

Learning through Collaborative Data Projects: Engaging Students and Building Rapport

Supporting Information (SI)

Contents

- 1 Survey Items 1-2
 - 1.1 Items used in this analysis 1-2
 - 1.2 Survey Batteries for Each Assignment 1-3
 - 1.2.1 Media & Politics 1: Ad Project 1-3
 - 1.2.2 Media & Politics 2: News Project, Day 1 1-7
 - 1.2.3 Media & Politics 2: News Project, Days 2-3 1-10
 - 1.2.4 Media & Politics 2: News Project, Day 4 1-10
 - 1.2.5 Social Influence, Day 1 1-13
 - 1.2.6 Social Influence, Day 2 1-16
 - 1.2.7 Social Influence, Day 3 1-17
 - 1.2.8 Social Influence, Day 4 1-19
 - 1.2.9 Research Methods 1-27
- 2 Instructions 2-32
 - 2.1.1 Media & Politics 1: Ad Project 2-32
 - 2.1.2 Media & Politics 2: News Project 2-33
 - 2.1.3 Social Influence 2-36
 - 2.1.4 Research Methods 2-36
- 3 Resources 3-37
 - 3.1 Survey Tools 3-37
 - 3.2 Software 3-37

1 Survey Items

1.1 Items used in this analysis

These items are summarized in Figure 1:

Label	Question text	Response Options
How much student learned from the assignment	Compared to other college assignments you have completed that take similar amounts of time, how would you rate this assignment in terms of ... how much you learned from the assignment	Far above average; Somewhat above average; Average; Somewhat below average; Far below average
How much student enjoyed the assignment	Compared to other college assignments you have completed that take similar amounts of time, how would you rate this assignment in terms of ... how much you enjoyed the assignment	Far above average; Somewhat above average; Average; Somewhat below average; Far below average

These items are summarized in Figures 2 & 3:

Label	Question text	Response Options
Most enjoyable assessments	Which set of assessments in this class did you find most enjoyable to complete? For this question, please focus only on how much you enjoyed completing the assessments, not how much you learned from them.	Reading quizzes; Exams; Data Projects; Writing assignments
Most informative assessments	Which set of assessments in this class did you find most informative to complete? For this question, please focus only on how much you learned from completing the assessments, not how much you enjoyed the	Reading quizzes; Exams; Data Projects; Writing assignments

Media & Politics and Social Influence

Label(s)	Question text	Response Options
Most enjoyable assessments	Which set of assessments in this class did you find most enjoyable to complete? For this question, please focus only on how much you enjoyed completing the assessments, not how much you learned from them.	Reading quizzes; Exams; Assignments
Most informative assessments	Which set of assessments in this class did you find most informative to complete? For this question, please focus only on how much you learned from completing the assessments, not how much you enjoyed the	Reading quizzes; Exams; Assignments
Efficacy: More interested; Efficacy: Instructors more invested; Efficacy: Not useful; Efficacy: Did not notice the reports were personalized	After most assignments, the instructor emailed you a report with personalized results based on the data you entered. What did you think of these reports? (Check all that apply)	The reports made me feel more interested in the material; The reports made me feel like the instructors were more invested in my learning; I did not notice the reports were personalized to me; I did not find the reports useful

Research Methods

1.2 Survey Batteries for Each Assignment

The text below provides the complete survey batteries and Qualtrics survey logic used for each project.

1.2.1 Media & Politics 1: Ad Project

MP-S21 - Negative Ads Form

Survey Flow

Standard: id_block (3 Questions)

Standard: loop_block (15 Questions)

Standard: comment_block (4 Questions)

Page Break

Start of Block: id_block

first What is your FIRST name?

(enter your full first name as it is listed on Canvas)

last What is your LAST name?

(enter your last name as it is listed on Canvas)

id What is your [STUDENT ID]?

Your [STUDENT ID] is the string of letters and numbers before the @ sign in your @[university].edu email address, e.g., abc19

Page Break

End of Block: id_block

Start of Block: loop_block

new_ad

You are now starting ad

#{m://CurrentLoopNumber} of #{m://TotalLoops}

#{m://Field/3}" target="_blank">Click here to open the ad or copy and paste this URL into your browser:

#{m://Field/3}

Page Break

header_1 #{m://Field/3}" target="_blank">Ad #{m://CurrentLoopNumber} of #{m://TotalLoops}

#{m://Field/3}

tone Did the ad intend to suggest...

(check all that apply)

- good things about Donald Trump? (3)
- bad things about Donald Trump? (2)
- good things about Joe Biden? (1)
- bad things about Joe Biden? (4)
- None of the above (5)

Page Break

Display This Question:

If Loop current: Did the ad intend to suggest... (check all that apply) = None of the above

problem On the previous question, you chose none of the above, suggesting this ad is not relevant for the project.

If that choice was a mistake, please go back to the previous question to correct it.

Otherwise, briefly explain why the ad was not relevant and then proceed to the next ad.

Skip To: End of Block If Condition: On the previous question, y... Is Not Empty. Skip To: End of Block.

header_2 `$(Im://Field/3)" target="_blank">Ad $$(Im://CurrentLoopNumber)$ of $$(Im://TotalLoops)$
 $$(Im://Field/3)$`

av Did the ad ...

(check all that apply)

- display an image or video of Donald Trump (4)
- play audio of Donald Trump speaking (5)
- display an image or video of Joe Biden (11)
- play audio of Joe Biden speaking (13)
- None of the above (12)

Page Break

header_3 `$(Im://Field/3)" target="_blank">Ad $$(Im://CurrentLoopNumber)$ of $$(Im://TotalLoops)$
 $$(Im://Field/3)$`

content Did the ad ...

(check all that apply)

Display This Choice:

If Loop current: Did the ad intend to suggest... (check all that apply) = `good` things about `Donald Trump?`

Or Loop current: Did the ad intend to suggest... (check all that apply) = `bad` things about `Donald Trump?`

- mention Donald Trump's policy positions? (3)

Display This Choice:

If Loop current: Did the ad intend to suggest... (check all that apply) = `good` things about `Donald Trump?`

Or Loop current: Did the ad intend to suggest... (check all that apply) = `bad` things about `Donald Trump?`

- associate Donald Trump with policy results? (2)

Display This Choice:

If Loop current: Did the ad intend to suggest... (check all that apply) = `good` things about `Donald Trump?`

Or Loop current: Did the ad intend to suggest... (check all that apply) = `bad` things about `Donald Trump?`

- mention Donald Trump's personal characteristics? (1)

Display This Choice:

If Loop current: Did the ad intend to suggest... (check all that apply) = `good` things about `Joe Biden?`

Or Loop current: Did the ad intend to suggest... (check all that apply) = `bad` things about `Joe Biden?`

- mention Joe Biden's policy positions? (5)

Display This Choice:

If Loop current: Did the ad intend to suggest... (check all that apply) = good things about Joe Biden?

Or Loop current: Did the ad intend to suggest... (check all that apply) = bad things about Joe Biden?
 associate Joe Biden with policy results? (9)

Display This Choice:

If Loop current: Did the ad intend to suggest... (check all that apply) = good things about Joe Biden?

Or Loop current: Did the ad intend to suggest... (check all that apply) = bad things about Joe Biden?
 mention Joe Biden's personal characteristics? (10)
 None of the above (12)

Page Break

Display This Question:

If Loop current: Did the ad ... (check all that apply) = mention Donald Trump's policy positions?

Or Loop current: Did the ad ... (check all that apply) = associate Donald Trump with policy results?

Or Loop current: Did the ad ... (check all that apply) = mention Joe Biden's policy positions?

Or Loop current: Did the ad ... (check all that apply) = associate Joe Biden with policy results?

header_4 target="_blank">Ad of

Display This Question:

If Loop current: Did the ad ... (check all that apply) = mention Donald Trump's policy positions?

Or Loop current: Did the ad ... (check all that apply) = associate Donald Trump with policy results?

Or Loop current: Did the ad ... (check all that apply) = mention Joe Biden's policy positions?

Or Loop current: Did the ad ... (check all that apply) = associate Joe Biden with policy results?

policies Which of the following policies did the ad address?

(check all that apply)

- Business (4)
- Campaign Finance (89)
- Child Care/Family Leave (90)
- China/Trade (91)
- Civil Rights/Racial Discrimination/Police violence/Protests/Riots (92)
- Climate Change/Environment (93)
- COVID-19 (94)
- Crime (95)
- Economy, Jobs, Minimum wage (96)
- Education (97)
- Emergency Prep/Response (98)
- Energy Policy (99)
- Guns/Second amendment (112)
- Health Care (100)
- Housing/Subprime (101)
- Immigration (102)
- Seniors/Social Security/Medicare (106)
- Taxes (107)
- None of the above (111)

Page Break

header_5 target="_blank">Ad of

ipa Which IPA classifications do you think this ad fits best? (choose up to three)

- Bandwagon (1)
- Card Stacking (2)
- Glittering Generalities (3)

- Name Calling (4)
- Plain Folks (5)
- Testimonial (6)
- Transfer (7)

Page Break

header_6 `{m://Field/3}" target="_blank">Ad {m://CurrentLoopNumber} of {m://TotalLoops}`
`{m://Field/3}`

dv Rate the ad based on the following characteristics

	Less than most ads (1)	Less than many ads (2)	A typical amount (3)	More than many ads (4)	More than most ads (5)
How much evidence did the ad provide? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How fair was the ad (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How enjoyable was the ad? (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How informative was the ad? (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

timer Timing

- First Click (1)
- Last Click (2)
- Page Submit (3)
- Click Count (4)

End of Block: loop_block

Start of Block: comment_block

informative Overall, how informative would you say these ads were, relative to what you would have expected before starting this project?

