

Hello! I'm Mel Howlett and today's topic is around visualizing qualitative data.

This image – stacks and stacks of paper – might look familiar to you. You have pages and pages of great qualitative data – data that you have spent hours combing and coding, grouping and regrouping.

But now what? You want to share the fruit of all that hard work with your team or your client in a way that is both accessible and actionable. Hopefully this session you'll learn some techniques to help you do just that. (This session is building on an AEA Coffee Break that my colleague Sara Afflerback and I did in March).

I'm going to spend ~20 min sharing techniques for visualizing qualitative data, then we'll do an activity to give you a chance to try it on your own, and then I've left plenty of time at the end to debrief the activity and to answer questions.



Before we dig in, I work for ORS Impact, a consulting firm established in 1989. ORS Impact has become more intentional in the past few years about how we use data visualization and design in our reporting to promote the use of our evaluation findings. We often conduct mixed method evaluations, which means we work extensively with qualitative data.

At AEA last year, nearly every Data Viz and Reporting session – including our own – had a question about how to visualize qualitative data. It is clearly an untapped topic.

Though inherently different and more difficult than visualizing quantitative data, visualizing qualitative data is similarly essential to communicating evaluation data and findings with clients, partners, and constituents.

I’ve grouped various techniques to visualize qualitative data into three categories. For each technique, I’ll discuss considerations and recommendations. I have also included one example product per section to show how some of the techniques can be put into practice. The three categories are...

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The three categories are...

Today's Content

1 Visualizing Qualitative Data

3

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The three categories are...

Today's Content

- 1 Visualizing Qualitative Data
- 2 Quantifying Qualitative Data

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- 2 Quantifying Qualitative Data
- 3 Visualizing Mixed-Methods Data

Visualizing Qualitative Data

6

Timelines

Best suited for:

Telling your data story at a high-level

7



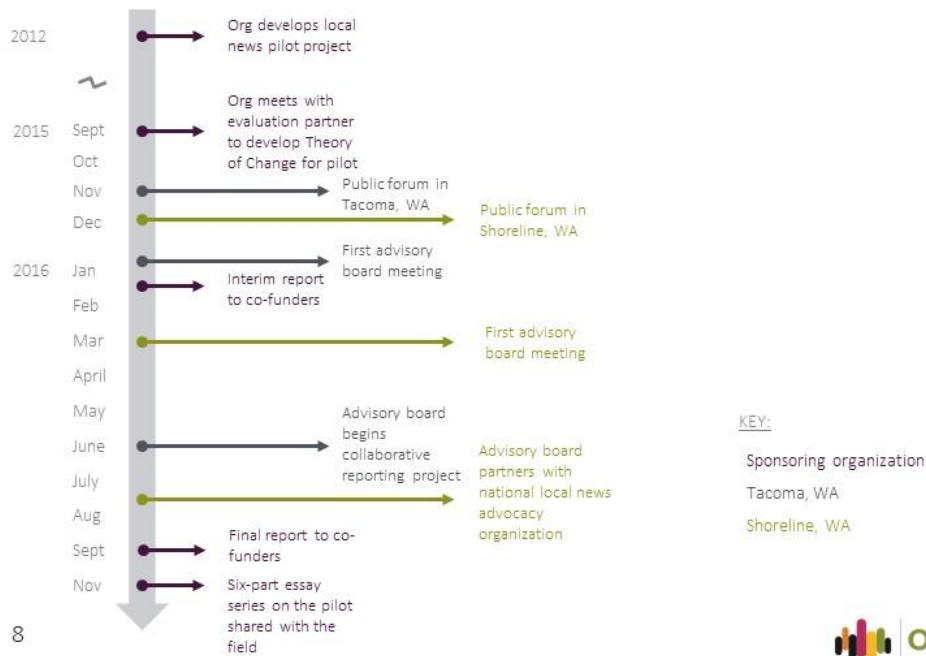
As evaluators, we often gather accounts – through stakeholder interviews or content analyses of background documents – that when visualized chronologically can help tell the data story at a high-level.

Given this, we have sometimes integrated timelines into eval reports or other visual products.

A few things to note:

- When creating a timeline graphic, you want to be selective and careful not to overwhelm your audience with too much detail.
- But of course you want to go deeper in your reporting than what reasonably fits in the timeline graphic – meaning use your narrative to expand on data points.
- It's good practice, especially if you're a third party evaluator, to run your timeline by someone who is closer to the work to make sure it is an accurate reflection of the sequence of events and that nothing is glaringly missing.

