The Original Project

- Librarians created a set of data literacy modules
  - Based on Carlson et al. 2011 data literacy competencies
  - Data Management; Data Curation & Reuse; Data Analysis & Intro to R; Data Visualization

- Designed to be…
  - Online asynchronous
  - Taken either in unison or separately
  - Mostly for STEM disciplines with hopes of being useful in other disciplines

- Flexibility was intentional from initial planning
  - Plug-and-play for faculty to incorporate into their courses
  - Self-paced workshop for students

Boehme, G., Adams, K., & Benzing, M. (2022) Data Literacy on Demand: Creating a Set of Data Literacy Modules for Remote Instruction. In Teaching Research Data Management. Edt. Bauder, J. ALA Editions.

The Request

- Interest in incorporating the modules into a graduate program consisting of predominantly non-traditional students

- Faculty desired some practical skills, particularly in the data analysis and visualization modules, to complement the mostly theoretical concepts already presented

Project Dragonfly students on a study abroad trip in Mexico

The Solution

Rethinking

Set of 17 videos created

Covers the graph type and anatomy, then shows how to make one

Data used in the examples was not STEM based, but very generic

Most were pairs, one for Google, one for Microsoft

Aimed for under 5 min.

Saving PowerPoint Slides as Image Files

Saving Google Slides as Image Files

Creating Column and Bar Charts in Google Sheets

Creating Column and Bar Charts in MS Excel

Creating Box and Whisker Plots in MS Excel

Creating Pie or Doughnut Charts in MS Excel

Creating Pie or Doughnut Charts in Google Sheets

Creating Hierarchy Diagrams in MS PowerPoint

Creating Hierarchy Diagrams in Google Slides

Creating Line Graphs in MS Excel

Creating Line Graphs in Google Sheets

Creating Scatter Plots in MS Excel

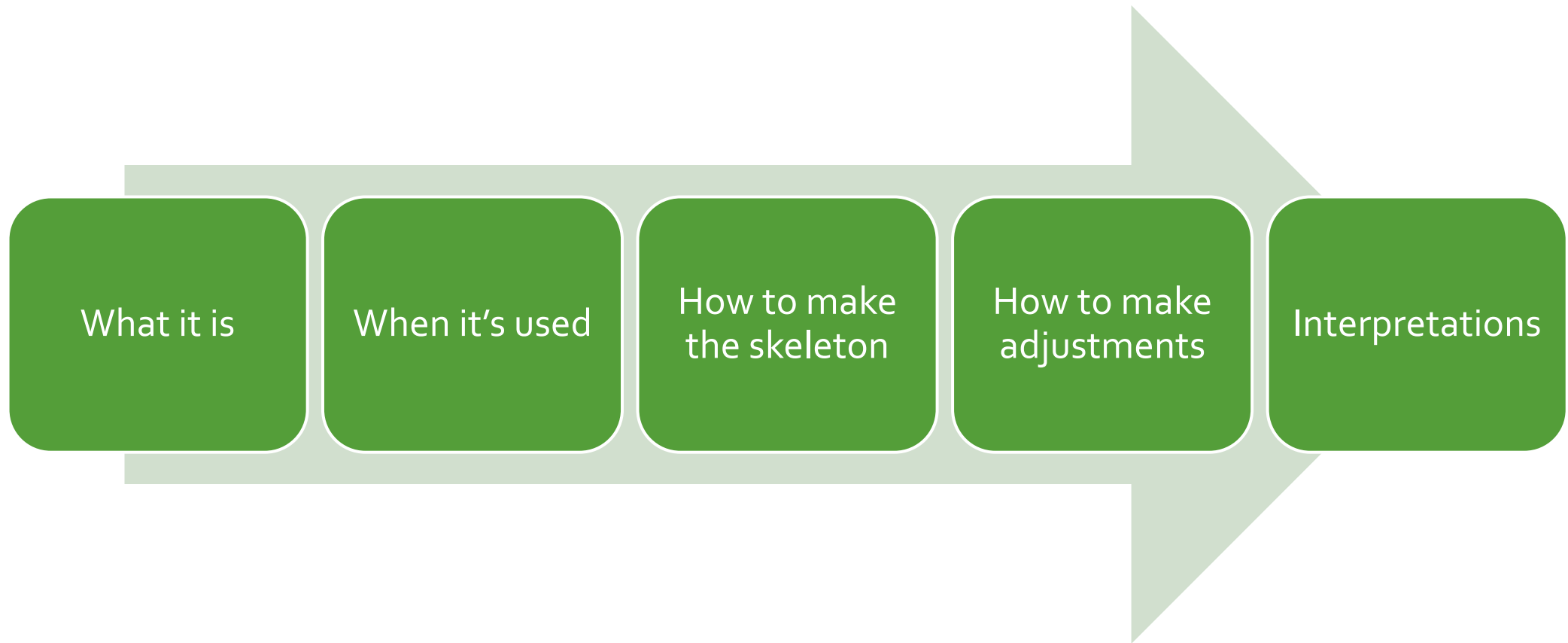Creating Scatter Plots in Google Sheets

Creating Flowcharts in MS PowerPoint

Creating Flowcharts in Google Slides

Creating Venn Diagrams in Google Slides

Creating Venn Diagrams in MS PowerPoint

An Example Video Outline

What it is → When it's used → How to make the skeleton → How to make adjustments → Interpretations

The Integration and Separation

- Videos incorporated into the module, so more inclusive for learners at all levels

- Videos available on the Libraries' YouTube channel, so they re not locked away in the module

- Usage
  - The program who requested them
  - Students in the free-standing course
  - Shared with librarians
  - YouTube viewers/learners

The Results

YouTube viewing statistics

Videos uploaded July-Aug. 2021

Video Topic	Platform	Date Uploaded	Views as of 1/19/21
Box and Whisker	Microsoft	07/12/2021	18
Column and Bar Charts	Google	07/08/2021	13
Column and Bar Charts	Microsoft	07/08/2021	6
Flowcharts	Google	08/05/2021	575
Flowcharts	Microsoft	07/27/2021	55
Hierarchy Diagrams	Google	07/12/2021	578
Hierarchy Diagrams	Microsoft	07/12/2021	17
Line Graphs	Google	07/27/2021	16
Line Graphs	Microsoft	07/26/2021	12
Pie or Doughnut Charts	Google	07/12/2021	777
Pie or Doughnut Charts	Microsoft	07/09/2021	6
Saving as Image Files	Google	07/08/2021	7
Saving as Image Files	Microsoft	07/08/2021	10
Scatter Plots	Google	07/27/2021	9
Scatter Plots	Microsoft	07/28/2021	11
Venn Diagrams	Google	08/05/2021	10
Venn Diagrams	Microsoft	08/05/2021	55

Concluding Thoughts

The Philosophy

- Theoretical vs. practical
- General vs STEM
- Canvas vs. YouTube
  - Subtitles – for hearing impaired or non-English speakers
- Meals vs. snacks

The Future

- Additional data visualization videos
  - Other visualizations mentioned in the Canvas module

- A new Canvas module for the course
  - Built with discrete skills in mind

THANKS FOR LISTENING

Questions or conversations?

Kristen Adams | adamsk3@miamioh.edu

To view the videos on YouTube
Channel: Miami University Libraries Instructional Videos
Playlist: Data Analysis and Visualization