- Far more informative than I expected (1)
- A little more informative than I expected (2)
- About what I expected (3)
- A little less informative than I expected (4)
- Far less informative than I expected (5)

Page Break

comments_ad Now that you've finished coding the ads, is there anything you'd like to share about the ads you examined?

Page Break

eval Compared to other college assignments you have completed that take similar amounts of time, how would you rate this assignment (The Negative Ads Project) in terms of ...

	Far above average (11)	Somewhat above average (12)	Average (13)	Somewhat below average (14)	Far below average (15)
how much you learned from the assignment (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
how much you enjoyed the assignment (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

comments_survey Did you encounter any problems while working on this project or do you have any suggestions for ways to improve it?

End of Block: comment_block

1.2.2 Media & Politics 2: News Project, Day 1

MP-S21 - News Analysis Project, Day 1

Survey Flow
Standard: id_block (4 Questions)
WebService: GET - <http://reporting.qualtrics.com/projects/randomNumGen.php> - Fire and Forget
Standard: source_block (4 Questions)
Block: article_block (8 Questions)
Page Break

Start of Block: id_block

intro Welcome to Day 1 of the News Analysis Project!

Page Break

first What is your FIRST name?
(enter your full first name as it is listed on Canvas)

last What is your LAST name?
(enter your last name as it is listed on Canvas)

id What is your [STUDENT ID]?
Your [STUDENT ID] is the string of letters and numbers before the @ sign in your @[university].edu email address, e.g., abc19

End of Block: id_block

Start of Block: source_block

two_sources Which two sources will you be analyzing for this project?

- www.aljazeera.com/topics/regions/us-canada.html
- www.apnews.com/
- www.bbc.com/news/world/us_and_canada
- www.theblaze.com/
- www.cnn.com/
- www.foxnews.com/
- www.npr.org/sections/news/
- www.nytimes.com/
- www.rt.com/usa/
- www.tallahassee.com/
- www.washingtonpost.com/
- www.wsj.com/

Carry Forward Selected Choices from "Which two sources will you be analyzing for this project?"

yoursource Before this project, did you typically use these news outlets to get news?

	Yes, this outlet is one of my main sources for news	No, I typically do not seek this outlet for news
www.aljazeera.com/topics/regions/us-canada.html	0	0
www.apnews.com/	0	0
www.bbc.com/news/world/us_and_canada	0	0
www.theblaze.com/	0	0
www.cnn.com/	0	0
www.foxnews.com/	0	0
www.npr.org/sections/news/	0	0
www.nytimes.com/	0	0
www.rt.com/usa/	0	0
www.tallahassee.com/	0	0
www.washingtonpost.com/	0	0
www.wsj.com/	0	0

Carry Forward Selected Choices from "Which two sources will you be analyzing for this project?"

prior_bias How liberal or conservative did you think each source tends to be?

	Very liberal	Leaning liberal	Evenly balanced	Leaning conservative	Very conservative
www.aljazeera.com/topics/regions/us-canada.html	0	0	0	0	0
www.apnews.com/	0	0	0	0	0
www.bbc.com/news/world/us_and_canada	0	0	0	0	0
www.theblaze.com/	0	0	0	0	0
www.cnn.com/	0	0	0	0	0
www.foxnews.com/	0	0	0	0	0
www.npr.org/sections/news/	0	0	0	0	0
www.nytimes.com/	0	0	0	0	0
www.rt.com/usa/	0	0	0	0	0
www.tallahassee.com/	0	0	0	0	0
www.washingtonpost.com/	0	0	0	0	0
www.wsj.com/	0	0	0	0	0

Carry Forward Selected Choices from "Which two sources will you be analyzing for this project?"

prior_info How informative do you think each source tends to be?

	Extremely informative	Very informative	Moderately informative	Slightly informative	Not informative at all
www.aljazeera.com/topics/regions/us-canada.html	0	0	0	0	0
www.apnews.com/	0	0	0	0	0
www.bbc.com/news/world/us_and_canada	0	0	0	0	0
www.theblaze.com/	0	0	0	0	0
www.cnn.com/	0	0	0	0	0
www.foxnews.com/	0	0	0	0	0
www.npr.org/sections/news/	0	0	0	0	0
www.nytimes.com/	0	0	0	0	0
www.rt.com/usa/	0	0	0	0	0
www.tallahassee.com/	0	0	0	0	0
www.washingtonpost.com/	0	0	0	0	0
www.wsj.com/	0	0	0	0	0

End of Block: source_block

Start of Block: article_block

url

You are about to begin \${Im://Field/1}, \${Im://Field/2} for the day.

Enter the full URL of the article you are coding.

Carry Forward Selected Choices from "Which two sources will you be analyzing for this project?"

source Which source is this article from?

▼ www.aljazeera.com/topics/regions/us-canada.html ... www.wsj.com/

tone Use this face to rate the overall tone of the article on a scale from very negative (i.e., conveys many unhappy emotions) to very positive (i.e. conveys many happy or hopeful emotions).

- 1
- 2
- 3
- 4
- 5

content How informative was the article?

- Not at all informative: Provides the bare minimum amount of content to cover the story
- A little informative: Provides more than the bare minimum, but much more information would be helpful
- Moderately informative: Provides a fair amount of useful information to make a well-informed assessment of the issue/topic
- Very informative: Provides a lot of useful information
- Maximally informative: Provided as much information as I could hope for in a single article

bias Rate how biased the article was on a scale from strong liberal bias (i.e., presents the story in a manner that distorts reality to favor liberal values) to strong conservative bias (i.e. presents the story in a manner that distorts reality to favor conservative values).

- Strong liberal bias
- Weak liberal bias
- Neutral
- Weak conservative bias
- Strong conservative bias

thematic Was the article framed episodically (i.e., focus on specific people, individual events) or thematically (i.e., focus on origins of problem; context in which the immediate story developed; other similar events)?

- Very episodic
- Somewhat episodic
- Somewhat thematic
- Very thematic

international How internationally focused is the story?

- Not at all: focuses exclusively on events/issues in the United States
- Partially: focuses on relationships between US actors and international actors
- Entirely: focuses on international issues with little direct attention to the US

topic

Which of the following classifications best describes the story's topic? (check at least one and up to three)

- Presidential Election
- former President Trump or his administration
- President Biden or his administration
- U.S. Congress (House/Senate)
- Judicial (not counting Crime, which is a separate topic)
- State or Local issues
- US international relations (e.g., alliances, conflict, trade)
- International politics (US not a primary actor in story)
- Civil rights/Civil liberties/Protests
- Crime
- Economy (e.g., Jobs, Growth, Inflation)
- Science/Technology
- Sports
- Celebrities (non politicians)

- Climate/Environment/Natural Disaster
- Other (only choose this one if you are CERTAIN no other category is applicable)

End of Block: article_block

1.2.3 Media & Politics 2: News Project, Days 2-3

On these days, the surveys include only the items from the source_block and article_block in the Day 4 survey, below.

1.2.4 Media & Politics 2: News Project, Day 4

Survey Flow

Standard: id_block (4 Questions)

WebService: GET - <http://reporting.qualtrics.com/projects/randomNumGen.php> - Fire and Forget

Standard: source_block (1 Question)

Block: article_block (8 Questions)

Standard: Block 3 (5 Questions)

Page Break

Start of Block: id_block

day4intro Welcome to Day 4 (the final day) of the News Analysis Project!

If you have yet to complete Days 1-3, do not start this survey. Go back and complete those days first.

If you have already completed Days 1-3, and have waited at least a day, you may continue.

Page Break

first What is your FIRST name?

(enter your full first name as it is listed on Canvas)

last What is your LAST name?

(enter your last name as it is listed on Canvas)

id What is your [STUDENT ID]?

Your [STUDENT ID] is the string of letters and numbers before the @ sign in your @[university].edu email address, e.g., abc19

End of Block: id_block

Start of Block: source_block

two_sources Which two sources will you be analyzing for this project?

IMPORTANT: please choose the same sources you chose on the first day of the project)

- www.aljazeera.com/topics/regions/us-canada.html (48)
- www.apnews.com/ (49)
- www.bbc.com/news/world/us_and_canada (54)
- www.theblaze.com/ (51)
- www.cnn.com/ (52)
- www.foxnews.com/ (53)
- www.npr.org/sections/news/ (56)
- www.nytimes.com/ (57)
- www.rt.com/usa/ (58)

- www.tallahassee.com/ (60)
- www.washingtonpost.com/ (61)
- www.wsj.com/ (59)

End of Block: source_block

Start of Block: article_block

url

You are about to begin $\{\text{lm://Field/1}\}$, $\{\text{lm://Field/2}\}$ for the day.

Enter the full URL of the article you are coding.

Carry Forward Selected Choices from "Which two sources will you be analyzing for this project? IMPORTANT: please choose the same sources you chose on the first day of the project)"

source Which source is this article from?

- ▼ www.aljazeera.com/topics/regions/us-canada.html (1) ... www.wsj.com/ (12)

tone Use this face to rate the overall tone of the article on a scale from very negative (i.e., conveys many unhappy emotions) to very positive (i.e. conveys many happy or hopeful emotions).

- 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)

content How informative was the article?

