



## Week 4: *Intro to formr*

 EMSE 6035: Marketing Analytics for Design Decisions

 John Paul Helveston

 September 21, 2022

# Reminders

Proposals due Sunday, 9/25 by midnight

No class next week - team meetings instead

# Week 4: *Intro to formr*

1. Surveys in R

2. Surveys in formr

BREAK

3. Conjoint survey components

# Week 4: *Intro to formr*

1. Surveys in R

2. Surveys in formr

BREAK

3. Conjoint survey components

Start in RMarkdown

See `demoSurvey.Rmd`

# Some Guidelines

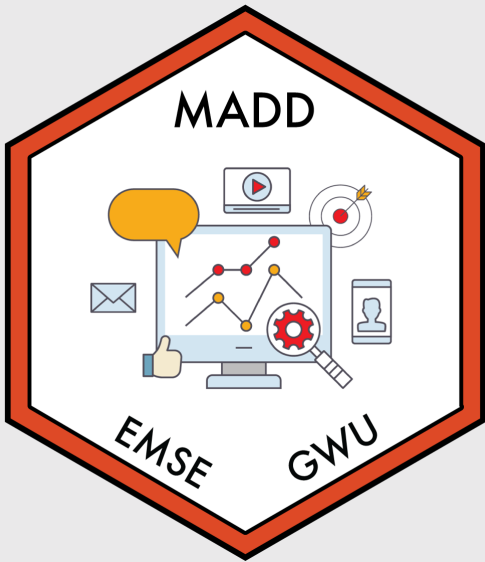
- Use `---` to indicate new pages (this inserts a horizontal line)
- Be sure that any data / images are hosted somewhere on the web
- Consider each new page a **New R Session** (reload libraries, etc.)

# Embedding images

I recommend just writing html code, like this

```

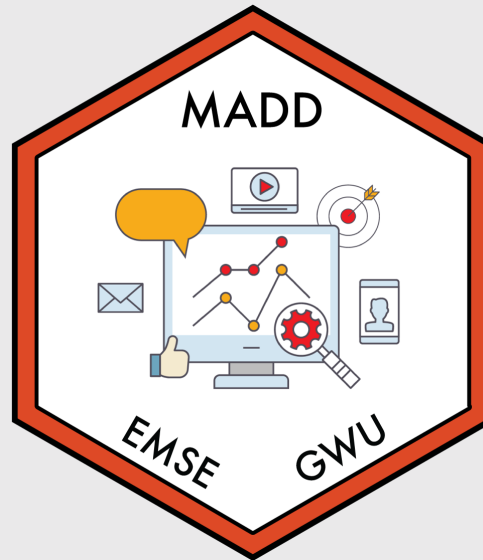
```



# Centered image

I recommend just writing html code, like this

```
<center>  
  
</center>
```





# Check your urls carefully!

This is the link to the Github page with the class logo image:

<https://github.com/emse-madd-gwu/2022-Fall/blob/main/images/logo.png>

This is the link to the actual image:

<https://raw.githubusercontent.com/emse-madd-gwu/2022-Fall/main/images/logo.png>

# Your turn

- Open and edit the `practiceSurvey.Rmd` file.
- Pick a topic for your survey (a food, an animal, a sports team...whatever).
- Draft a survey about that topic. Include the following:
  - Page 1: A welcome message in large font ("Welcome to a survey about [topic]") and an image about the topic (find an image somewhere).
  - Page 2: Once simple multiple choice question about the topic (state the question and write the choice responses as bullets).
  - Page 3: Choose a data set from [this page](#) (pick a .csv file). Get the url to the .csv file you chose, read it in, and display only the first 6 rows of the data file (do not show any code - only the output of your code).
  - Page 4: Show the last 6 rows of the same data file (again, only the output - hide all code).

# Week 4: *Intro to formr*

1. Surveys in R

2. **Surveys in formr**

BREAK

3. Conjoint survey components

# formr principles

- Use *RMarkdown* / *html* to create survey elements
- Define surveys in *Google Sheets*
- Import Google Sheets into formr *surveys*
- Link surveys together in formr *runs*

# Demo survey

# formr row types [\(more here\)](#)

Type	Description
<code>note</code>	Display content in <code>label</code> column
<code>submit</code>	Next page button
<code>mc</code>	Multiple choice question (single choice)
<code>mc_multiple</code>	Multiple choice question (multiple choices)
<code>mc_button</code>	Multiple choice question (large buttons)
<code>select_one</code>	Drop down menu (choose one)
<code>text</code>	Open text, single row
<code>textarea</code>	Open text, block

