

UNIVERSITY OF KENTUCKY

CI 665: Quantitative Methods in Communication Research

Semester/Term: Spring 2023 (16 weeks)

Class Meeting Dates: 1/9/2023 - 5/5/2023

Meeting Days/Time/Location: Mondays 5:00 pm - 7:45 pm | Lucille Little Library Room 312

Instructor Information

Instructor: Kody Frey, Ph.D.

Office Address: 317 Lucille Little Library

Email: tkfr222@uky.edu

Student Q&A hours: Mondays 2:00 to 5:00 pm (can log in [via Zoom](#) if in-person does not work)
Also available by appointment (contact me to schedule)

Preferred Method of Communication: Email or Twitter ([@TKFrey](#))

Required Resources

- Gliner, J. A., Morgan, G. A., & Leech, N. L. (2017). *Research methods in applied settings: An integrated approach to design and analysis* (3rd ed.). Routledge.

In addition to the textbook above, students will be expected to bring a laptop with SPSS and R capabilities to every class. SPSS 28 is free for graduate students and can be downloaded to a laptop from the UK Software Downloads Portal (<https://download.uky.edu>). R and RStudio/Posit are freely available for download and use. You can visit the official Posit support page for a guide on getting started (<https://support.posit.co/hc/en-us/articles/201141096-Getting-Started-with-R>), but I'd also recommend skimming through [The Beginner's Guide to R](#) by Computerworld Magazine.

Course Description

This required graduate course is designed to provide master's and doctoral students with a sophisticated understanding of the philosophy, theory, design, and analysis of quantitative communication research. As such, the course focuses on the scientific method and approaches communication research as part of social science research. The course will assist students in understanding the study and practice of quantitative behavioral research techniques that apply to communication. Throughout the semester students will be exposed to a variety of methodological designs and statistical procedures that will ultimately allow them to design, complete, and eventually publish the results from independent research projects. At the end of this course, students should be able to:

- Develop research ideas and turn them into testable questions;
- Design and conduct ethical social scientific studies using quantitative research approaches;
- Map theoretical constructs onto their concrete operationalizations;
- Measure latent constructs in reliable and valid ways;
- Locate, critically read, summarize, and critique reports of empirical research;
- Write transparent reports of studies using quantitative research methods.

Course Structure and Workload

Each week, I will assign 3-4 articles, chapters, videos, or podcast episodes for you to read or listen to *before* class. You will submit a one-page reaction paper via Canvas by 5:00 pm Mondays (see Weekly Reaction & Synthesis Papers assignment below). The assigned textbook readings will serve as complements to course lectures and important guides for your midterm exam, but you are not expected to include the textbook readings as part of your reactions.

Each course meeting will be divided into three segments:

- 5:00-5:50 pm: I will give a lecture (accounting for questions) on the relevant conceptual areas
- 5:50-6:00 pm: Break
- 6:00-6:50 pm: Student-led discussion based on issues raised in reaction papers
- 6:50-7:00 pm: Break
- 7:00-7:45 pm: Skill building workshop / Hands-on analysis

Over the course of the semester, you will work in groups to complete a full, data-driven research project. The topic of the project is up to you, but it must involve some form of quantitative method. I encourage you to consider topics that are relevant to your research goals. Various parts of the project will be due throughout the semester (see Schedule). Late assignments will not be graded; students will receive a 0 for any late work unless accommodations have been discussed with me in advance.

Course Assignments

(1) Weekly Reaction & Synthesis Papers (10 @ 15 points each).

Reaction papers are exactly what they sound like – a reaction to the assigned readings for the week. I encourage you to respond to or focus on what was most surprising or interesting about the readings; you can (1) ask questions about things that are unclear, (2) raise issues we should discuss, (3) constructively criticize, (4) comment on ideas you find interesting, (5) make connections to other readings and courses, or (6) elaborate on ideas for future research. We will not formally discuss everything in your reaction, but they should guide your contributions during the student-led portion of each class period. Mainly, ***each reaction paper should contain 3 burning questions that you would like answered in the class discussion.***

You will be responsible for turning in 10 reaction papers between Weeks 2-16 for a total of 150 points. There are 12 reaction papers assigned during that time – you are free to skip two weeks of your choice with no penalty. Your reaction paper should have a *maximum* of 1 single-spaced page with references included on separate page as needed. I will grade reaction papers in terms of completion (complete/incomplete).

(2) In-Class Participation (50 total points)

You are expected to read all of the assigned readings *prior to the beginning* of class. Discussions will extend information covered in the readings. You are responsible for knowing this information to the extent that you are able to fully discuss it. You will engage fully in every discussion by demonstrating knowledge and critical thought about the readings and lecture materials, and by asking thought-provoking questions about the course content. Your classroom participation is valued and will benefit all of us. The participation expectations extend to the hands-on practice that will take place throughout the course on your personal laptops with SPSS and R/RStudio.

(3) Midterm Examination (200 points)

During Week 9 (3/6), you will complete an *in-class* midterm examination designed to resemble the methodological portion of your comprehensive exams. Students will have two hours and 45 minutes and a maximum of 10 pages to complete the written exam. You will not be able to access outside research or material during this time; however, you will be allowed to use one page of notes. The notes can be formatted any way that you prefer, and there is no limit to how much information can be included on the page.