Timelines



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This first example tells the story of a community engagement pilot program. The timeline uses color coding (as indicated by the key in the bottom right) to distinguish between the data story in different communities. Also note this symbol (point) which represents a break in time – this can be useful for minimizing the amount of info that makes it into the graphic

Timelines



The next example tells the story in months of an advocacy effort leading up to the passage of a bill. Here we used icons to make a visual distinction between in-person events and virtual communication with various stakeholders.

Both of these were created in Microsoft PowerPoint.

Word Clouds

Best suited for:

Prominently displaying words that appear most frequently in data collection responses

The next technique is generating word clouds.

Word clouds give greater prominence to words that arose more frequently in data collection responses.

You can use word clouds for interview or focus group data, but you'd most likely use them for visualizing open-ended survey responses – which are more manageable than longer responses. In most cases, though not always, you would design your open-ended survey question with this type of visualization in mind.

Word Clouds

What are 1-3 things you gained as a result of this training?



So you might craft an open-ended survey question like this one here [read]. Or you might ask for a few words that describe their experience with something or a few words that come to mind when they think about something. Whatever it is, the question should elicit descriptive responses.

Even with foresight, you'll likely still need to scrub the data before plugging it into a word cloud generator to make sure you only visualize words that give meaning (& not words like "I" "and" or "because")

Word Clouds

What are attributes of successful partnerships?



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Here's another example that stems from a similar open-ended survey question. We asked respondents [read] both prior to and at the conclusion of a partnership initiative. So we were able to visualize the contrast between pre and post survey responses.

The last thing to note about word clouds is to know your audience – word clouds might not appeal to more sophisticated audiences.

We used Wordle to create these, which allows for some degree of customization.

Call-Out Boxes

Best suited for:

Capturing direct quotes to support your claims

Humanizing your evaluation findings

When reporting interview or focus group data, we often use call-out boxes or quote bubbles. This type of visualization draws attention to direct quotations that may help support your claim. It also humanizes your evaluation findings in that it helps tell the data story through the words of stakeholders and/or key informants.

Call-Out Boxes

"The fellowship **connected** me with people who helped sharpen my thinking and my ability to work in this space."

I'm going to flip through several examples to give you a sense of the variety of ways you can capture and visualize interview or focus group quotes. Note, though, that within the body of a report or deck you should use a consistent style.

Don't forget to adhere to your data visualization and design principles! Make sure to strategically use color or bold text for emphasis.

We also recommend that you choose succinct quotes or use ellipses to omit words that aren't particularly meaningful – concise quotes are more powerful and more memorable. All of these examples were created with the shapes feature in Microsoft PowerPoint.

Call-Out Boxes

*“The fellowship **connected** me with people who helped sharpen my thinking and my ability to work in this space.”*

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Icons

Best suited for:

Visual representation of a qualitative theme

Way-finding in a report or slide deck

The visualization techniques we've shown so far can be useful for visualizing the data itself. Icons can be useful for visual representation of a qualitative theme.

Icons are best suited for broad themes or headlines that organize and provide structure to your reporting content (e.g., in place of bullets). They can also be used for way-finding in a report or slide deck (e.g., table of contents).

You should ensure the icons you select – whether photos or graphics – are clearly related to or associated with the theme you are trying to signify.

Icons



Influencing Federal
Policy



Improving Organizational
Transparency



Measuring and Evaluating
Progress



Informing Future
Strategy

In this example we use Creative Commons (openly licensed) stock photos as icons to convey key themes that arose from our analysis of qualitative data.

In this next example we use graphic icons for wayfinding purposes – it's essentially a table of contents. You could even carry these throughout a deck/report by placing them in the corner of relevant slides or in the margin of relevant sections of a report. For example, pages or slides having to do with the evaluation methods might have the methodology icon positioned at the top right.

For graphic icons like this, we typically go to Flaticon or The Noun Project – though you must purchase or attribute. Note that we've learned that spending \$2 is more cost effective in some cases than spending another 15-20 minutes looking for a new, free icon.

Icons

	Methodology
	Findings
	Strategic Implications
	Appendix

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Families Share Their PCHP Experience

A focus group of participating parents at Kindering

Eight participants

In November 2015, ORS Impact conducted a focus group with eight mothers participating in the Parent-Child Home Program (PCHP) at Kindering to explore their experience in the program. The focus group included:

6 families that had **graduated**

2 families currently **enrolled**

Families join PCHP to improve children's school readiness and to gain knowledge and resources around parenting teaching skills

Participants in the focus group were motivated to join PCHP for the following two reasons:

- 1 A desire for their child to be **better prepared to enter kindergarten**

"I liked the idea that they would be ready for school – learn their numbers, shapes, and be ready for school."

