Description

“A picture is worth a thousand words!”—an adage used so often stands true even whilst reporting your research data. Research studies with overwhelming data can perhaps be difficult to comprehend by some readers or can even be time-consuming. While presenting quantitative research data becomes easier with the help of graphs, pie charts, etc. researchers face an undeniable challenge whilst presenting qualitative research data. In this article, we will elaborate on effectively presenting qualitative research using **data visualization techniques**.

What is Data Visualization?

Data visualization is the process of converting textual information into graphical and illustrative representations. It is imperative to think beyond numbers to get a holistic and comprehensive understanding of research data. Hence, this technique is adopted to help presenters communicate relevant research data in a way that’s easy for the viewer to interpret and draw conclusions.

What Is the Importance of Data Visualization in Qualitative Research?

According to the form in which the data is collected and expressed, it is broadly divided into qualitative data and quantitative data. Quantitative data expresses the size or quantity of data in a countable integer. Unlike quantitative data, qualitative data cannot be expressed in continuous integer values; it refers to data values ??described in the non-numeric form related to subjects, places, things, events, activities, or concepts.

What Are the Advantages of Good Data Visualization Techniques?

Excellent **data visualization techniques** have several benefits:

1. Human eyes are often drawn to patterns and colors. Moreover, in this age of Big Data, visualization can be considered an asset to quickly and easily comprehend large amounts of data

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generated in a research study.
2. Enables viewers to recognize emerging trends and accelerate their response time on the basis of what is seen and assimilated.
3. Illustrations make it easier to identify correlated parameters.
4. Allows the presenter to narrate a story whilst helping the viewer understand the data and draw conclusions from it.
5. As humans can process visual images better than texts, **data visualization techniques** enable viewers to remember them for a longer time.

Different Types of Data Visualization Techniques in Qualitative Research

Here are several **data visualization techniques** for presenting qualitative data for better comprehension of research data.

1. Word Clouds

- Word Clouds is a type of **data visualization technique** which helps in visualizing one-word descriptions.
- It is a single image composing multiple words associated with a particular text or subject.
- The size of each word indicates its importance or frequency in the data.
- Wordle and Tagxedo are two majorly used tools to create word clouds.