# Two ways to define choice options

Add "choice" columns

	H	I	J	K
	choice1	choice2	choice3	value
	Yes!	Kind of	No :(	

Use `choices` tab  
(when you have a lot of choices)

Example: "Year of birth" in  
[randomImagesDemo](#)

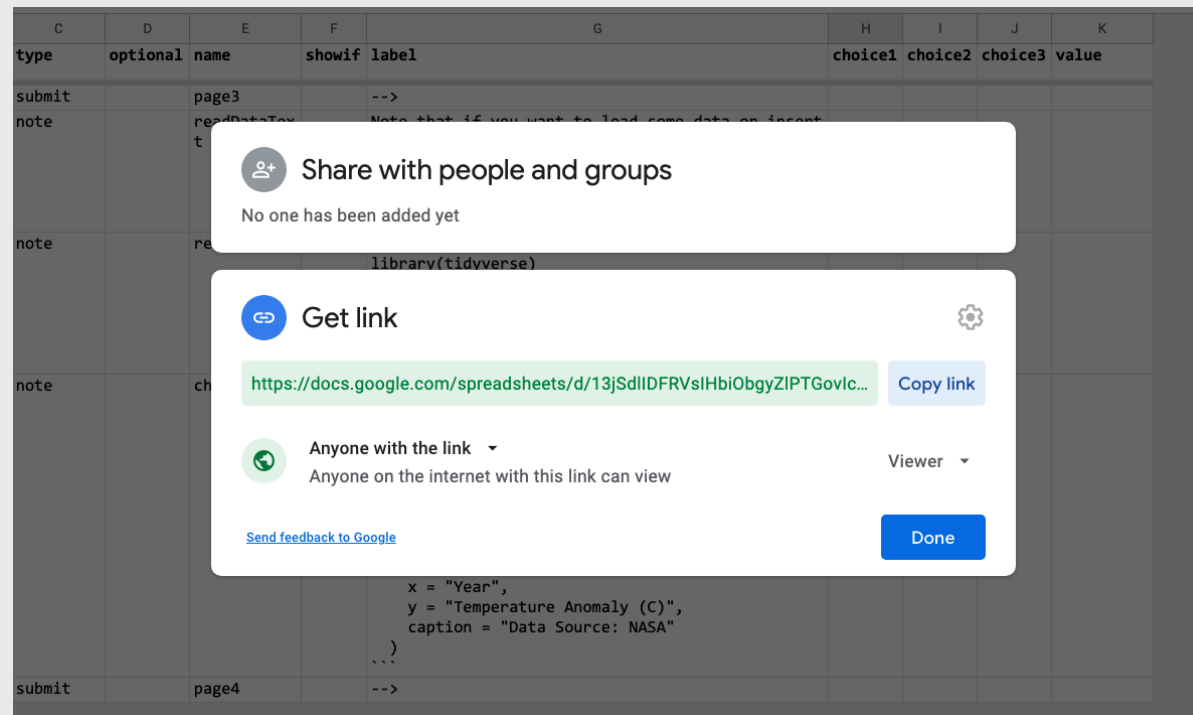
Control the way things look in `class` column  
(options here)



# Importing survey into formr

formr.org --> Admin --> Surveys --> Create new survey

(Make sure your Google Sheet is visible!)



The screenshot shows a Google Sheet interface with a 'Get link' dialog box open. The dialog box has a blue header with a link icon and the text 'Get link'. Below the header, there is a green box containing the URL <https://docs.google.com/spreadsheets/d/13jSdIIIDFRVsIHbiObgyZIPTGovlc...> and a blue 'Copy link' button. Below the URL, there is a green circle icon with a person and the text 'Anyone with the link' followed by a dropdown arrow. Below this, it says 'Anyone on the internet with this link can view'. To the right of this text is a 'Viewer' dropdown menu. At the bottom left of the dialog box is a blue link 'Send feedback to Google' and at the bottom right is a blue 'Done' button. The background shows a Google Sheet with columns labeled C through K. The rows contain various data, including 'type', 'optional', 'name', 'showif', 'label', 'choice1', 'choice2', 'choice3', and 'value'. There are also some notes and code snippets visible in the cells.

# Make a run

formr.org --> Admin --> Runs --> Create new run

Insert survey with 

Insert stop with 

# Change order by adjusting numbers & clicking "Reorder"

Edit Run


⇅ Reorder

🔒 Lock

📄 Export

📄 Import

demoSurvey



×

10

demoSurvey

0 complete results, 0 begun (in ~ 0m)


View items

Upload items

Saved

Test

Description (click to edit)



×

20

Feedback text:





Thanks for taking our survey!