(4) Research Paper (500 total points)

You will work in groups to complete a comprehensive research project on a topic of your choice. Data for all projects will be collected via the CI SONA research pool, but the project can utilize any method (e.g., survey, experiment) provided that it makes sense given the group's research questions and/or hypotheses. In addition, the project must (1) include an original measure that your group creates to operationalize a construct you are interested in and (2) use some form of

quantitative procedure (e.g., ANOVA, linear regression) to analyze data. The final paper should be no more than 25 pages in total and should be written according to APA 7th edition.

You will be expected to update me at various checkpoints throughout the semester, including CITI certification (Week 1), Topic Approval (Week 3), IRB protocol (Week 5), Study Codebook (Week 8), Final Survey in Qualtrics (Week 12), and conference style presentation (Week 16).

Below is the breakdown of the 500 points assigned to this project:

- CITI Certification (50 points)
- IRB Protocol (50 points)
- Study Codebook (50 points)
- Final Survey in Qualtrics (50 points)
- Final Paper (300 points)

(5) Final Presentation (100 points)

The final research report should be presented to the entire class in a conference style presentation and should not exceed 10 minutes. The presentation should establish social significance, lead the audience through a logical rationale that builds to the research questions and/or hypotheses, presents the methods, and results, and stimulates discussion of limitations, future directions, and potential implications of the research. Each presentation will be followed by a question-and-answer session where the presenters should field at least 3 questions.

Grading and Grading Scale

I hope grades will not be emphasized in this course as the major reinforcement for which students are to strive. At the same time, I realize that grades do hold contingencies for you and, therefore, I will make every effort to be as objective, impartial, and fair as possible. In keeping with this goal, I welcome your involvement in the assessment process and general feedback. The following guidelines will be used to establish the final grade for the course:

Assignment	Points
Weekly Reaction Papers	150
In-Class Participation	50
Midterm Exam	200
CITI Certification	50
IRB Protocol	50
Study Codebook	50
Final Survey in Qualtrics	50
Final Paper	300
Final Conference Presentation	100
Total Points	1000

Grades will be administered using the standard 90% = A, 80% = B, 70% = C, 60% = D, <60% = E.

Please NOTE: I do not believe in incompletes. Additionally, I absolutely **CANNOT** legally discuss grades via email or Canvas. If you have questions or issues related to a grade, you **MUST** set up a meeting with me or visit office hours.

Additional Information / Resources

If things come up and you require a short-term accommodation, please let me know as soon as you can. I believe that you are *humans first and students second*, and I will do whatever I can to support you in your academic or personal journeys. To this end, please read over the resources below:

[Academic Integrity - Prohibition on Plagiarism \(Senate Rules 6.3.1\)](#)

Per University policy, students shall not plagiarize, cheat, or falsify or misuse academic records. Students are expected to adhere to University policy on cheating and plagiarism in all courses. The minimum penalty for a first offense is a zero on the assignment on which the offense occurred. If the offense is considered severe or the student has other academic offenses on their record, more serious penalties, up to suspension from the University may be imposed.

Plagiarism and cheating are serious breaches of academic conduct. Each student is advised to become familiar with the various forms of academic dishonesty as explained in the Code of Student Rights and Responsibilities. Complete information can be found at the following website:

<http://www.uky.edu/Ombud>. A plea of ignorance is not acceptable as a defense against the charge of academic dishonesty. It is important that you review this information as all ideas borrowed from others need to be properly credited.

Senate Rules 6.3.1 (see <http://www.uky.edu/Faculty/Senate/> for the current set of *Senate Rules*) states that all academic work, written or otherwise, submitted by students to their instructors or other academic supervisors, is expected to be the result of their own thought, research, or self-expression. In cases where students feel unsure about a question of plagiarism involving their work, they are obliged to consult their instructors on the matter before submission.

When students submit work purporting to be their own, but which in any way borrows ideas, organization, wording, or content from another source without appropriate acknowledgment of the fact, the students are guilty of plagiarism.

Plagiarism includes reproducing someone else's work (including, but not limited to a published article, a book, a website, computer code, or a paper from a friend) without clear attribution. Plagiarism also includes the practice of employing or allowing another person to alter or revise the work which a student submits as his/her own, whoever that other person may be, except under specific circumstances (e.g. Writing Center review or peer review) allowed by the Instructor of Record or that person's designee. Plagiarism may also include double submission, self-plagiarism, or unauthorized resubmission of one's own work, as defined by the instructor.

Students may discuss assignments among themselves or with an instructor or tutor, except where prohibited by the Instructor of Record (e.g. individual take-home exams). However, the actual work must be done by the student, and the student alone, unless collaboration is allowed by the Instructor of Record (e.g. group projects).

When a student's assignment involves research in outside sources or information, the student must carefully acknowledge exactly what, where and how he/she has employed them. If the words of someone else are used, the student must put quotation marks around the passage in question and add an appropriate indication of its origin. Making simple changes while leaving the organization, content, and phraseology intact is plagiaristic. However, nothing in these Rules shall apply to those ideas, which are so generally and freely circulated as to be a part of the public domain.