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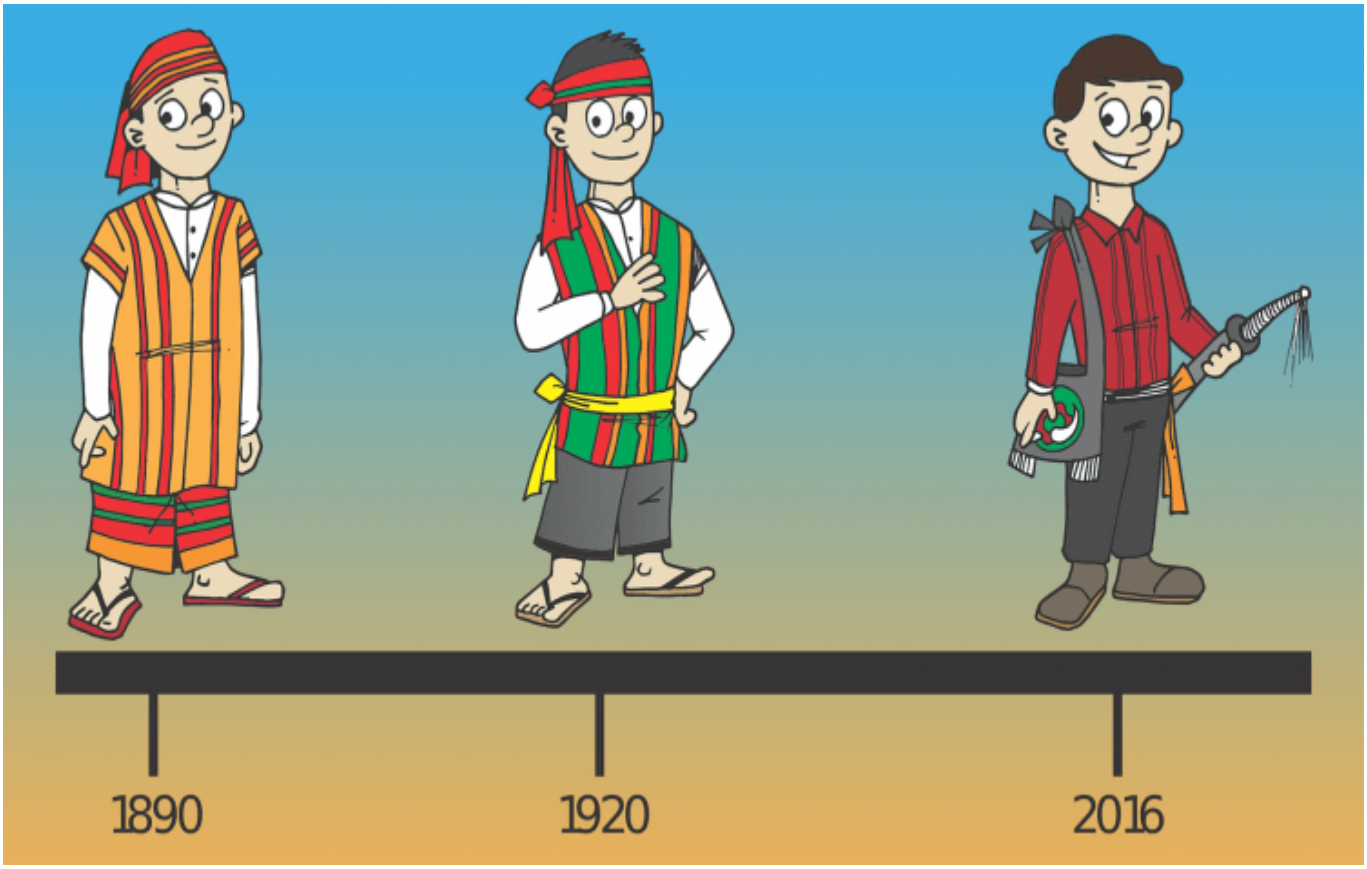
2. Graphic Timelines



- Graphic timelines are created to present regular text-based timelines with pictorial illustrations or diagrams, photos, and other images.
- It visually displays a series of events in chronological order on a timescale.
- Furthermore, showcasing timelines in a graphical manner makes it easier to understand critical milestones in a study.