- 2 An interest in becoming **better equipped to teach their child**

"I would see my daughter all alone, as the youngest. I thought it was a good idea for her to be playing and learning at the same time and for me to learn to play while teaching her."

Parents see positive impacts of participating in the program

Focus group participants cited the following **benefits** of PCHP:



SCHOOL
READINESS

"I saw the results in the first year and saw how much she was learning. My child learned to wait her turn, raise her hand. She was always interested in books but became more interested and learned to play with the toys."



SOCIAL-EMOTIONAL
DEVELOPMENT

"I have noticed progress in all areas – he learned how to share, how to express himself better."



CHANGES IN
THE PARENT

"I learned to have patience with all the why questions, why, why? Now I understand that she was asking for attention besides wanting to learn something. I understand the importance of dialogue – responding to her questions and the need to focus on her as a priority."

So like I said, there is one practical example of a real evaluation product for each grouping of techniques. For visualizing qualitative data, this is a one page summary of focus group findings. It incorporates icons relating to overarching themes and it captures quotes from parents who participated in the focus group.

Quantifying Qualitative Data

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Choosing to quantify qualitative data is particularly useful when responses fall into clear groupings (e.g., positive, negative, neutral OR rhetoric vs behavior), but not if there is overlap between groups (e.g., positive and very positive). If there is overlap like this, either don't quantify or use more general groups that don't require overlap

Treemaps

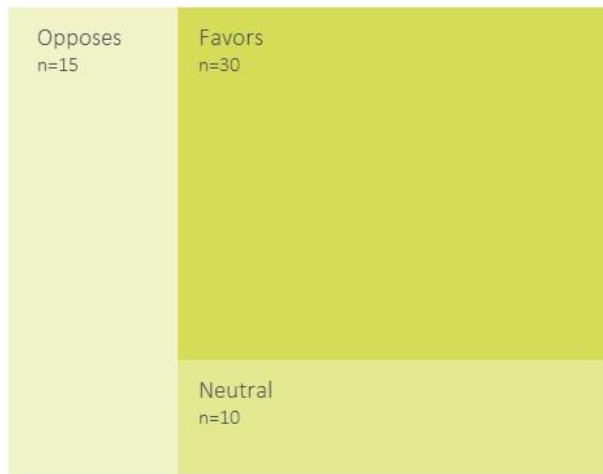
Best suited for:

Visualizing the prevalence of *three or more* qualitative themes

The first technique in this category are treemaps. Treemaps are useful when there are three or more categories and when showing the distribution of responses is meaningful.

Treemaps

Issue Stance (n=55)



One example might be interview respondents' stance on a policy issue. In this example, responses were broken down into favors, neutral, and opposes. I would not have used this visual if respondents did not fall neatly into one of these three categories.

Treemaps

Issue Support (n=73)



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Another advocacy/policy example would be interviewees support of an issue – in this case, no support, support in rhetoric, and support in rhetoric *and* behavior (n=73).

Again, this visual is useful for showing the distribution of responses – a quick glance and it becomes immediately clear that the majority of interviewees show support through rhetoric only.

Both of these examples were made in Datamatic.io. It's a free program, but has limited ability to manipulate style and colors. We ended up recreating the visuals in PowerPoint, using the proportions that the program produced.

Icon Arrays

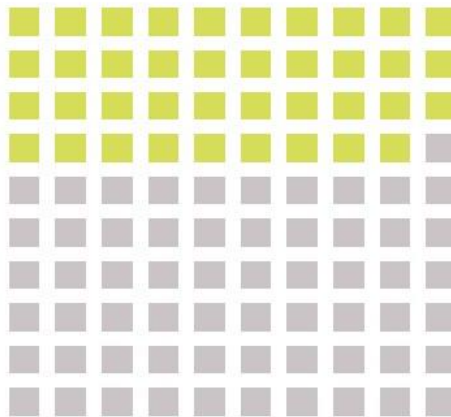
Best suited for:

Visualizing the prevalence of *three or fewer* qualitative themes

Another way to visualize this data is an icon array. Similar to treemaps, icon arrays are useful when the prevalence of a thought or theme is meaningful. But different, icon arrays are meant for data that fall into two themes, three max.