- Not at all informative: Provides the bare minimum amount of content to cover the story (1)
- A little informative: Provides more than the bare minimum, but much more information would be helpful (2)
- Moderately informative: Provides a fair amount of useful information to make a well-informed assessment of the issue/topic (3)
- Very informative: Provides a lot of useful information (4)
- Maximally informative: Provided as much information as I could hope for in a single article (5)

bias Rate how biased the article was on a scale from strong liberal bias (i.e., presents the story in a manner that distorts reality to favor liberal values) to strong conservative bias (i.e. presents the story in a manner that distorts reality to favor conservative values).

- Strong liberal bias (1)
- Weak liberal bias (2)
- Neutral (3)
- Weak conservative bias (4)
- Strong conservative bias (5)

thematic Was the article framed episodically (i.e., focus on specific people, individual events) or thematically (i.e., focus on origins of problem; context in which the immediate story developed; other similar events)?

- Very episodic (1)
- Somewhat episodic (2)
- Somewhat thematic (3)
- Very thematic (4)

international How internationally focused is the story?

- Not at all: focuses exclusively on events/issues in the United States (1)
- Partially: focuses on relationships between US actors and international actors (2)
- Entirely: focuses on international issues with little direct attention to the US (3)

topic

Which of the following classifications best describes the story's topic? (check at least one and up to three)

- Presidential Election (16)
- former President Trump or his administration (1)
- President Biden or his administration (15)
- U.S. Congress (House/Senate) (2)
- Judicial (not counting Crime, which is a separate topic) (3)
- State or Local issues (4)
- US international relations (e.g., alliances, conflict, trade) (6)
- International politics (US not a primary actor in story) (7)
- Civil rights/Civil liberties/Protests (17)
- Crime (8)
- Economy (e.g., Jobs, Growth, Inflation) (9)
- Science/Technology (10)
- Sports (11)
- Celebrities (non politicians) (12)
- Climate/Environment/Natural Disaster (13)
- Other (only choose this one if you are CERTAIN no other category is applicable) (14)

End of Block: article_block

Start of Block: Block 3

almost-done You are almost done!

You just have a few more questions to answer about your overall experience during all four days of the project.

Page Break

Carry Forward Selected Choices from "Which two sources will you be analyzing for this project? IMPORTANT: please choose the same sources you chose on the first day of the project)"

post_bias Now that you have completed this project, how liberal or conservative do you think each source tends to be?

	Very liberal (1)	Leaning liberal (2)	Evenly balanced (3)	Leaning conservative (4)	Very conservative (5)
www.aljazeera.com/topics/regions/us-canada.html (x48)	0	0	0	0	0
www.apnews.com/ (x49)	0	0	0	0	0
www.bbc.com/news/world/us_and_canada (x54)	0	0	0	0	0
www.theblaze.com/ (x51)	0	0	0	0	0
www.cnn.com/ (x52)	0	0	0	0	0
www.foxnews.com/ (x53)	0	0	0	0	0
www.npr.org/sections/news/ (x56)	0	0	0	0	0
www.nytimes.com/ (x57)	0	0	0	0	0
www.rt.com/usa/ (x58)	0	0	0	0	0
www.tallahassee.com/ (x60)	0	0	0	0	0
www.washingtonpost.com/ (x61)	0	0	0	0	0
www.wsj.com/ (x59)	0	0	0	0	0

Carry Forward Selected Choices from "Which two sources will you be analyzing for this project? IMPORTANT: please choose the same sources you chose on the first day of the project)"

post_info Now that you have completed this project, how informative do you think each source tends to be?

	Extremely informative (11)	Very informative (12)	Moderately informative (13)	Slightly informative (14)	Not informative at all (15)
www.aljazeera.com/topics/regions/us-canada.html (x48)	0	0	0	0	0
www.apnews.com/ (x49)	0	0	0	0	0
www.bbc.com/news/world/us_and_canada (x54)	0	0	0	0	0
www.theblaze.com/ (x51)	0	0	0	0	0
www.cnn.com/ (x52)	0	0	0	0	0
www.foxnews.com/ (x53)	0	0	0	0	0
www.npr.org/sections/news/ (x56)	0	0	0	0	0
www.nytimes.com/ (x57)	0	0	0	0	0
www.rt.com/usa/ (x58)	0	0	0	0	0
www.tallahassee.com/ (x60)	0	0	0	0	0
www.washingtonpost.com/ (x61)	0	0	0	0	0

background NETWORK ANALYSIS PROJECT
Survey 1 of 4

The Network Analysis Project requires you to complete four surveys about your personal social networks. Surveys 1-3 focus on the ties (aka edges) in your network. Survey 4 focuses on the attributes of the alters in your network.

This first survey should only take about five minutes.

Page Break

howtoenternames

This survey asks for you to enter the names or initials of some people you know.

You do not need to provide anyone's full name. Just include enough information so that you will remember who they are so you can answer follow-up questions about them. You will need to differentiate between the people you identify on later questions so give each person a unique name or initials.

You might name the same person for several questions. If you do, try to enter their name exactly the same way each time to avoid errors in the data.

I understand. I will use unique names and enter their name exactly the same each time. (4)

Page Break

template

Since surveys 2-4 will ask questions about the people you mention here, you must keep track of the names or initials you enter. You can do so by creating a spreadsheet with two columns like this:

Name or initials you entered

Full name

To make this task easier for you, I created this spreadsheet you can use as a template.

Make sure to save this spreadsheet for your records and update it each time you enter a new name.

I understand. I and am ready to take notes on the names I enter. (4)

metainfo Browser Meta Info

Browser (1)

Version (2)

Operating System (3)

Screen Resolution (4)

Flash Version (5)

Java Support (6)

User Agent (7)

instructions_time Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

End of Block: Information

Start of Block: name-generators

names_loan Imagine you need to borrow a large sum of money, say \$2,000. Please enter the first names or initials of the first three people you would ask for a loan?

- First person you would ask (1) _____
- Second person you would ask (2) _____
- Third person you would ask (3) _____

names_advice Please enter the first names or initials of the first three people you would go to for career advice?

- First person you would ask (1) _____
- Second person you would ask (2) _____
- Third person you would ask (3) _____

names_spoke Please enter the first names or initials of the last five people you spoke with in person about any topic at all.

If, for any reason, you do not wish to share information about someone for this project, skip them and move to the next most recent person.

- Most recent (1) _____
- Second most recent (2) _____
- Third most recent (3) _____
- Fourth most recent (4) _____
- Fifth most recent (5) _____

names_politics Please enter the first names or initials of the last five people you spoke with in person about political matters.

If, for any reason, you do not wish to share information about someone for this project, skip them and move to the next most recent person.

- Most recent (1) _____
- Second most recent (2) _____
- Third most recent (3) _____
- Fourth most recent (4) _____
- Fifth most recent (5) _____

names_text Please enter the first names or initials of the last five people you sent a message to from your phone or mobile device.

Include only people you know personally on a first name basis. Include only messages sent to one and only one person (skip any group texts). If, for any reason, you do not wish to share information about someone for this project, skip them and move to the next most recent person.

- Most recent (1) _____
- Second most recent (2) _____
- Third most recent (3) _____
- Fourth most recent (4) _____
- Fifth most recent (5) _____

names_time Timing

- First Click (1)
- Last Click (2)
- Page Submit (3)
- Click Count (4)

End of Block: name-generators

Start of Block: errors

suggestions You are almost done! Last question:

Do you have any suggestions on how to improve this survey?

You might list any confusion you had, any errors you encountered, or any ideas you have for interesting questions to ask in future versions of the study.

If you do not have any suggestions, you can leave the box blank and proceed to the next screen.

End of Block: errors

1.2.6 Social Influence, Day 2

SI - Network Analysis Project - Day 2

Survey Flow
EmbeddedData
finish_code = \${rand://int/10000:999999}
Standard: ID (4 Questions)
Standard: Information (3 Questions)
Block: name-generators (3 Questions)
Standard: errors (1 Question)
EndSurvey: Advanced
Page Break

Start of Block: ID

header NETWORK ANALYSIS PROJECT SURVEY 2 (of 4)

first What is your FIRST name?
(Enter your full first name, as displayed on Canvas)

last What is your LAST name?

[student ID] What is your [STUDENT ID]?
Your [STUDENT ID] is the string of letters and numbers before the @ sign in your @[university].edu email address, e.g., abc19

End of Block: ID

Start of Block: Information

background NETWORK ANALYSIS PROJECT
Survey 2 of 4

The Network Analysis Project requires you to complete four surveys about your personal social networks. Surveys 1-3 focus on the ties (aka edges) in your network. Survey 4 focuses on the attributes of the alters in your network.

This second survey should take less than five minutes.

Page Break

wait48 You must wait at least 48 hours after submitting Survey 1 before you begin this survey. If it has been less than 48 hours, please exit the survey and return after the 48 hours are over.

I affirm that it has been at least 48 hours since I submitted Survey 1 (1)

Page Break

notes-update

Like the previous survey, you must keep track of the names or initials you enter.

Please find your existing notes and update them each time you enter a new name.

- I understand. I will update my notes with each new name I enter in this survey (4)

End of Block: Information

Start of Block: name-generators

names_spoke Please enter the first names or initials of the last five people you spoke with in person about any topic at all.

If, for any reason, you do not wish to share information about someone for this project, skip them and move to the next most recent person.

- Most recent (1) _____
- Second most recent (2) _____
- Third most recent (3) _____
- Fourth most recent (4) _____
- Fifth most recent (5) _____

names_text Please enter the first names or initials of the last five people you sent a message to from your phone or mobile device.

Include only people you know personally on a first name basis. Include only messages sent to one and only one person (skip any group texts). If, for any reason, you do not wish to share information about someone for this project, skip them and move to the next most recent person.