3. Icons Beside Descriptions

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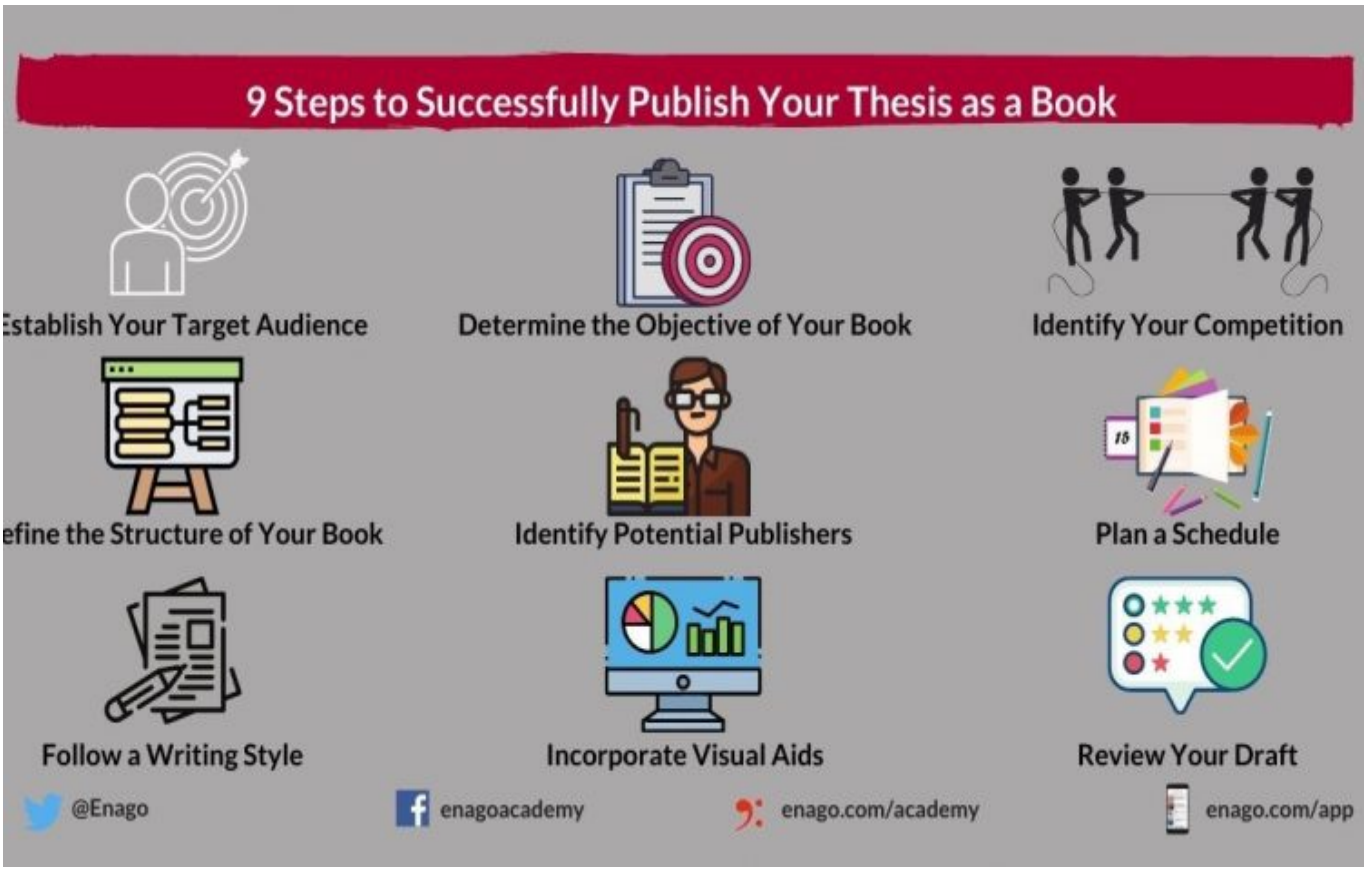

- Rather than writing long descriptive paragraphs, including resembling icons beside brief and concise points enable quick and easy comprehension.

4. Heat Map

How Willing Are Researchers to Adopt AI in Publishing?					
	Rarely	Unlikely	Fairly	Most Likely	Certain
Life Sciences	Low	Low	Low	Medium	Medium
Chemical Sciences	Low	Low	Low	Medium	Medium
Humanities	Low	Low	Medium	Medium	Medium
Computer Sciences	Low	Low	Medium	Medium	Extreme
Engineering	Low	Medium	Medium	Extreme	Extreme
Artificial Intelligence	Low	Medium	Extreme	Extreme	Extreme

- Using a heat map as a **data visualization technique** better displays differences in data with color variations.
- The intensity and frequency of data is well addressed with the help of these color codes.
- However, a clear legend must be mentioned alongside the heat map to correctly interpret a heat