Icon Arrays

39%
of interviewees
observed changes
in practice



This example shows the percentage of interviewees who observed a change in practice, compared to the percentage who had not.

When creating icon arrays, it is important to consider whether simple icons (e.g., boxes, circles) or relevant icons (e.g., computers, stick figures) are more appropriate. This example uses simple icons.

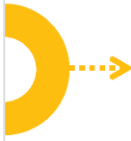
Icon Arrays



More than half of the grantees we spoke with reported an increase in organizational capacity.

This example uses relevant icons. Each icon – shaped like a human – represents one grantee. When deciding between simple and relevant icons, make sure to consider the sensitivity of the content you are visualizing. For example, I was recently visualizing a breakdown of average household income for a participants in the program – one idea that was proposed was an icon array of house icons. Now that’s sensitive, right? Not everyone in this population lives in a house – most of them live in apartment buildings, some of them live in temporary housing. Keeping in mind our cultural competency, we decided to use circles.

Both of these were created in Microsoft PowerPoint



Nine foundations described institutionalized examples of gathering and using beneficiary feedback for strategy development and refinement within their organizations that included clear definitions of beneficiaries as the people they seek to help. These occurred in different focal areas, though education and place-based work did emerge a number of times.

Six foundations had a relatively strong focus on intentional data collection, but as a group, there was less consistency in its use for the foundation (compared to grantee effectiveness) and in whom they perceived as the “people they seek to help.”

Eight foundations had partial or very ad hoc intentionality around collecting data or using it for their foundation's work.

Five foundations had no intentionality, no shared definition of beneficiaries and no emphasis on using beneficiary feedback in their foundation work. They often found their beneficiaries hard to define and relied heavily on input from grantee partners to support their work.

Ideal practice →

Here's an example evaluation product – this is just one page of a full evaluation report. It quantifies qualitative interview data, associating each theme with an icon color (also note the use of quote boxes to distinguish quotes from the narrative). At the bottom of the page, we visualize the quantities in an icon array to pull it all together and paint the full picture.



Visualizing Mixed Methods Data

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The last category is visualizing mixed methods data. Qualitative data can be used to reinforce quantitative findings – it helps to elaborate and expand on the quant.

The main – and obvious – way to visualize mixed methods data is by laying qualitative and quantitative findings side-by-side.

Side-by-side visualizations help elaborate and expand on quantitative findings (triangulation).

Side-by-Side

Best suited for:

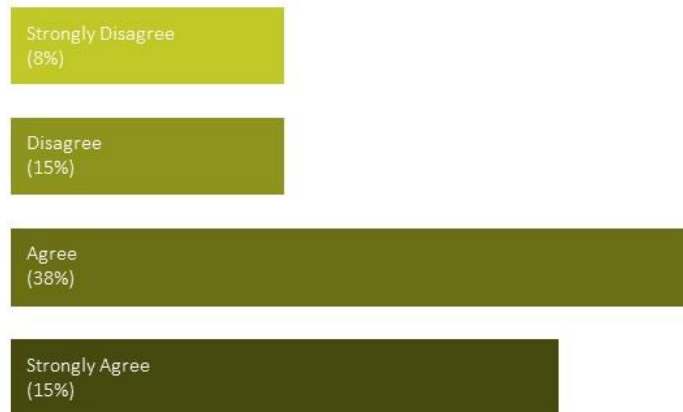
Expanding on quantitative findings

The main – and obvious – way to visualize mixed methods data is by laying qualitative and quantitative findings side-by-side.

Side-by-side visualizations help elaborate and expand on quantitative findings (triangulation).

Side-by-Side

I was **satisfied** with the training (n=13)



This example shows a bar graph of satisfaction ratings – agree and strongly agree have the highest distribution of responses.

Side-by-Side



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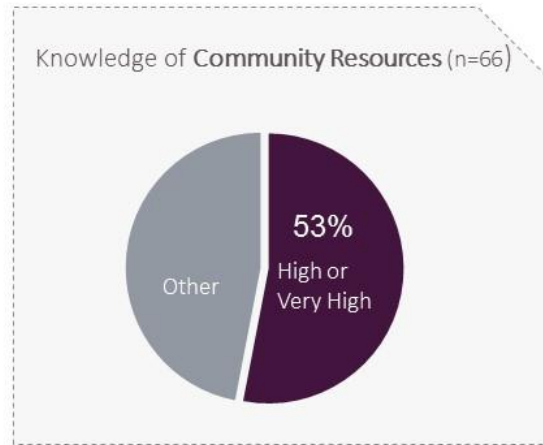
Why not add a quote to illustrate what those ratings mean?