Note: Any assignment you turn in may be submitted to an electronic database to check for plagiarism.

[Academic Integrity - Prohibition on Cheating \(Senate Rules 6.3.2\)](#)

Cheating is defined by its general usage. It includes, but is not limited to, the wrongfully giving, taking, or presenting any information or material by a student with the intent of aiding himself/herself or another on any academic work which is considered in any way in the determination of the final grade. The fact that a student could not have benefited from an action is not by itself proof that the action does not constitute cheating. Any question of definition shall be referred to the University Appeals Board.

[Academic Integrity - Prohibition on Falsification/Misuse of Academic Records \(SR 6.3.3\)](#)

Maintaining the integrity, accuracy, and appropriate privacy of student academic records is an essential administrative function of the University and a basic protection of all students. Accordingly, the actual or attempted falsification, theft, misrepresentation or other alteration or misuse of any official academic record of the University, specifically including knowingly having unauthorized access to such records or the unauthorized disclosure of information contained in such records, is a serious academic offense. As used in this context, "academic record" includes all paper and electronic versions of the partial or complete permanent academic record, all official and unofficial academic transcripts, application documents and admission credentials, and all academic record transaction documents. The minimum sanction for falsification, including the omission of information, or attempted falsification or other misuse of academic records as described in this section is suspension for one semester.

[Accommodations Due to Disability](#)

If you have a documented disability that requires academic accommodations, please see me as soon as possible during scheduled office hours. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (DRC). The DRC coordinates campus disability services available to students with disabilities. Visit the [DRC website](#), [email the DRC](#), contact them by phone at (859) 257-2754, or visit their office on the corner of Rose Street and Huguelet Drive in the Multidisciplinary Science Building, Suite 407.

[Non-Discrimination Statement and Title IX Information](#)

UK is committed to providing a safe learning, living, and working environment for all members of the University community. The University maintains a comprehensive program which protects all members from discrimination, harassment, and sexual misconduct. For complete information about UK's prohibition on discrimination and harassment on aspects such as race, color, ethnic origin, national origin, creed, religion, political belief, sex, and sexual orientation, please see [the electronic version of UK's Administrative Regulation 6:1 \("Policy on Discrimination and Harassment"\)](#). In accordance with Title IX of the Education Amendments of 1972, the University prohibits discrimination and harassment on the basis of sex in academics, employment, and all of its programs and activities. Sexual misconduct is a form of sexual harassment in which one act is severe enough to create a hostile environment based on sex and is prohibited between members of the University community and shall not be tolerated. For more details, please see [the electronic version of Administrative Regulations 6:2 \("Policy and Procedures for Addressing and Resolving Allegations of Sexual Assault, Stalking, Dating Violence, Domestic Violence, and Sexual Exploitation"\)](#). Complaints regarding violations of University policies on discrimination, harassment, and sexual misconduct are handled by the Office of Institutional Equity and Equal Opportunity (IEEO), which is located in 13 Main Building and can be reached by phone at (859) 257-8927. You can also visit [the IEEO's website](#).

Faculty members are obligated to forward any report made by a student related to IEEO matters to the Office of Institutional Equity and Equal Opportunity. Students can *confidentially* report alleged incidences through the Violence Intervention and Prevention Center, Counseling Center, or University Health Services.

[Statement on Diversity, Equity, and Inclusion \(DEI\)](#)

The University of Kentucky is committed to our core values of diversity and inclusion, mutual respect and human dignity, and a sense of community ([Governing Regulations XIV](#)). We acknowledge and respect the seen and unseen diverse identities and experiences of all members of the university community (<https://www.uky.edu/regs/gr14>). These identities include but are not limited to those based on race, ethnicity, gender identity and expressions, ideas and perspectives, religious and cultural beliefs, sexual orientation, national origin, age, ability, and socioeconomic status. We are committed to equity and justice and providing a learning and engaging community in which every member is engaged, heard, and valued.

We strive to rectify and change behavior that is inconsistent with our principles and commitment to creating a safe, equitable, and anti-racist environment. If students encounter such behavior in a course, they are encouraged to speak with the instructor of record or the [college's diversity officer](#), who is charged with addressing concerns about diversity, equity, and inclusiveness (uky.edu/inclusiveexcellence/college-diversity-inclusion-officers). Students may also contact a faculty member within the department, program director, the director of undergraduate or graduate studies, the department chair, or the dean. To submit an official report of bias, hatred, racism, or identity-based violence, visit the Bias Incident Support Services [website](#).

[Counseling Center](#)

The UK Counseling Center (UKCC) provides a range of confidential psychological services to students enrolled in 6 credit hours or more, psychoeducational outreach programming (including QPR suicide prevention), and consultation to members of the UK community (students, faculty, staff, administrators, parents, concerned others). Please visit the website <https://www.uky.edu/counselingcenter/> for more detailed information, or call 859.257.8701.