- Most recent (1) _____
- Second most recent (2) _____
- Third most recent (3) _____
- Fourth most recent (4) _____
- Fifth most recent (5) _____

names_time Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

End of Block: name-generators

Start of Block: errors

suggestions You are almost done! Last question:

Do you have any suggestions on how to improve this survey?

You might list any confusion you had, any errors you encountered, or any ideas you have for interesting questions to ask in future versions of the study.

If you do not have any suggestions, you can leave the box blank and proceed to the next screen.

End of Block: errors

1.2.7 Social Influence, Day 3

SI - Network Analysis Project - Day 3

Survey Flow
EmbeddedData
finish_code = \${rand://int/10000:999999}
Standard: ID (4 Questions)
Standard: Information (3 Questions)
Block: name-generators (3 Questions)
Standard: errors (1 Question)
EndSurvey: Advanced
Page Break

Start of Block: ID

header NETWORK ANALYSIS PROJECT SURVEY 3 (of 4)

first What is your FIRST name?
(Enter your full first name, as displayed on Canvas)

last What is your LAST name?

[student ID] What is your [STUDENT ID]?
Your [STUDENT ID] is the string of letters and numbers before the @ sign in your @[university].edu email address, e.g., abc19

End of Block: ID

Start of Block: Information

background NETWORK ANALYSIS PROJECT
Survey 3 of 4

The Network Analysis Project requires you to complete four surveys about your personal social networks. Surveys 1-3 focus on the ties (aka edges) in your network. Survey 4 focuses on the attributes of the alters in your network.

This third survey should take less than five minutes.

Page Break

wait48 You must wait at least 48 hours after submitting Survey 2 before you begin this survey. If it has been less than 48 hours, please exit the survey and return after the 48 hours are over.

I affirm that it has been at least 48 hours since I submitted Survey 1 (1)

Page Break

notes-update
Like the previous surveys, you must keep track of the names or initials you enter.

Please find your existing notes and update them each time you enter a new name.

I understand. I will update my notes with each new name I enter in this survey (4)

End of Block: Information

Start of Block: name-generators

names_spoke Please enter the first names or initials of the last five people you spoke with in person about any topic at all.

If, for any reason, you do not wish to share information about someone for this project, skip them and move to the next most recent person.

- Most recent (1) _____
- Second most recent (2) _____
- Third most recent (3) _____
- Fourth most recent (4) _____
- Fifth most recent (5) _____

names_text Please enter the first names or initials of the last five people you sent a message to from your phone or mobile device.

Include only people you know personally on a first name basis. Include only messages sent to one and only one person (skip any group texts). If, for any reason, you do not wish to share information about someone for this project, skip them and move to the next most recent person.

- Most recent (1) _____
- Second most recent (2) _____
- Third most recent (3) _____
- Fourth most recent (4) _____
- Fifth most recent (5) _____

names_time Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

End of Block: name-generators

Start of Block: errors

suggestions You are almost done! Last question:

Do you have any suggestions on how to improve this survey?

You might list any confusion you had, any errors you encountered, or any ideas you have for interesting questions to ask in future versions of the study.

If you do not have any suggestions, you can leave the box blank and proceed to the next screen.

End of Block: errors

1.2.8 Social Influence, Day 4

SI - Network Analysis Project - Day 4

Survey Flow

EmbeddedData

finish_code = \${rand://int/10000:999999}

person_1Value will be set from Panel or URL.

person_10Value will be set from Panel or URL.

person_11Value will be set from Panel or URL.

person_12Value will be set from Panel or URL.

person_13Value will be set from Panel or URL.

person_14Value will be set from Panel or URL.
person_15Value will be set from Panel or URL.
person_16Value will be set from Panel or URL.
person_17Value will be set from Panel or URL.
person_18Value will be set from Panel or URL.
person_19Value will be set from Panel or URL.
person_2Value will be set from Panel or URL.
person_20Value will be set from Panel or URL.
person_21Value will be set from Panel or URL.
person_22Value will be set from Panel or URL.
person_23Value will be set from Panel or URL.
person_24Value will be set from Panel or URL.
person_25Value will be set from Panel or URL.
person_26Value will be set from Panel or URL.
person_27Value will be set from Panel or URL.
person_28Value will be set from Panel or URL.
person_29Value will be set from Panel or URL.
person_3Value will be set from Panel or URL.
person_30Value will be set from Panel or URL.
person_31Value will be set from Panel or URL.
person_32Value will be set from Panel or URL.
person_33Value will be set from Panel or URL.
person_34Value will be set from Panel or URL.
person_35Value will be set from Panel or URL.
person_37Value will be set from Panel or URL.
person_4Value will be set from Panel or URL.
person_5Value will be set from Panel or URL.
person_6Value will be set from Panel or URL.
person_7Value will be set from Panel or URL.
person_8Value will be set from Panel or URL.
person_9Value will be set from Panel or URL.

Standard: ID (3 Questions)

WebService: GET - <http://reporting.qualtrics.com/projects/randomNumGen.php> - Fire and Forget

Standard: Information (1 Question)

Standard: edge-attributes (9 Questions)

Standard: loop-sociomatrix (1 Question)

Standard: errors (1 Question)

EndSurvey: Advanced

Page Break

Start of Block: ID

first What is your FIRST name?

Enter your full first name, as displayed on Canvas

last What is your LAST name?

[student ID] What is your [STUDENT ID]?

Your [STUDENT ID] is the string of letters and numbers before the @ sign in your @[university].edu email address, e.g., abc19

End of Block: ID

Start of Block: Information

notes-ready NETWORK ANALYSIS PROJECT - Survey 4

In this survey, you will tell me more about the names you listed on the previous surveys.

To answer the questions, make sure you have the notes you took tracking the names or initials you entered on the first three surveys.

Note: This survey will be quicker if you use a desktop or laptop rather than a mobile device.

o OK, I have my notes ready (4)

End of Block: Information

Start of Block: edge-attributes

edges-self If you had to choose, which of the following options best describes your current relationship with each person you mentioned?

DEFINITIONS

Only choose "remove from network" if ... The entry is blank You do not know who this is (e.g., perhaps you typed someone's initials incorrectly)
 They are listed above on this question (e.g., you typed someone's initials slightly differently each time and so they are repeated here) For privacy reasons, you do not wish to respond to questions about this person

	remove from network (0)	Acquaintance (Know on a first-name basis) (1)	Classmate or Coworker (2)	Close friend (3)	Family (4)
#{e://Field/person_1} (1)	0	0	0	0	0
#{e://Field/person_2} (2)	0	0	0	0	0
#{e://Field/person_3} (4)	0	0	0	0	0
#{e://Field/person_4} (5)	0	0	0	0	0
#{e://Field/person_5} (6)	0	0	0	0	0
#{e://Field/person_6} (7)	0	0	0	0	0
#{e://Field/person_7} (8)	0	0	0	0	0
#{e://Field/person_8} (9)	0	0	0	0	0
#{e://Field/person_9} (10)	0	0	0	0	0
#{e://Field/person_10} (11)	0	0	0	0	0
#{e://Field/person_11} (12)	0	0	0	0	0
#{e://Field/person_12} (13)	0	0	0	0	0
#{e://Field/person_13} (14)	0	0	0	0	0
#{e://Field/person_14} (15)	0	0	0	0	0
#{e://Field/person_15} (16)	0	0	0	0	0
#{e://Field/person_16} (17)	0	0	0	0	0
#{e://Field/person_17} (18)	0	0	0	0	0
#{e://Field/person_18} (19)	0	0	0	0	0
#{e://Field/person_19} (20)	0	0	0	0	0
#{e://Field/person_20} (21)	0	0	0	0	0
#{e://Field/person_21} (22)	0	0	0	0	0
#{e://Field/person_22} (23)	0	0	0	0	0
#{e://Field/person_23} (24)	0	0	0	0	0
#{e://Field/person_24} (25)	0	0	0	0	0
#{e://Field/person_25} (26)	0	0	0	0	0
#{e://Field/person_26} (27)	0	0	0	0	0
#{e://Field/person_27} (28)	0	0	0	0	0
#{e://Field/person_28} (29)	0	0	0	0	0
#{e://Field/person_29} (30)	0	0	0	0	0
#{e://Field/person_30} (31)	0	0	0	0	0
#{e://Field/person_31} (32)	0	0	0	0	0
#{e://Field/person_32} (33)	0	0	0	0	0
#{e://Field/person_33} (34)	0	0	0	0	0
#{e://Field/person_34} (35)	0	0	0	0	0
#{e://Field/person_35} (36)	0	0	0	0	0
#{e://Field/person_36} (37)	0	0	0	0	0
#{e://Field/person_37} (38)	0	0	0	0	0

Page Break

Carry Forward Unselected Choices from "edges-self"

gender To the best of your knowledge, which of the following options best describes the gender of each person you mentioned?

