo Bionaz, Animal and Rangeland Sciences (2024 – present)

9.Yakima River Basin Fish Population Contingent Valuation Survey, Alexey Kalinin, U.S. Bureau of Reclamation (2024 – present)

10.Marine Service Providers Survey, Brett Hembrough, PacWave, College of Earth, Ocean and Atmospheric Sciences (2024 – present)

11.Bi22x Pre-Post Survey, Lori Kayes, Integrative Biology (2024 – present)

Discussion questions

Incentives

Monetary versus others

Fixed or lottery

$5 to $3 to $1 or none

Address letters

Pros/cons of sending mailing to specific person (personalized) vs address

Reached out MSG - and found 70% only have full names - can be purchased

Worried about accuracy

Greta -

Purchase names and genders as the standard. Use the household head name.

Post office returned them if the box was closed

Personal approach is anecdotally better - to avoid it going into junk mail

General might need more branding

Things to think about - Capitalization of the name might matter - hence use all caps

Issues related to addressing a farmer with their name - Solution - dont use a name and use a general solution

Alternative to use the group affiliation - “New york hunter” “New York Angler” (Region and specific code) “Producer”

If name is available - use “First name only”

If it is hard to distinguish the name “First name and second name” without a specific honorific term

Promote survey work to agricultural sciences

Meet with a Dean and share

Extension

Planning considerations

Continued feasibility of oversampling from specific groups given low response rates?

Katie (Cornell) - Survey research (for ag sciences or scientific oriented groups) versus social science research. Getting the work done by the Dean for ag - then really matters for the brand recognition.

Zhengyuan - Plan to reach out to Dean and departments. Created a presentation for their faculty meetings. Showing the various projects and surveys that are done. Improved website and provide more web request for services and project information etc. Many start as prospects without funding so think of the long game.

Many of the people don’t really think about social scientists and do their own surveys. So knowledge might be an issue but they dont really know what the services can be provided. They use the cheaper web option. This is also driven by a push for social science research.

Greta - Dont take people at face value. They might not need you for all their services and then reach out as if they dont know you exist.

Katie Walsh - Turn over - among faculty - impacts the ability to keep the institutional knowledge about center.

Pierce - Graduate students with open office hours to get people to come in and check in about the various topics as a light touch.