[Martin Luther King Center](#)

The Martin Luther King Center (MLKC) supports an inclusive learning environment where diversity and individual differences are understood, respected, and appreciated as a source of strength. The MLKC's year-round programs and activities that focus on the importance of cultural awareness and cross-cultural understanding support its three primary goals: 1) sponsoring cultural and educational programming; 2) offering opportunities for student support and development; and 3) through programmatic linkages with a wide variety of civic and community agencies, promoting community outreach, engagement, and collaboration. Students can reach the MLKC via phone at (859) 257-4130, by visiting them in Gatton Student Center Suite A230, [via email](#), and by visiting [the MLKC website](#).

[Office of LGBTQ* Resources](#)

UK is committed to supporting students and upholding the University's efforts to promote inclusion among our community. UK faculty and staff employees support inclusion and diversity throughout the University, including the ways in which faculty structure classroom conversations and manage those dynamics. To assist in these efforts, students are welcome to provide the names and pronouns they prefer. One easy way to do this is by using the pronoun feature of UK's Name Change Form. (More information about the form can be found on the [Office of LGBTQ*'s website](#).) Otherwise, students can provide this information to faculty members directly.

Discrimination based on sexual orientation, gender expression, and gender identity is prohibited at UK. If you have questions about support, advocacy, and community-building services related to sexual orientation, gender expression, or gender identity, students are encouraged to visit the [website of the Office of LGBTQ* Resources](#).

[Violence Intervention and Prevention \(VIP\) Center](#)

If you experience an incident of sex- or gender-based discrimination or interpersonal violence, we encourage you to report it. While you may talk to a faculty member or TA/RA/GA, understand that as a "Responsible Employee" of the University these individuals MUST report any acts of violence (including verbal bullying and sexual harassment) to the University's Title IX Coordinator in the IEEO Office. If you would like to speak with someone who may be able to afford you confidentiality, you can visit the [Violence Intervention and Prevention \(VIP\) Center's website](#) (offices located in Frazee Hall, lower level; [email them](#); or call (859) 257-3574), [the Counseling Center's \(CC\) website](#) (106 Frazee Hall; (859)), and the [University Health Services \(UHS\) website](#); the VIP Center, CC, and UHS are confidential resources on campus. **The VIP Center accepts walk-in appointments.**

Course Schedule

Assignments (listed in red font) are due at the beginning of class unless otherwise noted. The textbook chapters are ***strongly recommended*** to help you prepare for the midterm exam and final project. I believe these readings are critical tools to help you truly master the content. However, the textbook chapters are not required to be read for the reaction papers or discussion. Instead, focus the reaction papers on the assigned scholarly readings.

Week 1 Introductions, Course Expectations, and Research Ethics

1/9

I will establish expectations and goals for the course and learn more about you and your research / professional interests. Other lecture topics include a brief discussion about the philosophy of quantitative social science research, the development of hypotheses and research questions, and the ethics of human-subjects research.

Workshop Topic: Ethical dilemmas in communication research

Readings & Podcast

*Gliner, J. A., Morgan, G. A., & Leech, N. L. (2017). *Research methods in applied settings: An integrated approach to design and analysis* (3rd ed.). Routledge. *Read Chs. 1 & 14*

Beatty, M. J. (2014). Thinking quantitatively. In D. W. Stacks and M. B. Salwen (Eds.), *An integrated approach to communication theory and research* (2nd ed.) (pp. 44-53). Routledge.

Radiolab: "G: The Miseducation of Larry P" <https://radiolab.org/episodes/g-miseducation-larry-p>

Sommers, R., & Bohns, V. K. (2019). The voluntariness of voluntary consent: Consent searches and the psychology of compliance. *Yale Law Journal*, 128(7), 1962-2033. <https://ssrn.com/abstract=3369844>

CITI Certification DUE by 1/16

Week 2 No CLASS – MLK Jr. Day

1/16

Week 3 Conceptualizing Quantitative Communication Research

1/23

We will begin a discussion about *how* to conduct research, including an overview of the scientific method. The lecture will also include an introduction to common notation used throughout quantitative methods. The goal is to help you better conceptualize the research process, your goal within it, and what you hope to achieve along the way.

Workshop Topic: Setting up your research infrastructure / workflow

Readings

*Gliner, J. A., Morgan, G. A., & Leech, N. L. (2017). *Research methods in applied settings: An integrated approach to design and analysis* (3rd ed.). Routledge. *Read Chs. 2 & 3*

Grigoropoulou, N., & Small, M. L. (2022). The data revolution in social science needs qualitative research. *Nature Human Behaviour*, 6(6), 904-906.

Margolin, D. B. (2019). Computational contributions: A symbiotic approach to integrating big, observational data studies into the communication field. *Communication Methods and Measures*, 13(4), 229-247

Rozin, P. (2009). What kind of empirical research should we publish, fund, and reward? A different perspective. *Perspectives on Psychological Science*, 4(4), 435-439.

<https://doi.org/10.1111/j.1745-6924.2009.01151.x>

Watts, D. J. (2017). Should social science be more solution-oriented? *Nature Human Behaviour*, 1, 1-5.

Deadline for Approval of Research Projects

Have SPSS and R Downloaded

Reaction Paper #1

Week 4
1/30

Planning and Designing Communication Research: Who are you studying?