	Same gender as me (1)	Different gender than me (0)	Prefer not to disclose (999)
#{e://Field/person_1} (x1)	0	0	0
#{e://Field/person_2} (x2)	0	0	0

#{e://Field/person_3} (x4)	0	0	0
#{e://Field/person_4} (x5)	0	0	0
#{e://Field/person_5} (x6)	0	0	0
#{e://Field/person_6} (x7)	0	0	0
#{e://Field/person_7} (x8)	0	0	0
#{e://Field/person_8} (x9)	0	0	0
#{e://Field/person_9} (x10)	0	0	0
#{e://Field/person_10} (x11)	0	0	0
#{e://Field/person_11} (x12)	0	0	0
#{e://Field/person_12} (x13)	0	0	0
#{e://Field/person_13} (x14)	0	0	0
#{e://Field/person_14} (x15)	0	0	0
#{e://Field/person_15} (x16)	0	0	0
#{e://Field/person_16} (x17)	0	0	0
#{e://Field/person_17} (x18)	0	0	0
#{e://Field/person_18} (x19)	0	0	0
#{e://Field/person_19} (x20)	0	0	0
#{e://Field/person_20} (x21)	0	0	0
#{e://Field/person_21} (x22)	0	0	0
#{e://Field/person_22} (x23)	0	0	0
#{e://Field/person_23} (x24)	0	0	0
#{e://Field/person_24} (x25)	0	0	0
#{e://Field/person_25} (x26)	0	0	0
#{e://Field/person_26} (x27)	0	0	0
#{e://Field/person_27} (x28)	0	0	0
#{e://Field/person_28} (x29)	0	0	0
#{e://Field/person_29} (x30)	0	0	0
#{e://Field/person_30} (x31)	0	0	0
#{e://Field/person_31} (x32)	0	0	0
#{e://Field/person_32} (x33)	0	0	0
#{e://Field/person_33} (x34)	0	0	0
#{e://Field/person_34} (x35)	0	0	0
#{e://Field/person_35} (x36)	0	0	0
#{e://Field/person_36} (x37)	0	0	0
#{e://Field/person_37} (x38)	0	0	0

Page Break

Carry Forward Unselected Choices from "edges-self"

age To the best of your knowledge, how old are each of these people?

If you do not know, just enter your best guess.

	younger than me (3+ years) (-1) (10+ years) (2)	about my age (within two years) (0) prefer not to say (999)	somewhat older than me (3-9 years) (1)	much older than me
#{e://Field/person_1} (x1)	0	0	0	0
#{e://Field/person_2} (x2)	0	0	0	0
#{e://Field/person_3} (x4)	0	0	0	0
#{e://Field/person_4} (x5)	0	0	0	0
#{e://Field/person_5} (x6)	0	0	0	0
#{e://Field/person_6} (x7)	0	0	0	0
#{e://Field/person_7} (x8)	0	0	0	0
#{e://Field/person_8} (x9)	0	0	0	0
#{e://Field/person_9} (x10)	0	0	0	0
#{e://Field/person_10} (x11)	0	0	0	0
#{e://Field/person_11} (x12)	0	0	0	0
#{e://Field/person_12} (x13)	0	0	0	0
#{e://Field/person_13} (x14)	0	0	0	0
#{e://Field/person_14} (x15)	0	0	0	0
#{e://Field/person_15} (x16)	0	0	0	0
#{e://Field/person_16} (x17)	0	0	0	0
#{e://Field/person_17} (x18)	0	0	0	0
#{e://Field/person_18} (x19)	0	0	0	0
#{e://Field/person_19} (x20)	0	0	0	0
#{e://Field/person_20} (x21)	0	0	0	0
#{e://Field/person_21} (x22)	0	0	0	0

#{e://Field/person_22} (x23)	0	0	0	0	0
#{e://Field/person_23} (x24)	0	0	0	0	0
#{e://Field/person_24} (x25)	0	0	0	0	0
#{e://Field/person_25} (x26)	0	0	0	0	0
#{e://Field/person_26} (x27)	0	0	0	0	0
#{e://Field/person_27} (x28)	0	0	0	0	0
#{e://Field/person_28} (x29)	0	0	0	0	0
#{e://Field/person_29} (x30)	0	0	0	0	0
#{e://Field/person_30} (x31)	0	0	0	0	0
#{e://Field/person_31} (x32)	0	0	0	0	0
#{e://Field/person_32} (x33)	0	0	0	0	0
#{e://Field/person_33} (x34)	0	0	0	0	0
#{e://Field/person_34} (x35)	0	0	0	0	0
#{e://Field/person_35} (x36)	0	0	0	0	0
#{e://Field/person_36} (x37)	0	0	0	0	0
#{e://Field/person_37} (x38)	0	0	0	0	0

Page Break

Carry Forward Unselected Choices from "edges-self"

race To the best of your knowledge, which of the following options best describes the racial/ethnic identity of each person you mentioned?

	Same as mine (1)	Different than mine (0)	Do not know (99)	Prefer not to say (999)
#{e://Field/person_1} (x1)	0	0	0	0
#{e://Field/person_2} (x2)	0	0	0	0
#{e://Field/person_3} (x4)	0	0	0	0
#{e://Field/person_4} (x5)	0	0	0	0
#{e://Field/person_5} (x6)	0	0	0	0
#{e://Field/person_6} (x7)	0	0	0	0
#{e://Field/person_7} (x8)	0	0	0	0
#{e://Field/person_8} (x9)	0	0	0	0
#{e://Field/person_9} (x10)	0	0	0	0
#{e://Field/person_10} (x11)	0	0	0	0
#{e://Field/person_11} (x12)	0	0	0	0
#{e://Field/person_12} (x13)	0	0	0	0
#{e://Field/person_13} (x14)	0	0	0	0
#{e://Field/person_14} (x15)	0	0	0	0
#{e://Field/person_15} (x16)	0	0	0	0
#{e://Field/person_16} (x17)	0	0	0	0
#{e://Field/person_17} (x18)	0	0	0	0
#{e://Field/person_18} (x19)	0	0	0	0
#{e://Field/person_19} (x20)	0	0	0	0
#{e://Field/person_20} (x21)	0	0	0	0
#{e://Field/person_21} (x22)	0	0	0	0
#{e://Field/person_22} (x23)	0	0	0	0
#{e://Field/person_23} (x24)	0	0	0	0
#{e://Field/person_24} (x25)	0	0	0	0
#{e://Field/person_25} (x26)	0	0	0	0
#{e://Field/person_26} (x27)	0	0	0	0
#{e://Field/person_27} (x28)	0	0	0	0
#{e://Field/person_28} (x29)	0	0	0	0
#{e://Field/person_29} (x30)	0	0	0	0
#{e://Field/person_30} (x31)	0	0	0	0
#{e://Field/person_31} (x32)	0	0	0	0
#{e://Field/person_32} (x33)	0	0	0	0
#{e://Field/person_33} (x34)	0	0	0	0
#{e://Field/person_34} (x35)	0	0	0	0
#{e://Field/person_35} (x36)	0	0	0	0
#{e://Field/person_36} (x37)	0	0	0	0
#{e://Field/person_37} (x38)	0	0	0	0

Page Break

Carry Forward Unselected Choices from "edges-self"

party To the best of your knowledge, which of the following options best describes the political preferences of each person you mentioned?

If you do not know, take your best guess.

	Usually supports the same party as me (1)	Sometimes supports the same party as me, sometimes the opposite party (0)	Usually
supports the opposite party as me (-1)		prefer not to say (999)	
#{e://Field/person_1} (x1)	0	0	0
#{e://Field/person_2} (x2)	0	0	0
#{e://Field/person_3} (x4)	0	0	0
#{e://Field/person_4} (x5)	0	0	0
#{e://Field/person_5} (x6)	0	0	0
#{e://Field/person_6} (x7)	0	0	0
#{e://Field/person_7} (x8)	0	0	0
#{e://Field/person_8} (x9)	0	0	0
#{e://Field/person_9} (x10)	0	0	0
#{e://Field/person_10} (x11)	0	0	0
#{e://Field/person_11} (x12)	0	0	0
#{e://Field/person_12} (x13)	0	0	0
#{e://Field/person_13} (x14)	0	0	0
#{e://Field/person_14} (x15)	0	0	0
#{e://Field/person_15} (x16)	0	0	0
#{e://Field/person_16} (x17)	0	0	0
#{e://Field/person_17} (x18)	0	0	0
#{e://Field/person_18} (x19)	0	0	0
#{e://Field/person_19} (x20)	0	0	0
#{e://Field/person_20} (x21)	0	0	0
#{e://Field/person_21} (x22)	0	0	0
#{e://Field/person_22} (x23)	0	0	0
#{e://Field/person_23} (x24)	0	0	0
#{e://Field/person_24} (x25)	0	0	0
#{e://Field/person_25} (x26)	0	0	0
#{e://Field/person_26} (x27)	0	0	0
#{e://Field/person_27} (x28)	0	0	0
#{e://Field/person_28} (x29)	0	0	0
#{e://Field/person_29} (x30)	0	0	0
#{e://Field/person_30} (x31)	0	0	0
#{e://Field/person_31} (x32)	0	0	0
#{e://Field/person_32} (x33)	0	0	0
#{e://Field/person_33} (x34)	0	0	0
#{e://Field/person_34} (x35)	0	0	0
#{e://Field/person_35} (x36)	0	0	0
#{e://Field/person_36} (x37)	0	0	0
#{e://Field/person_37} (x38)	0	0	0

Page Break

covidoptout The next two questions ask about COVID-19:

The first question asks whether each person has the same vaccination status as you, but it does not ask you to disclose whether you are vaccinated.

The second question asks whether you and the others in your network have ever contracted COVID-19.

Since these are sensitive topics, you may skip these questions without affecting your grade. If you skip these questions, analyses related to COVID-19 will be excluded from the personalized report I will send each student.

Remember, you can always go back and change your response to this question if you change your mind.

Do you wish to respond to the COVID-19 questions?