##### University of Vermont (Anaka Aiyar)

* Health economist, Asst Professor, previous postdoc at Cornell
* Research on health, agriculture, and development (esp. Globally vulnerable communities)
* Macro level: intersectionality of agricultural sciences, food and health, socio-cultural and econ factors in transforming food systems
* Meso level: impacts of policies, safety nets, climate change, on health and food security
* Micro level: inter- and intra- household and community dynamics that impact food security
* Project: Preferences or access: the effects of broadband internet on rural health outcomes
  + Large changes in broadband availability happened around 2013
  + Found to be correlated with business development, etc. - reverse causality
  + More recently, the government has been expanding access to counties missed in the initial phase
  + Focus is on increasing speed of access
* Leveraging Broadband for Enabling Resilient, Sustainable, and Inclusive Communities (new project)
* Rationale for both projects: Cost effectiveness of providing care and programs online
  + Changing rural health landscape
  + Closing down of rural hospitals - increases time and effort in accessing care
  + Training programs pivoted in the pandemic - to deal with stay-at-home policies while reaching target populations
* Objective 1
  + Create a national level panel dataset that captures broadband access, mobile phone access, internet speeds at the MSA level
    - 2004-2023 (ongoing)
    - Block level
  + Create a national level panel dataset that collates all health information across the country
* Results
  + 5 funding programs
    - ReConnect (2019-)
      * Loans and grants for broadband services in eligible rural counties
    - Community Connect (2013-)
    - Broadband Initiatives (2009-)
    - Farm Bill (2018-)
    - Telecommunication Infrastructure Borrowers (2010-)
  + A majority of funded tracts/counties are in code 5 or above
* First stage: internet dataset - panel data with year (2017-2021) and 11-digit census tract code
* Main results from first stage
  + There are no consistent impacts on download speeds (intensive margin) due to the programs
    - Results are not robust to TWEE models like Callaway and Santa Anna
    - Controls groups are no different than treatment groups
  + Funding programs vary by state
    - Infrastructure providers (state or private or NGO)
    - Companies
    - Grant and business models
  + Objective 2: Estimate causality - does broadband access change health outcomes - probably not…
  + Anecdotally, most broadband expansion occurring where there is always broadband - see this story in summary statistics. Companies need incentives to go to harder places, e.g. where no fiber optic cables available.
  + Zhengyuan - what methods use? We did something similar, using difference-indifferences approach. Suggestion to use Ookla, or something similar. Good in places with new service established. Anaka had doubts about using this. But might not be available everywhere, there are gaps.
* Objective 3: Using a multi-method survey approach (web and mailed paper survey, we will:
  + Evaluate the reach and use of SNAP-Ed online programs
  + Evaluate the drivers of demand, i.e., if preferences for in-personal connections or lack of knowledge drives e-program use, conditional on SDOH and a minimum supply of broadband services
  + Identify constraints in broadband enabled technologies for accessing internet drive experience of use of services
  + Identify whether broadband technologies can be leveraged to reach Nevada’s left behind groups
* Survey(s)
  + Nevada Center for Surveys, Evaluation and Statistics (NCSES) to survey a random sample of 600 rural Nevada residents
    - 10-20 minute bilingual survey (English and Spanish)
  + Vermont - Center for Rural Studies, to survey a random sample of ~400 rural Vermont residents
    - 10-20 minute English version
* Timelines
  + Nevada - list from MSG on 14 rural counties, target 600 (expected response 10-11%), Week 1: cover letter + FAQ sheet + QR code to Qualtrics survey; Week 3: post card follow up; Week 4: cover letter + paper based survey; Week 12: Wave N+1 = {1,2,3}
  + Vermont - list from CRS on 8 rural counties, target 600 (expected response 1%); Week 1: email + QR code to Qualtrics survey; Week 3: email reminder follow up; Week 4: email follow up; Week 12…
* Incentives
  + No pre-incentives provided through the survey
    - USDA grant limitation
    - Vermont - post-survey incentive
* Randomization
  + Unique email IDs from a list purchased by CRS. [...]
* Design (web-based)
  + Subject line with cash prize, reinforce cash lottery up front and then project information
  + Subject line without cast prize, reinforce cash lottery up front and then project information
  + Subject line with cash prize, reinforce project information first and then lottery
  + Subject line without cast prize, reinforce project information first and then lottery
  + This creates 4 designs
* Questions
  + Response rates calculator - outcomes to be tested
    - Total clicks to survey / total sent out
    - Total completes / total sent out?
    - Total completes + partial completes / total sent out?
  + Recommended sample size for each group?
  + Standard weighting techniques for online survey estimates?
  + Which demographics predict response rates and other interesting experimental differences?
  + Best practices for comparability of the UNR and UVM results [will go out at same time, but differences in methodology]
* Discussion
  + What to put in the subject line? Cash prize may make it seem like spam, saying take a survey may get people to click away. Suggest putting “research study” in the subject line, perhaps mentioning SNAP.
  + Definition for completes, partial completes - what is methodology for this? They have to do more than open survey and then click away. Some threshold for portion complete.
  + Possible to change design over next iterations (e.g. web+mail format)
  + Can Nevada and Vermont be compared since methods are different? Methods used are confounded with the location, so need to assess if each individual states’ estimates are valid (e.g. assess assumptions, limitations, uncertainty, bias), then, if believe pop-level inferences are reasonable, can compare numbers. Can’t do head to head because of differences in methodology. May be reaching different subgroups with email only vs email+mail survey. Make sure to be upfront about differences in methodology in report/papers.Bui