At this point, you should have a basic understanding of what you want to study. The logical next step is to discuss how to select your sample and determine the number of people that you will need. Lecture topics also include tradeoffs across sampling approaches, internal and external validity, significance testing, and power.

Workshop Topic: Navigating the IRB

Readings & Videos

*Gliner, J. A., Morgan, G. A., & Leech, N. L. (2017). *Research methods in applied settings: An integrated approach to design and analysis* (3rd ed.). Routledge. *Read Chs. 8, 9, 13*

Crash Course Statistics: [Sampling Methods and Bias](#) / [p-values](#)

Erba, J., Ternes, B., Bobkowski, P., Logan, T., & Liu, Y. (2018). Sampling methods and sample populations in quantitative mass communication research studies: A 15-year census of six journals. *Communication Research Reports*, 35(1), 42-47. <https://doi.org/10.1080/08824096.2017.1362632>

Greiner Safi, A., Reyes, C., Jesch, E., Steinhardt, J., Niederdeppe, J., Skurka, C., Kalaji, M., Scolere, L., & Byrne, S. (2019). Comparing in person and internet methods to recruit low-SES populations for tobacco control policy research. *Social Science & Medicine*, 242, 112597. <https://doi.org/10.1016/j.socscimed.2019.112597>

McEwan, B. (2020). Sampling and validity. *Annals of the International Communication Association*, 44(3), 235-247. <https://doi.org/10.1080/23808985.2020.1792793>

Reaction Paper #2

Week 5
2/6

The Independent Variable

The week will focus primarily on manipulated independent variables in the form of experimental and quasi-experimental designs. We will also cover issues when conducting survey or other types of observational research and when independent variables differ across perspectives.

Workshop Topic: Creating a Codebook

Readings

*Gliner, J. A., Morgan, G. A., & Leech, N. L. (2017). *Research methods in applied settings: An integrated approach to design and analysis* (3rd ed.). Routledge. *Read Chs. 4, 5, 6, 7*

Bradley, V. C., Kuriwaki, S., Isakov, M., Sejdinovic, D., Meng, X., & Flaxman, S. (2021). Unrepresentative big surveys significantly overestimated US vaccine uptake. *Nature*, 600, 695-700. <https://doi.org/10.1038/s41586-021-04198-4>

Chan, M., Hu, P., & Mak, M. K. F. (2022). Mediation analysis and warranted inferences in media and communication research: Examining research design in communication journals from 1996 to 2017. *Journalism & Mass Communication Quarterly*, 99(2), 463-486. <https://doi.org/10.1177/1077699020961519>

Ma, D. S., Correll, J., & Wittenbrink, B. (2015). The Chicago face database: A free stimulus set of faces and norming data. *Behavior Research Methods*, 47(4), 1122-1135. <https://doi.org/10.3758/s13428-014-0532-5>

IRB Protocol Due (Must be submitted)

Reaction Paper #3

Week 6
2/13

Measuring the Dependent Variable I

The first of our two lessons on measurement will be very broad, focusing on measurement theory and definitions. The goal is for you to leave class with a basic understanding of the differences between conceptual and operational approaches, as well as the general steps in developing a measure to adequately assess a variable of interest.

Workshop Topic: Let's Measure!

Readings

*Gliner, J. A., Morgan, G. A., & Leech, N. L. (2017). *Research methods in applied settings: An integrated approach to design and analysis* (3rd ed.). Routledge. *Read Ch 10*

Baston, R. (2022). From old-fashioned to offensive racism: How social norms determine the measurement object of prejudice questionnaires. *Philosophical Psychology*. <https://doi.org/10.1080/09515089.2022.2029386>

Carpenter, S. (2018). Ten steps in scale development and reporting: A guide for researchers. *Communication Methods and Measures*, 12(1), 25-44. <https://doi.org/10.1080/19312458.2017.1396583>

Lazer, D., Hargittai, E., Freelon, D., Gonzalez-Bailon, S., Munger, K., Ognyanova, K., & Radford, J. (2021). Meaningful measures of human society in the twenty-first century. *Nature*, 595, 189-196.

Reaction Paper #4

Week 7
2/20

Measuring the Dependent Variable II

Our second lesson on measurement will help us determine what our measures mean. We will think about the ways we can offer increased support for measures going forward, as well as the ways in which attempts to objectively capture subjective ideas should be challenged and critiqued.

Workshop Topic: Construct Validation

Readings

*Gliner, J. A., Morgan, G. A., & Leech, N. L. (2017). *Research methods in applied settings: An integrated approach to design and analysis* (3rd ed.). Routledge. *Read Chs 11, 12*

Bowman, N. D., & Goodboy, A. K. (2020). Evolving considerations and empirical approaches to construct validity in communication science. *Annals of the International Communication Association*, 44(3), 219-234.
<https://doi.org/10.1080/23808985.2020.1792791>

Frey, T. K., & Tatum, N. T. (2022). Instructor strictness: instrument development and validation. *Communication Education*, 71(4), 327-354.
<https://doi.org/10.1080/03634523.2022.2096246>

Reynolds-Tylus, T., Bigsby, E., & Quick, B. L. (2021). A comparison of three approaches for measuring negative cognitions for psychological reactance. *Communication Methods and Measures*, 15(1), 43-59.
<https://doi.org/10.1080/19312458.2020.1810647>

Reaction Paper #5

Week 8
2/27

Making Sense of Your Data

The content this week is designed to help you understand what to do with data once it is collected. Before you can start to analyze, you have to get a better idea of what you are working with. Lecture content includes descriptive vs inferential statistics, parametric statistics, missing data, manipulation checks, and pilot testing.