- Yes, I would like the chance to answer the the COVID-19 questions (1)
- No, I wish to skip the COVID-19 questions (0)

Skip To: End of Block If covidoptout = No, I wish to skip the COVID-19 questions

Page Break

Carry Forward Unselected Choices from "edges-self"

vaccine-status To the best of your knowledge, which of the following options best describes the vaccine status of each person you mentioned?

If you don't know, please take your best guess.

DEFINITIONS

If you have had one or more doses of a COVID-19 vaccine: choose "same" for people you think have had at least one dose choose "opposite" for people you think have had no doses

If you have not received even a single dose of a COVID-19 vaccine: choose "same" for people you think have had no doses choose "opposite" for people you think have had at least one dose

	same status as me (1)	opposite status as me (0)	Prefer not to answer (999)
{e://Field/person_1} (x1)	0	0	0
{e://Field/person_2} (x2)	0	0	0
{e://Field/person_3} (x4)	0	0	0
{e://Field/person_4} (x5)	0	0	0
{e://Field/person_5} (x6)	0	0	0
{e://Field/person_6} (x7)	0	0	0
{e://Field/person_7} (x8)	0	0	0
{e://Field/person_8} (x9)	0	0	0
{e://Field/person_9} (x10)	0	0	0
{e://Field/person_10} (x11)	0	0	0
{e://Field/person_11} (x12)	0	0	0
{e://Field/person_12} (x13)	0	0	0
{e://Field/person_13} (x14)	0	0	0
{e://Field/person_14} (x15)	0	0	0
{e://Field/person_15} (x16)	0	0	0
{e://Field/person_16} (x17)	0	0	0
{e://Field/person_17} (x18)	0	0	0
{e://Field/person_18} (x19)	0	0	0
{e://Field/person_19} (x20)	0	0	0
{e://Field/person_20} (x21)	0	0	0
{e://Field/person_21} (x22)	0	0	0
{e://Field/person_22} (x23)	0	0	0
{e://Field/person_23} (x24)	0	0	0
{e://Field/person_24} (x25)	0	0	0
{e://Field/person_25} (x26)	0	0	0
{e://Field/person_26} (x27)	0	0	0
{e://Field/person_27} (x28)	0	0	0
{e://Field/person_28} (x29)	0	0	0
{e://Field/person_29} (x30)	0	0	0
{e://Field/person_30} (x31)	0	0	0
{e://Field/person_31} (x32)	0	0	0
{e://Field/person_32} (x33)	0	0	0
{e://Field/person_33} (x34)	0	0	0
{e://Field/person_34} (x35)	0	0	0
{e://Field/person_35} (x36)	0	0	0
{e://Field/person_36} (x37)	0	0	0
{e://Field/person_37} (x38)	0	0	0

Page Break

Carry Forward Unselected Choices from "edges-self"

covidpositive To the best of your knowledge, which of the following people have ever contracted COVID-19?

If you don't know, take your best guess.

	Never had COVID-19 (0)	Had COVID-19 (1)	Prefer not to disclose (999)
Yourself (562)	0	0	0
{e://Field/person_1} (x1)	0	0	0
{e://Field/person_2} (x2)	0	0	0
{e://Field/person_3} (x4)	0	0	0
{e://Field/person_4} (x5)	0	0	0
{e://Field/person_5} (x6)	0	0	0
{e://Field/person_6} (x7)	0	0	0
{e://Field/person_7} (x8)	0	0	0
{e://Field/person_8} (x9)	0	0	0

$\{e://Field/person_9\}$ (x10)	0	0	0
$\{e://Field/person_10\}$ (x11)	0	0	0
$\{e://Field/person_11\}$ (x12)	0	0	0
$\{e://Field/person_12\}$ (x13)	0	0	0
$\{e://Field/person_13\}$ (x14)	0	0	0
$\{e://Field/person_14\}$ (x15)	0	0	0
$\{e://Field/person_15\}$ (x16)	0	0	0
$\{e://Field/person_16\}$ (x17)	0	0	0
$\{e://Field/person_17\}$ (x18)	0	0	0
$\{e://Field/person_18\}$ (x19)	0	0	0
$\{e://Field/person_19\}$ (x20)	0	0	0
$\{e://Field/person_20\}$ (x21)	0	0	0
$\{e://Field/person_21\}$ (x22)	0	0	0
$\{e://Field/person_22\}$ (x23)	0	0	0
$\{e://Field/person_23\}$ (x24)	0	0	0
$\{e://Field/person_24\}$ (x25)	0	0	0
$\{e://Field/person_25\}$ (x26)	0	0	0
$\{e://Field/person_26\}$ (x27)	0	0	0
$\{e://Field/person_27\}$ (x28)	0	0	0
$\{e://Field/person_28\}$ (x29)	0	0	0
$\{e://Field/person_29\}$ (x30)	0	0	0
$\{e://Field/person_30\}$ (x31)	0	0	0
$\{e://Field/person_31\}$ (x32)	0	0	0
$\{e://Field/person_32\}$ (x33)	0	0	0
$\{e://Field/person_33\}$ (x34)	0	0	0
$\{e://Field/person_34\}$ (x35)	0	0	0
$\{e://Field/person_35\}$ (x36)	0	0	0
$\{e://Field/person_36\}$ (x37)	0	0	0
$\{e://Field/person_37\}$ (x38)	0	0	0

interpreter_time Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

End of Block: edge-attributes

Start of Block: loop-sociomatrix

Carry Forward Unselected Choices from "edges-self"

sociomatrix Thinking of $\{l://Field/1\}$, which of these people do they know? Drag the names of the people they know into the box. If you don't know, take your best guess.

DEFINITIONS Choose "knows a little" for acquaintances, coworkers, and other people they know on a first name basis. Choose "knows well" for close friends, family, and other more intimate relationships.

	$\{l://Field/1\}$ does not know (0)	$\{l://Field/1\}$ knows a little (1)	$\{l://Field/1\}$ knows well (2)	This is $\{l://Field/1\}$ (99)
$\{e://Field/person_1\}$ (x1)	0	0	0	0
$\{e://Field/person_2\}$ (x2)	0	0	0	0
$\{e://Field/person_3\}$ (x4)	0	0	0	0
$\{e://Field/person_4\}$ (x5)	0	0	0	0
$\{e://Field/person_5\}$ (x6)	0	0	0	0
$\{e://Field/person_6\}$ (x7)	0	0	0	0
$\{e://Field/person_7\}$ (x8)	0	0	0	0
$\{e://Field/person_8\}$ (x9)	0	0	0	0
$\{e://Field/person_9\}$ (x10)	0	0	0	0
$\{e://Field/person_10\}$ (x11)	0	0	0	0
$\{e://Field/person_11\}$ (x12)	0	0	0	0
$\{e://Field/person_12\}$ (x13)	0	0	0	0
$\{e://Field/person_13\}$ (x14)	0	0	0	0
$\{e://Field/person_14\}$ (x15)	0	0	0	0
$\{e://Field/person_15\}$ (x16)	0	0	0	0
$\{e://Field/person_16\}$ (x17)	0	0	0	0
$\{e://Field/person_17\}$ (x18)	0	0	0	0
$\{e://Field/person_18\}$ (x19)	0	0	0	0

#{e://Field/person_19} (x20)	0	0	0	0
#{e://Field/person_20} (x21)	0	0	0	0
#{e://Field/person_21} (x22)	0	0	0	0
#{e://Field/person_22} (x23)	0	0	0	0
#{e://Field/person_23} (x24)	0	0	0	0
#{e://Field/person_24} (x25)	0	0	0	0
#{e://Field/person_25} (x26)	0	0	0	0
#{e://Field/person_26} (x27)	0	0	0	0
#{e://Field/person_27} (x28)	0	0	0	0
#{e://Field/person_28} (x29)	0	0	0	0
#{e://Field/person_29} (x30)	0	0	0	0
#{e://Field/person_30} (x31)	0	0	0	0
#{e://Field/person_31} (x32)	0	0	0	0
#{e://Field/person_32} (x33)	0	0	0	0
#{e://Field/person_33} (x34)	0	0	0	0
#{e://Field/person_34} (x35)	0	0	0	0
#{e://Field/person_35} (x36)	0	0	0	0
#{e://Field/person_36} (x37)	0	0	0	0
#{e://Field/person_37} (x38)	0	0	0	0

End of Block: loop-sociomatrix

Start of Block: errors

suggestions Optional: Do you have any suggestions on how to improve this survey? You might list any confusion you had, any errors you encountered, or any ideas you have for interesting questions to ask in future versions of the study.

If you do not have any suggestions, you can leave the box blank and click the next button to receive your confirmation code for completing the survey.

End of Block: errors

1.2.9 Research Methods

RM - S21 - Central Limit Theorem Assignment

Survey Flow

Standard: id_block (4 Questions)

WebService: GET - <http://reporting.qualtrics.com/projects/randomNumGen.php> - Fire and Forget

WebService: GET - <http://reporting.qualtrics.com/projects/randomNumGen.php> - Fire and Forget

Standard: mm1 (7 Questions)

Standard: mm2 (9 Questions)

Standard: comment_block (1 Question)

Page Break

Start of Block: id_block

intro:

Assignment 3 - Central Limit Theorem

Topics Covered:

In this assignment, you will gain practice calculating means, standard deviations, standard errors, and confidence intervals.

Required Materials:

To complete this assignment, you must have two bags of M&Ms (the original Milk Chocolate kind, not peanut or one of the other fancy kinds). Ideally, the bags should be the standard, 1.69-Ounce size. But smaller or larger bags are fine.

FAQ Yes, you really need to buy two bags of M&Ms. No, you cannot use your classmate's bag -- it defeats the purpose. Yes, you and your classmates can work together as long as each student uses their own two bags.