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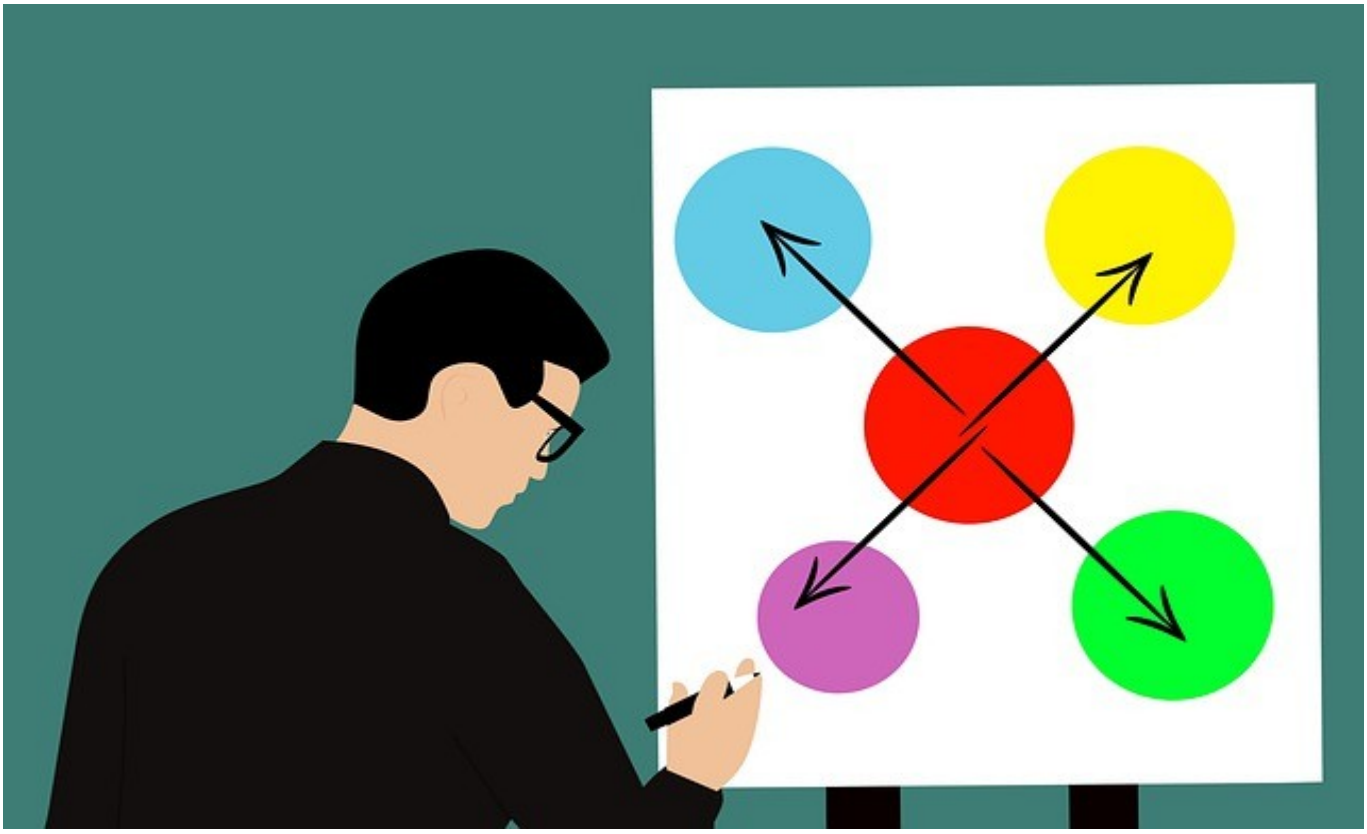
map.
- Additionally, it also helps identify trends in data.

5. Mind Map



- A mind map helps explain concepts and ideas linked to a central idea.
- Allows visual structuring of ideas without overwhelming the viewer with large amounts of text.
- These can be used to present graphical abstracts

Do’s and Don’ts of Data Visualization Techniques

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Do's	Don'ts
Use colors and shapes for indicating different categories.	Avoid using software default templates.
Use different sizes to emphasize the frequency of the data.	Don't use dramatic effects to show differences in data.
Use resembling vectors to bring creativity to your visuals.	Avoid using abstract images.
Use a proper color palette. A light-colored text on dark background and vice versa should be followed.	Avoid keeping the space white. However, do not bog the viewer with cluttered visuals.

It perhaps is not easy to visualize qualitative data and make it recognizable and comprehensible to viewers at a glance. However, well-visualized qualitative data can be very useful in order to clearly convey the key points to readers and listeners in presentations.

Are you struggling with ways to display your qualitative data? Which **data visualization techniques** have you used before? Let us know about your experience in the comments section below!

Category

1. Manuscript Preparation
2. Publishing Research

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