Workshop Topic: Survey Building in Qualtrics

Readings

*Gliner, J. A., Morgan, G. A., & Leech, N. L. (2017). *Research methods in applied settings: An integrated approach to design and analysis* (3rd ed.). Routledge. *Read Ch 15, 16, 17*

Baraldi, A. N., & Enders, C. K. (2010). An introduction to modern missing data analyses. *Journal of School Psychology*, 48(1), 5-37.
<https://doi.org/10.1016/j.jsp.2009.10.001>

Schwarz, N., & Oyserman, D. (2001). Asking questions about behavior: Cognition, communication, and questionnaire construction. *The American Journal of Evaluation*, 22(2), 127-160. [https://doi.org/10.1016/S1098-2140\(01\)00133-3](https://doi.org/10.1016/S1098-2140(01)00133-3)

Simmons, J. P., Nelson, L. D., & Simonsohn, U. (2016). False-positive psychology: Undisclosed flexibility in data collection and analysis allows presenting anything as significant. In A. E. Kazdin (Ed.), *Methodological issues and strategies in clinical research* (pp. 547-555). American Psychological Association.
<https://doi.org/10.1037/14805-033>

Study Codebook Due

Reaction Paper #6

Week 9
3/6

In-Class Midterm Examination

The midterm will resemble a traditional comprehensive exam environment. Students will have three hours to complete the midterm together in the classroom. Students will be allowed to create a one-page cheat sheet with as much information they can strategically place on the page.

Week 10
3/13

No CLASS - Spring Break

Week 11 Data Analysis and Interpretation I

3/20

The first half of the course introduced basic principles of quantitative research methods that will help students plan, design, conduct, and critique scholarship. The second half of the course will focus more on the statistical application of quantitative methods using SPSS and RStudio. That is, we are going to spend time learning (1) how to decide which tests should be run to answer your research questions and hypotheses and (2) how to actually conduct them.

Workshop Topic: Midterm Review

Readings & Video

*Gliner, J. A., Morgan, G. A., & Leech, N. L. (2017). *Research methods in applied settings: An integrated approach to design and analysis* (3rd ed.). Routledge. *Read Chs. 18, 20*

Crash Course Statistics: [ANOVA](#) / [Regression](#)

Huang, F. L. (2020). MANOVA: A procedure whose time has passed?. *Gifted Child Quarterly*, 64(1), 56-60. <https://doi.org/10.1177/0016986219887200>

Keselman, H. J., Huberty, C. J., Lix, L. M., Olejnik, S., Cribbie, R. A., Donahue, B., . . . Keselman, J. C. (1998). Statistical practices of educational researchers: An analysis of their ANOVA, MANOVA, and ANCOVA analyses. *Review of Educational Research*, 68, 350-386. <https://doi.org/10.3102/00346543068003350>

Schrodt, P., & Witt, P. L. (2006). Students' attributions of instructor credibility as a function of students' expectations of instructional technology use and nonverbal immediacy. *Communication Education*, 55(1), 1-20. <https://doi.org/10.1080/03634520500343335>

Reaction Paper #7

Week 12 Data Analysis and Interpretation II

3/27

In contrast to our overview of understanding group differences last week, the second sequence in our overview of data analysis focuses on relationships and associations between variables. We will closely examine what differentiates the various types of analyses, in addition to providing you with a basic understanding of correlations and linear regression techniques.

Workshop Topic: Connecting Surveys to CI SONA

Readings & Podcast

*Gliner, J. A., Morgan, G. A., & Leech, N. L. (2017). *Research methods in applied settings: An integrated approach to design and analysis* (3rd ed.). Routledge. *Read Chs. 19, 21*

Quantitude Podcast: S3E09: Semi-Partially Clarifying Measures of Association in Regression. <https://quantitudepod.org/s3e09-semi-partially-clarifying-measures-of-association-in-regression/>

Shulman, H. C., Dixon, G. N., Bullock, O. M., & Colón Amill, D. (2020). The effects of jargon on processing fluency, self-perceptions, and scientific engagement. *Journal of Language and Social Psychology*, 39(5-6), 579-597. <https://doi.org/10.1177/0261927X20902177>

Sherblom, J. C., & Umphrey, L. R. (2023). The social cognition of hope. *Communication Research Reports*, 0(0), 1–10. <https://doi.org/10.1080/08824096.2022.2164265>

Final Survey in Qualtrics Due

Reaction Paper #8

Week 13
4/3

Advanced Analyses

This week will focus on complex data analytic techniques that go beyond basic ANOVA and regression methods. The lecture will include a brief introduction to several statistical methods that advance communication science by answering nuanced research questions and hypotheses: structural equation modeling, hierarchical linear modeling, meta-analyses, logistic regression, computational communication / the tidyverse, Bayesian modeling, measurement invariance, and growth curve modeling.