Page Break

first What is your FIRST name?
(enter your full first name as it is listed on Canvas)

last What is your LAST name?
(enter your last name as it is listed on Canvas)

id What is your [STUDENT ID]?
Your [STUDENT ID] is the string of letters and numbers before the @ sign in your @[university].edu email address, e.g., abc19

Page Break

End of Block: id_block

Start of Block: mm1

pic1

To help verify each student's work, and help students who have questions, we need a picture of the contents of your M&M bags.

Please upload a picture of the contents of your first bag of M&Ms. In the picture, please ensure the bag itself and all the M&Ms are in view, like in this example:

Page Break

orange1 What is the total number of orange M&Ms in this bag?

any1 What is the total number of M&Ms in this bag of any color (including orange)?

prop1 What proportion of your bag is orange?

This proportion is the mean for a variable that equals 1 if a candy is orange and equals 0 if it is any other color.

Since this is a proportion, the number you enter must be from 0 to 1.

To calculate this quantity, divide the number of orange by the number of any color.

Page Break

sd1

What is the standard deviation of this variable?

See example 6.4, starting on p. 139 of your textbook for details.

To help, here are some numbers based on what you entered that should push you in the right direction:

Quantity	Value
n	$\${any1/ChoiceTextEntryValue}$
\bar{y}	$\${prop1/ChoiceTextEntryValue}$
number of observations for which $Y = 1$	$\${orange1/ChoiceTextEntryValue}$
number of observations for which $Y = 0$	$\${e{q://QID369/ChoiceTextEntryValue} - q://QID368/ChoiceTextEntryValue}$

Page Break

se1

What is the standard error of the proportion orange in this bag?

See p. 137 of your textbook for the formula and p. 140 for an example.

To help, here are some numbers based on what you entered that should push you in the right direction:

Quantity	Value
n	$\${any1/ChoiceTextEntryValue}$
sY	$\${sd1/ChoiceTextEntryValue}$

Page Break

ci1

What is the 95% confidence interval of the proportion orange in this bag? Enter the lower and upper bounds of this interval.

See p. 138 of your textbook for the formula and p. 140 for an example. In a confidence interval, the lower bound is the lowest value within the interval and the upper bound is the highest value. So if you think the confidence interval is from 0.1 to 0.3, the lower bound is 0.1 and the upper bound is 0.3.

To help, here are some numbers based on what you entered that should push you in the right direction:

Quantity	Value
\bar{Y}	$\${prop1/ChoiceTextEntryValue}$
$\sigma\bar{Y}$	$\${se1/ChoiceTextEntryValue}$
critical value	2

o Lower bound (4) _____

o Upper bound (5) _____

End of Block: mm1

Start of Block: mm2

intro2 We shall now repeat those steps using your second bag of M&Ms.

pic2 Please upload a picture of the contents of your second bag of M&Ms. In the picture, please ensure the bag itself and all the M&Ms are in view.

Page Break

orange2 What is the total number of orange M&Ms in this bag?

any2 What is the total number of M&Ms in this bag of any color (including orange)?

prop2 What proportion of your bag is orange?

This proportion is the mean for a variable that equals 1 if a candy is orange and equals 0 if it is any other color.

Since this is a proportion, the number you enter must be from 0 to 1.

To calculate this quantity, divide the number of orange by the number of any color.

Page Break

sd2

What is the standard deviation of this variable?

See example 6.4, starting on p. 139 of your textbook for details.

To help, here are some numbers based on what you entered that should push you in the right direction:

Quantity	Value
n	$\${any2/ChoiceTextEntryValue}$
\bar{Y}	$\${prop2/ChoiceTextEntryValue}$
number of observations for which $Y = 1$	$\${orange2/ChoiceTextEntryValue}$
number of observations for which $Y = 0$	$\${e{q://QID377/ChoiceTextEntryValue} - q://QID376/ChoiceTextEntryValue}$

Page Break

se2

What is the standard error of the proportion orange in this bag?

See p. 137 of your textbook for the formula and p. 140 for an example.

To help, here are some numbers based on what you entered that should push you in the right direction:

Quantity	Value
n	$\${any2/ChoiceTextEntryValue}$
sY	$\${sd2/ChoiceTextEntryValue}$

Page Break

ci2

What is the 95% confidence interval of the proportion orange in this bag? Enter the lower and upper bounds of this interval.

See p. 138 of your textbook for the formula and p. 140 for an example. In a confidence interval, the lower bound is the lowest value within the interval and the upper bound is the highest value. So if you think the confidence interval is from 0.1 to 0.3, the lower bound is 0.1 and the upper bound is 0.3.

To help, here are some numbers based on what you entered that should push you in the right direction:

Quantity	Value
\bar{Y}	$\${prop2/ChoiceTextEntryValue}$
$\sigma\bar{Y}$	$\${se2/ChoiceTextEntryValue}$
critical value	2

o Lower bound (4) _____

o Upper bound (5) _____

Page Break

end2

You just have one more question and then you will receive your confirmation code.

Before continuing, please read below to see what should have happened during this exercise.

What should have happened?

Each of your bags of M&Ms represents a sample from the M&Ms population. We should expect most students' sample statistics to look very similar to the true population parameters. Of course, about 5% of students' confidence intervals will be so far from the true population parameter that the population parameter will be outside their confidence interval.

In real-world sampling problems, we can never be sure how close our sample statistic is to the true population parameter--if we knew the population parameter, we wouldn't bother taking a sample. But in this instance, [the instructors] will use the data gathered by all students to see if the central limit theorem holds as we would expect. If so, we should expect the following (assuming all calculations were done correctly): about 95% of the time, the student's confidence interval should include the population parameter

about 68% of the time, the student's sample statistic should be no more than one standard error above or below the true population parameter

about 99.7% of the time, the student's sample statistic should be no more than three standard errors above or below the true population parameter

if we plot every mean from every student's samples, we should see a normal distribution. With the most common sample statistic equal to the true population parameter.

End of Block: mm2

Start of Block: comment_block

comments_survey Did you encounter any problems while working on this assignment or do you have any suggestions for ways to improve it?

End of Block: comment_block

2 Instructions for Students

This appendix includes the written instructions students receive for each project.

2.1.1 Media & Politics 1: Ad Project

TASK

For the project, students will analyze 15 ads from the 2020 presidential campaign.

PURPOSE

Students will be performing a content analysis that is similar, though far less tedious, than the one performed by John Geer in his book, *In Defense of Negativity*. By conducting this analysis, students should gain a far more nuanced understanding of Geer's arguments and should be better able to judge for themselves whether they agree or disagree with his claims.

YOU CAN COMPLETE THE FORM IN MORE THAN ONE SESSION

Since you are using a personalized link (see details below), you do not need to complete the analysis in a single session. You can code a few ads and then return to the link later to code a few more.

WHICH ADS WILL YOU CODE?

Each student will be shown a random sample of 15 ads selected from the 42 ads in the The Living Room Candidate's 2020 ad archive.

HOW DO I COMPLETE THE ASSIGNMENT?

STEP 1: START BY READING THE CODEBOOK

A full list of variables, with explanations can be found here or by clicking Next, below. You should read the explanations first before entering any data. You should read these explanations first before entering any data.

STEP 2: THEN COMPLETE THE PRACTICE AD

To gain practice before you complete your data collection, you should first code this practice ad.

STEP 3: USE THE LINK I SENT YOU VIA EMAIL TO COMPLETE THE DATA COLLECTION

Around 11:00AM on November 16, each student should have received an email with a personalized link from the email address noreply@qualtrics-survey.com.

Since these links are personalized, you must use the one I sent you and you should not share your link with other people. The email with the link uses the subject line: "[Course ID]: Negative Ads Project Link". If you have not received it, check your spam folder.

STEP 4: ENTER YOUR CONFIRMATION NUMBER

After completing your data entry, save the confirmation number from the last page of the survey and enter it on the assignment page.

GRADE

To receive a satisfactory grade, a student must:

Use the link from your email to complete your data entry

After completing your data entry, save the confirmation number from the last page of the survey and enter it on the assignment page.

That's it!

2.1.2 Media & Politics 2: News Project

DUE DATE

Students must submit all four days of data collection before the deadline.

Warning: This project requires you to collect data on four different days so you must start it by no later than September 17. To ensure that unforeseen circumstances (e.g., covid, hurricane, something really good for a change) do not prevent you from completing the project, I strongly advise you to start the project as soon as possible.

TASK

On each of four different days, students shall analyze the first three articles linked on the main page of two different news websites. In other words, students will be analyzing a total of 24 articles over the course of four days (2 news sources × 3 articles a day × 4 days). In the analysis, students will use survey forms to enter scores for each article. The surveys ask students to evaluate each article in terms of how informative it is, how biased it seems to be, what topic it covers, and a few other considerations.

PURPOSE

This project is designed to encourage students to think critically about the content of news. This project will help students compare and contrast the ways that different news outlets perform their surveillance and interpretation functions (and possibly muckraking too, if we're lucky; on the other hand, socialization happens at too slow a pace to observe over just four days).

THINGS TO KNOW BEFORE YOU START

I have done some version of this project for years. Students often have these reactions:

- This assignment is pretty easy, but also fairly tedious. I've tried to reduce the tedium this semester by reducing the total number of days required (it used to be five) and the total number of articles per day (it used to be five per source). I figure we're all spending too much time staring at screens already.
- This assignment is informative: students are often surprised by both the similarities and differences in how each news source presents the news.