### 10:30 - 11:00 am – Meeting Planning/Announcements for Next Year

* Glenn Isreal - introduces self
  + Study with extension dean
    - Finished draft of paper with Don Dillman,
    - Currently under review, happy to share draft
    - Appears to be some advantage to including figure with authority when sending communication from survey folks
  + Some data with Pew, UF before retired - items used to identify different subgroups along continuum of Christian nationalism to secularism, and how relates to environmental perspectives. Paper ready to submit within the next few weeks.
  + Continues to maintain the Savvy Survey Series of fact sheets on survey basics at https://edis.ifas.ufl.edu/collections/series\_savvy\_survey
* Items of business
  + Annual report needs meeting notes, publications we have done, outcomes in terms of teaching experience
  + Last year - discussed repository for relevant documents, including presentations from this year’s meeting [perhaps Google drive folder? Katie will create, and we will add to it]
  + Need to clean up email list. Need to add Garima and Edem
  + **Next year’s meeting: Feb 19-20, with ecological sampling seminar the day before**
  + Katie will look into reserving room blocks, cost of meeting “registration” fee. Currently ~$800+tax, ask for voluntary contributions. This year, 7 people did. But know that folks get different levels of support for travel from their universities.
  + Next year/going forward: Bring postdocs, grad students, people from other universities. We can always expand the grant and add people! This is a **multi-state coordinating committee** (we don’t have to submit individual reports) - not a hatch multistate *project*.

### 11:00 am - 12:00 pm – Topic Discussion: Survey Landscape Under New Administrative Priorities

* Funding sources and strategies that people are pursuing for funding
  + Greta knows one project where researcher was concerned about being able to get the money
  + Creative grant/invoicing solutions - bill for labor upfront?
    - For analysis, bill more frequently (e.g. quarterly, rather than at the end of the project)
    - BIll - for printing and implementing (usually around 75% of the costs) and then 25% after project completion
  + Zhengyuan - reached out to federal funders. Response seems to be “don’t know”. Funds from IRA have been paused, not sure if will come back - related to land surveys, farmer assistance, those related to green energy. Some issues with state funds. More scrutiny about expenses such as travel costs. Receipts for everything, rather than just fixed cost contract. State and university reimbursements rates are different which creates a lot of concern. Such a headache, may not keep up with these projects.
* Katie D - Concerns about asking questions about gender, race/ethnicity on surveys. Could this impact response rates? E.g. do response rates drop if include question with gender with expanded categories or sexuality? Seems like yes. Now, could “regular” questions about gender and race get the same response.
  + Greta - now use open-ended gender question; plan to ask minimal demographic questions, only the ones that will actually use
  + Two issues - what funders want, how approach impacts participants (e.g. response rate)
  + Put demographic questions at end of survey (unless screening questions)
  + Katie D - experience with the race open ended was not good. Created data not useful.
* Concern about number and type of funding opportunities that will be available over the next few years. Will there be program officers available to review these?
  + If there are opportunities, how will they limit our work?
* What funding sources do we use?
  + Katie D - Mostly federal, some funding from state, some from commodity groups (inherited)
  + Katie W - 60% state, 40% federal
  + Sam, Anil - all sizeable ones are federal (USDA, NSF)
  + Greta - mix of federal, state, hospitals, pretty well diversified, but don;t know going forward, many from DOD (not as concerned); concerns with NIH funding
  + Zhengyuan - 90% federal funding
  + Sam - pending grant with Alliant Energy (they got money from government)
  + Anil - just submitted to Penn dept of education; a few Penn dept of ag grants; funding cycle begins in May. So far, a lot of money with BMP implementation, no change.
  + Commodity associations in a state might be useful for private grants (e.g. Iowa Soybean Research Center)
  + Jessica G - regional programs, like SARE (<https://www.sare.org/grants/>) , IMP centers – a lot are federal flowthroughs
  + Small towns that do community government surveys
* Cuts are not just about this administration, there is also some underlying larger trend.
* Support groups are important, this group is one place where we can do that! Discuss issues and support each other.
* AI in publishing - please declare (Katie D asks authors to go back and declare, but some might reject it right away)
  + Grammerly is flagged as AI
  + Literature review, editing for language, all are allowed - as long as it is declared
  + Qualitative data analysis on chatGPT - record date and time
  + Most journals have a statement about what AI use is ok and how to declare it
  + Discussion about differences between Grammerly vs spellcheck in Word