Workshop Topic: Peer Review and Design Feedback

Readings

- *Gliner, J. A., Morgan, G. A., & Leech, N. L. (2017). *Research methods in applied settings: An integrated approach to design and analysis* (3rd ed.). Routledge. *Read Ch 22*
- Frey, T. K., & Vallade, J. I. (Accepted). Securing the right skills: A longitudinal assessment of college students' writing and public speaking self-efficacy. *Basic Communication Course Annual*. *Copy available in Canvas*
- Goodboy, A. K., & Kline, R. B. (2017). Statistical and practical concerns with published communication research featuring structural equation modeling. *Communication Research Reports*, 34(1), 68-77. <https://doi.org/10.1080/08824096.2016.1214121>
- Walter, N., Cohen, J., Holbert, R. L., & Morag, Y. (2020). Fact-checking: A meta-analysis of what works and for whom. *Political Communication*, 37(3), 350-375. <https://doi.org/10.1080/10584609.2019.1668894>

Reaction Paper #9

Week 14
4/10

Data Exploration and Cleaning

After having your studies posted on the CI SONA webpage for two weeks, you should now have enough data to begin exploration. This class period will be very applied – demonstrating how to download your data from Qualtrics, organize the database, clean the data, identify outliers, gather descriptive, and prepare everything for analysis.

Workshop Topic: In-Class Workday

Readings

- *Gliner, J. A., Morgan, G. A., & Leech, N. L. (2017). *Research methods in applied settings: An integrated approach to design and analysis* (3rd ed.). Routledge. *Read Chs. 23, 24, 25*
- Aguinis, H., Hill, N. S., & Bailey, J. R. (2021). Best practices in data collection and preparation: Recommendations for reviewers, editors, and authors. *Organizational Research Methods*, 24(4), 678-693. <https://doi.org/10.1177/1094428119836485>
- Maner, J. K. (2014). Let's put our money where our mouth is: If authors are to change their ways, reviewers (and editors) must change with them. *Perspectives on*

Psychological Science, 9(3), 343-351.
<https://doi.org/10.1177/1745691614528215>

McEwan, B., Carpenter, C. J., & Westerman, D. (2018). On replication in communication science. *Communication Studies*, 69(3), 235-241.
<https://doi.org/10.1080/10510974.2018.1464938>

Reaction Paper #10

Week 15 4/17

Writing the Research Report

Woohoo! You've analyzed your data and interpreted the results. Now it is time to turn it into a complete research report. We will discuss what to include in the back end of a quantitative research article, including providing implications of your work, limitations, and future directions. We want you to write your work in a way that demonstrates that you implemented your method well and make a sound contribution to communication scholarship and theory.

Workshop Topic: Your Favorite Article

Readings

*Gliner, J. A., Morgan, G. A., & Leech, N. L. (2017). *Research methods in applied settings: An integrated approach to design and analysis* (3rd ed.). Routledge. *Read Ch 26*

Appelbaum, M., Cooper, H., Kline, R. B., Mayo-Wilson, E., Nezu, A. M., & Rao, S. M. (2018). Journal article reporting standards for quantitative research in psychology: The APA Publications and Communications Board task force report. *American Psychologist*, 73, 3-25. <https://doi.org/10.1037/amp0000191>

Gernsbacher, M. A. (2018). Writing empirical articles: Transparency, reproducibility, clarity, and memorability. *Advances in Methods and Practices in Psychological Science*, 1(3), 403-414. <https://doi.org/10.1177/2515245918754485>

Lewis, N. A., Jr. (2020). Open communication science: A primer on why and some recommendations for how. *Communication Methods and Measures*, 14, 71-82.
<https://doi.org/10.1080/19312458.2019.1685660>

Reaction Paper #11

Week 16 4/24

Presenting the Results

You have successfully put together a quantitative research study. The next step is to present this work to your peers at an academic conference. The content for the final week in the course centers on effective dissemination and presentation of your empirical results. You should leave the day feeling prepared for your final course presentations, as well as any conference presentations you plan to submit to in the future.

Workshop Topic: In-Class Workday

Readings

Canfield, K., et al. (2020). Science communication demands a critical approach that centers inclusion, equity, and intersectionality. *Frontiers in Communication*, 5, 1-8.
<https://doi.org/10.3389/fcomm.2020.00002>

Manning, J. (2018). Making the most of our conferences and associations: An important component for communication research, teaching, and service. *Communication Studies*, 69(5), 605-616. <https://doi.org/10.1080/10510974.2018.1520734>

Vandemeulebroecke, M., Baillie, M., Margolskee, A., & Magnusson, B. (2019). Effective visual communication for the quantitative scientist. *CPT: Pharmacometrics & Systems Pharmacology*, 8(10), 705-719. <https://doi.org/10.1002/psp4.12455>

Reaction Paper #12

**Finals
Week
5/1**

Conference-Style Presentations at Dr. Frey's House

Please join me at my home for a conference-style presentation format. We will celebrate each other's work and enjoy each other's company over food and drink (I will be providing BBQ). Please let me know if you have any food allergies beforehand!