To include quotes for each of the response categories would be overwhelming, but this level of data tells more than the graph alone.

Another example is this pie chart, showing the percent of respondents with a high or very high knowledge of community resources.

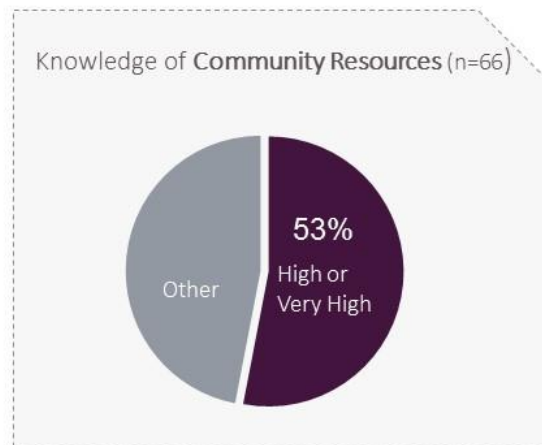
Another example is this pie chart, showing the percent of respondents with a high or very high knowledge of community resources.

Side-by-Side



Another example is this pie chart, showing the percent of respondents with a high or very high knowledge of community resources.

Side-by-Side



"I received a lot of pamphlets for seminars and other resources."

"We were referred to good resources and further classes around parenting."

"The support group in general is an excellent resource for support and guidance."

Adding qualitative quotes help explain what made survey respondents respond in the way they did.

Laying qualitative and quantitative data side-by-side like this really emphasizes storytelling – it tells more than just a quote or a graph alone by integrating various data collection methods.

Question & Answer

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That concludes the portion of the session where I talk at you. What are your questions?

Activity

STEP 1

Pair up and take a few minutes to review the data and **consider the following questions:**

- *What is the **overall data story**?*
- *Which data tell that story in the **most compelling way**?*
- *Is there data from **another source** that can elaborate or expand on the first data?*
- *What type of visualization **best fits** that data?*
- *Are there **other options**? What are the pros and cons of each?*

STEP 2

Once you have an idea of your content and visualizations, work together to **sketch a draft** on the blank slide.

It's your turn to practice synthesizing and visualizing qualitative eval data! This activity may seem elementary at first glance, but the process of reviewing qualitative data and findings, deciding on headlines, choosing appropriate visuals, and drafting a layout is imperative to effective information design. It's so easy to forget these process steps and skip to the final product, but being rigorous about the process strengthens the quality of the product.

[pass out handout] The handout I'm passing out has a variety of evaluation data – both qualitative and quantitative – on one side and a blank PowerPoint slide canvas on the other. Working alone or in a small group, take a few minutes to review the data and consider the questions on the screen, then sketch a draft PowerPoint slide.

Report Out

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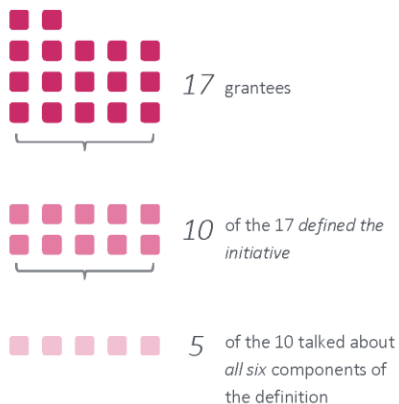
Pair up with another pair next to you and compare your slides – how are they similar or different? What works or what doesn't?

Do one or two people want to share what they came up with?

Did anyone use a type of qualitative visualization that we didn't talk about yet in today's session?

Among grantees, there is not one clear and consistent definition of the initiative.

Specific definitions of the initiative vary, though there does appear to be alignment in the field.



"Everybody is saying the same thing...that's good, in the sense that it's clear that we're all landing darts in the same general area on the same dart board."

This example product is one slide from a much larger deck. The finding and sub-finding come from a mixed-method evaluation. The icon array on the left quantifies qualitative interview data, and an illustrative qualitative quote is visualized on the right. The result is a clear, concise, and visually appealing PowerPoint slide summarizing one evaluation finding.

Question & Answer

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We have a few more minutes for Q&A. [DEL example]
What went well or what was hard about this activity?

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