If you have questions about the instructions that others might be interested to know, post your question to the "Syllabus, Assignment, and Grading Questions" discussion board.

HOW DO I SUBMIT MY DATA?

STEP 1: USE THE DAY 1 LINK TO COMPLETE THE FIRST DAY OF ANALYSIS

On the afternoon of September 2, [the instructor] sent each student an email with four personalized links. The email uses the subject line: "POS 4235: News Analysis Project links."

If you did not receive this email, check your spam folder. If it is not there, email [the instructor]([the instructor's email address]).

Use the four links in the email for each of the four days you gather data. Since these links are personalized, you must use the ones [the instructor] sent you and you should not share your links with other people.

STEP 2: USE THE DAY 2 LINK TO COMPLETE THE SECOND DAY OF ANALYSIS

This step must be completed one or more days after Step 1.

STEP 3: USE THE DAY 3 LINK TO COMPLETE THE THIRD DAY OF ANALYSIS

This step must be completed one or more days after Step 2.

STEP 4: USE THE DAY 4 LINK TO COMPLETE THE FOURTH (AND FINAL) DAY OF ANALYSIS

This step must be completed one or more days after Step 3.

At the end of the Day 4 survey, you will receive a unique confirmation number. Save this number.

STEP 5: ENTER YOUR CONFIRMATION NUMBER

Save the confirmation number from the last page of your Day 4 survey and enter it on the assignment page.

GRADE

If you carefully and honestly complete all four surveys on four separate days, you will receive 100% credit.

Partial credit will be awarded as follows:

10 pts for each survey you complete (max 4)

15 pts for each unique date you submit a survey (max 4)

Examples:

- If you complete all four surveys on the same day, you will receive $10 * 4 + 15 = 55\%$
- If you complete three surveys on three different days, you will receive $10 * 3 + 15 * 3 = 75\%$

WHICH SOURCES CAN I USE

You will choose two sources from the list below and use the same two sources for all four days of the analysis.

In choosing this set of sources, I wanted to offer several different comparisons you might find interesting. For example, one student might want to examine an international news outlet and a US news outlet and another student might wish to examine a national news outlet and a local news outlet. The choice is yours.

Each student must choose two sources from the following options:

www.aljazeera.com/topics/regions/us-canada.html

www.apnews.com/

www.bbc.com/news/world/us_and_canada

www.theblaze.com/

www.cnn.com/

www.foxnews.com/

www.npr.org/sections/news/

www.nytimes.com/

[local paper's website]

www.washingtonpost.com/

www.wsj.com/

Note that some of these sources are behind a paywall. For example, WSJ and the [local paper] limit the number of articles readers can view for free. Do not choose a source unless you have a way to access it each day.

How do I decide which three articles to code each day?

- Begin with most prominent story and then move to next most prominent and then the next most prominent.
- Be consistent in your numbering scheme each day
- Skip links to content that is presented in video format. If an article includes one or more videos, you are welcome to ignore them.

EXAMPLE 1: THE NEW YORK TIMES

Here's how I would code this version of the New York Times:

AM **Your Thursday Briefing**
 Here's what you need to know to start your day.

The Times **Listen to 'The Daily'**
 One woman's story of teenage sexual assault and its consequences.

The 'Six Political Newsletter'
 Who would have believed Hillary Clinton's loss would start a national movement of women?

 \$AP: 500 +0.30% ↑
 Dow: +2.79% ↑
 Nasdaq: +0.72% ↑

 77°F
 42°-74°
 Tallahassee, FL

1 **The Plot to Subvert Election**

For 18 years, Americans have tried to absorb the details of the 2016 interference by Russia — hacked emails, social media bots, possible espionage — and President Trump's claims that it's all a hoax. We unraveled the story so far.

18 hrs ago



2 **Interference in the 2016 Election Unfolded, and Its Aftermath**

Our investigation reveals how parallel threads — contacts, hacking and social media fraud — unfolded during the election.

3 **Supreme Court Nominee Kavanaugh's Supporters and His Accuser Agree to an Impasse Over Her Testimony**

The confrontation between Judge Brett M. Kavanaugh and his accuser, Christine Blasey Ford, devolved into a stalemate. Democrats and Republicans advanced their narratives. The accuser's information or an agreement by Dr. Blasey to testify, Judge Kavanaugh may now have enough momentum to be confirmed as early as next week on a 5-4 vote.

From the Anonymity of Academia to the Center of a Supreme Court Confirmation

Dr. Blasey, a researcher and statistician, was reluctant to come forward with her allegation that Judge Kavanaugh sexually assaulted her.

1.5 hrs ago

Dr. Blasey has been the target of widespread social media disinformation since she came forward. We debunk five

Opinion

The Editor of 'The Atlantic' Deserves Better Than This Senate Speculation

I met the political finger-pointing, Christine Blasey Ford's accusers against Brett Kavanaugh need to be seriously investigated.

10 hrs ago

Richard A. Thompson **Thomas H. Edsall**

Why Several Assault Menace Strik **Can the Democrats Rise Above?**

Christine Blasey Ford says she has a vivid memory of an attack that took place when she was 16. Her studies were...

Richard A. Thompson **Thomas H. Edsall**

Denying Women Are Ready to Vote in Far Country, Too

Maria Gay

Bloomberg's Blind Spot on Stop-and-Frisk

Emily Luce

The Liberation of the Religious Right

Elizabeth Johnson

Did I Save These Christmas Trees From War, Did It Hurt Them in the Pasture?

Charles M. Blow

Note how I blocked out the opinion section on the right. I want you to focus on news journalism, not opinion pieces.

EXAMPLE 2: FOX NEWS

Here's how I would code this version of Fox News:

Note that there are four additional links under article 1. I suggest you skip those.

Note how I blocked out the videos on the left and opinion on the right. Skip those and focus on news journalism.

Don't worry too much about doing it exactly how I would. Just do your best and try to be consistent each day.

2.1.3 Social Influence

All instructions were embedded in the survey forms, above.

2.1.4 Research Methods

TLDR

This assignment is a survey in which you will use two bags of M&Ms to mimic the process of sampling, calculating sample statistics (mean, standard deviation), and using those sample statistics to make inferences about population parameters (standard error of the mean, 95% confidence interval).

Students can preview all questions in this assignment in this pdf document.

[A3-Preview.pdf]

REQUIRED MATERIALS

To complete this assignment, you must have two bags of M&Ms (the original Milk Chocolate kind, not peanut or one of the other fancy kinds). Ideally, the bags should be the standard, 1.69-Ounce size. But smaller or larger bags are fine.

HOW DO I COMPLETE THE SURVEY?

You must use the personalized link sent to your [university] email address on February 16 around 11AM. The email will come from noreply@qualtrics-survey.com with the subject line, "[course number]: Assignment 3". If you have not received it, check your spam folder.

Since these links are personalized, you must use the one we sent you and you should not share your link with other people.

WHAT DO I NEED TO DO TO RECEIVE CREDIT?

You simply must complete the survey carefully and honestly.
Then, save the confirmation number from the last page of the survey, and enter it here.

FAQ

Yes, you really need to buy two bags of M&Ms.

No, you cannot use your classmate's bag -- it defeats the purpose.

Yes, you and your classmates can work together as long as each student uses their own two bags.

3 Resources

3.1 Survey Tools

To administer the surveys, we use Qualtrics (<https://www.qualtrics.com/>) or Canvas (<https://www.instructure.com/canvas>).

3.2 Software

We use the R statistical program¹ to analyze the data, generate the reports, and email them to each student. In our current workflow, we find the following packages particularly useful:

- ``rmarkdown``: The main package needed to compose reports for each student.
 - Allaire, JJ et al. 2021. *Rmarkdown: Dynamic Documents for R*. <https://github.com/rstudio/rmarkdown>.
 - Xie, Yihui, J.J. Allaire, and Garrett Golemund. 2018. *R Markdown: The Definitive Guide*. Boca Raton, Florida: Chapman and Hall/CRC. <https://bookdown.org/yihui/rmarkdown>.
 - Xie, Yihui, Christophe Dervieux, and Emily Riederer. 2020. *R Markdown Cookbook*. Boca Raton, Florida: Chapman and Hall/CRC. <https://bookdown.org/yihui/rmarkdown-cookbook>.
- ``qualtrics``: Import Qualtrics survey data into R.
 - Ginn, Jasper, and Julia Silge. 2021. *Qualtrics: Download "qualtrics" Survey Data*. <https://CRAN.R-project.org/package=qualtrics>.
- ``purrr``: Automatically repeat the workflow of selecting a student, generating their report, and emailing them their report.
 - Henry, Lionel, and Hadley Wickham. 2020. *Purrr: Functional Programming Tools*. manual. <https://CRAN.R-project.org/package=purrr>.
- ``glue``: provides a simple interface to convert generic placeholders in strings of text to specific results from a student's entered data. For example, ``glue::glue("The class average was {class_average} and your score was {student_score}")`` would replace the text within the brackets with the values stored in the R objects named ``class_average`` and ``student_score``.
 - Hester, Jim, and Jennifer Bryan. 2022. *Glue: Interpreted String Literals*. <https://CRAN.R-project.org/package=glue>.
- ``RDCOMClient``: Allows R to control Outlook, providing an automatic means to distribute a personalized report to every student. Alternative packages for sending email include ``blastula``, ``gmailr``, and ``mailr``.
 - Lang, Duncan Temple. 2021. *RDCOMClient: R-DCOM Client*.

¹ R Core Team. 2022. R: A Language and Environment for Statistical Computing. <https://www.R-project.org/>.