Saved

Test

# Make it "live" with the volume buttons

Edit Run

I am panicking :-(  
Publicness:    



×

10

demoSurvey

demoSurvey

0 complete [results](#), 0 begun (in ~ 0m)

View items

Upload items

Saved

Test

20 / 45

# Fine tune look & feel in "Settings"

# Think Pair Share

15:00

- Using your GW Google drive, create a new survey spreadsheet (you may wish to copy-paste from [this one](#))
- Name your sheet "[netID]\_practice", replacing "[netID]" with your GW Net ID (e.g. "jph\_practice")
- Insert the content in your `practiceSurvey.Rmd` file into your Google Sheet.
- Using the class formr account, import your Google Sheet as a survey in formr (use the same "[netID]\_practice" name for your survey).
- Create a run that includes your survey and a stop.
- Test it!

*Break*

05 : 00

# Week 4: *Intro to formr*

1. Surveys in R

2. Surveys in formr

BREAK

3. Conjoint survey components



# 3 Parts

- **Part 1:** Intro
- **Part 2:** Conjoint questions
- **Part 3:** Other / demographic questions

# 3 Parts

- **Part 1:** Intro --> screen for target population
- **Part 2:** Conjoint questions --> screen for random answers
- **Part 3:** Other / demographic questions

# Think of your survey as a *conversation*

- Include "transition" pages (e.g. Great job! Now we'll ask you about...)

# **Part 1: Intro**

# Start with a welcome page

Welcome!

Thank you for participating in this survey. With your responses, we are looking forward to understanding your perspective as a consumer. This research is part of an effort from the George Washington University.



# Consent form

This survey is being conducted by students at the George Washington University. We will not be collecting any identifying data such as your name or address. The whole survey will take approximately 10 to 15 minutes to complete. Your participation is voluntary and you may stop the survey at any time.

If you would like to participate, please answer the following questions:

I am age 18 or older

Yes	<input type="radio"/>
-----	-----------------------

No	<input type="radio"/>
----	-----------------------

I have read and understand the above information

Yes	<input type="radio"/>
-----	-----------------------

No	<input type="radio"/>
----	-----------------------

# Eligibility questions: who is your target population?

*Filter out respondents here*

Are you in the market for a car?

No

☐

Yes, and I plan to buy one in the next few months

☐

Yes, and I plan to buy one in within the next year

☐

>>

## **Part 2:** Conjoint questions



# Education information

In this survey, we are going to ask you about your preferences for the following vehicle attributes:

- Price
- Fuel Economy
- Acceleration Time
- Powertrain

But before we ask you any question, let's learn a little bit more about each of these attributes.

# Education information

Price is the final price you will pay for the vehicle you are buying  
(including all taxes and fees)



>>

## POWERTRAIN

The type of engine in the vehicle

### Gasoline



Gasoline engine vehicle.

### Electric



Electric motor vehicle.  
Must be plugged into an  
electrical outlet to be  
refueled. (6 – 10 hours to  
fully charge).

# Can be helpful to provide relative comparisons

## Weight:

- 1/2 lbs (similar to 1 cup water)
- 8 lbs (similar to 1 gallon of milk)

# Conjoint intro




In the next few pages, we will show you options of different vehicles and we'll ask you to select which you would choose.

Let's try a practice question - on the next page, click the round button under the option you most prefer.



# Practice conjoint (also attention check)

*May also filter out respondents here*

	Choice 1	Choice 2	Choice 3
Price	20	15	25
Fuel Economy	20	30	15
Acceleration Time	7	6	8
Powertrain			
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

# Transition to actual conjoint questions

**Nice work!**  
**Now let's begin the choice tasks.**  
**You will be asked four choice questions in total**




>>

# Conjoint questions

*May also filter out respondents at the end*

(e.g. chose all same answers)

(1 of 4) Choose your preferred option from the choices below:

	Choice 1	Choice 2	Choice 3	None
Price	25	25	15	None of these options
Fuel Economy	30	25	25	
Acceleration Time	8	7	7	
Powertrain				
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

>>

## **Part 3:** Other / demographic questions



# Transition

**Almost done!**

We'd like to ask just a few more questions about you.

>>

# Critical respondent information

How many vehicles does your household currently own?

>>

# Demographic / other questions

What is your age?

What is your total annual household income?

What is your gender?

Which of the following best describes your highest achieved education level?

# Finale

We thank you for your time spent taking this survey.  
Your response has been recorded.

Blog post on conjoint in formr

Project survey plan

Sign up for meeting slot next week  
(link in #project channel)