Final Papers Due

Final paper must include: Introduction, Rationale, Literature Review, RQs/RHs, Method, Results, Discussion (Limitations, Implications, Future Research), Conclusion, References, and Relevant Appendices

CI 665 ORIGINAL QUANTITATIVE COMMUNICATION RESEARCH REPORT

The major project in CI 665 is to write an original communication research report. The entire project asks you to examine a particular aspect of communication within a specific context, to review how communication theory has been used in previous scholarly studies and then to **design and carry out your own original quantitative communication research study**. You must conceptualize, plan and design, determine appropriate methods, collect data, analyze and interpret results, and reconceptualize the results in a meaningful discussion that follows the proper conventions of a final quantitative communication research report

You will construct an actual research study that will be completed by the end of the semester. This project requires each student to conduct an original communication study and write a 20–25-page research paper. Your task is to address a significant communication problem, topic, or issue and design original communication research. You will work in groups to complete a comprehensive research project on a topic of your choice. Data for all projects will be collected via the CI SONA research pool, but the project can utilize any method (e.g., survey, experiment) provided that it makes sense given the group’s research questions and/or hypotheses. In addition, the project must (1) include an original measure that your group creates to operationalize a construct you are interested in and (2) use some form of quantitative procedure (e.g., ANOVA, linear regression) to analyze data.

Students are expected and encouraged to devote to the term project approximately half of the time s/he spends on the seminar.

While there are no hard and fast rules governing the form and content of a research report, they normally contain five major sections:

1. **Problem.** The problem section of a research report contains the theoretical and empirical rationale for conducting the research and a statement of the research problem.

A. Rationale. The rationale sets forth the reasons for conducting a given research project. One’s “reasons” normally grow out of relevant theory underlying the research problem and research findings bearing directly on the proposed research. Thus, the rationale section is a theoretical and empirical discussion. It should read like a good argument leading unequivocally to the problem to be investigated.

B. The Problem Statement. The research problem is framed either as an hypothesis or a research question.

2. **Method.** The section on method describes the researcher’s strategy for gathering data, along with all required supporting materials and measuring instruments. Moreover, it specifies the analytical/statistical methods that are suitable for testing the hypotheses and questions selected. The following five kinds of information typically appear in a proposal’s method section.

A. Research Design. This subsection describes in detail the nature of the chosen research plan, whether an experiment, a survey, a textual analysis, or an ethnography. The researcher should specify why the chosen design is an appropriate mechanism for testing the research hypotheses.

B. Variable Specification. This subsection details the conceptual and operational definitions of all pertinent variables, including any independent and dependent variables. Additionally, the researcher should discuss procedures for certifying the validity and reliability of all variables. Finally, the means for controlling any potentially confounding effects should be described.

C. Elements and Sampling Method. The number and pertinent characteristics of the proposed study's elements or units of analysis are identified next. Elements include any individuals who will serve as research participants in the proposed project as well as communication artifacts (television programs, films, public speeches, conversational episodes) that are targeted for study. Additionally, the sampling method used to secure a sample (typically, a representative sample) of the elements must be specified and its appropriateness defended.

D. Procedure. This subsection describes the researcher's plan for conducting the proposed research, including any cover story and debriefing materials to be used, instructions to be given to research participants, and the setting and time frame for the research. In general, it is a step-by-step narrative detailing how the researcher will administer the proposed research from initiation to completion.

E. Data Analysis. This final subsection describes any statistical procedures the researcher will use to analyze results, including the specific statistical tests to be performed. If one's data are narrative rather than numerical, all descriptive, inferential, interpretative, and critical tools should be detailed. The subsection concludes with a statement indicating why the chosen data analytical methods will provide an adequate test of one's hypotheses, research questions, or general research aims.

3. **Results**. The results section of the research report clearly presents the statistical/descriptive results that answer the research questions and/or clearly provides the results of the hypothesis tests. Do not explain or provide implications of the findings in the results section – this information is provided in the implications section of the discussion part of the paper. While the results section may be relatively short, it must be written using appropriate language, rules, and social science conventions. All SPSS statistical output must also be included as part of the appendices.

4. **Discussion**. This section of the research report is divided into three specific parts and consists of 1) an insightful discussion of the implications of your results, 2) a thoughtful discussion of the limitations associated with your study, and 3) a meaningful discussion of directions for future research.

A. Implications. This subsection interprets the meaning of the findings as they relate to theory, previous research, and expectations.

B. Limitations. This subsection identifies limitations of the research due to internal as well as external validity threats.

C. Directions for Future Research. This subsection identifies meaningful directions for future research

5. **Conclusion and References**. The final section of the research report provides a summary of the conclusions and generally refers back to arguments advanced in the introduction. In addition, the final

section includes an APA reference list as well as an Appendix that will include complete measurement instruments (demographic questions, survey, scales, etc.) and the SPSS analysis from the results.

The final paper is due on May 1, 2022 at 5:00 p.m. Although the content of your final research project is the most important concern, I value close attention to matters of spelling, grammar, and form. Avoid the use of first and second person. I will expect you to use the guidelines contained in APA 7th edition.