

Key Practices for Visualizing Data

Teacher Attrition in the Federated States of Micronesia (FSM)



USING DATA VISUALIZATION TO GET YOUR MESSAGE ACROSS

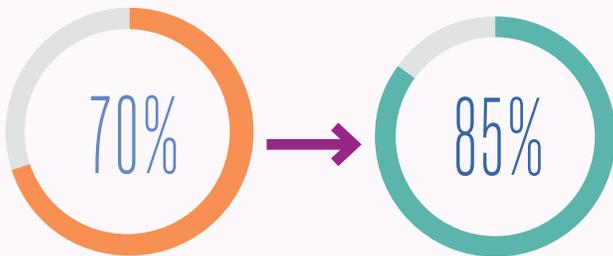
Effective data visualization can help improve data use within education organizations, facilitate data analysis, and foster communication with a wide range of stakeholders.

Infographics are one type of visualization that generally focus on smaller data sets. They are created to convey specific information quickly, accessibly, and in a graphically compelling manner. This infographic, the second of two REL Pacific infographics on data visualization, focuses on key practices for effectively transforming data into visual formats that increase stakeholders' understanding of the information represented by the data. This infographic displays existing data from two FSM reports to illustrate how data can be presented in a visually effective and appealing way. The infographic intentionally uses the same data throughout to demonstrate how the visualizations emphasize different takeaways.

Data Sources: Federated States of Micronesia National Department of Education, 2019 & 2020

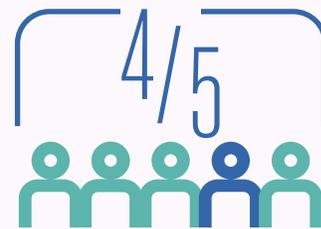
Teacher Attrition in FSM: In recent years, the FSM has performed well on teacher attrition and retention metrics. Teachers leaving the workforce — known as teacher attrition — contributes to teacher shortages, increased class sizes, and inexperienced or unqualified teachers in schools, which can all negatively impact student learning. The data displays in this infographic draw on teacher attrition data in the FSM.^{1,2}

FOCUS ON THE TAKE-HOME MESSAGE



Increase in Retention of Qualified Teachers

In 2019, 70% of qualified teachers in the FSM were retained. That percentage increased to 85% in 2020.



Approximately 4 of 5 certified teachers were retained in 2020.

What this display shows: These graphics display the high FSM teacher retention rates from 2019 to 2020.

Visualization practice: Keep the most important data at the forefront of the visualization and use a variety of charts and graphics to emphasize key messages. Including too much information can become visually overwhelming and reduce readability.

Rationale for visualization: Using icons, shapes, and other graphics to call attention to specific details in the data can help emphasize key messages.

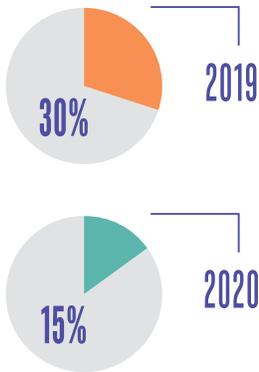
1 Carver-Thomas, D., & Darling-Hammond, L. (2019). The trouble with teacher turnover: How teacher attrition affects students and schools. *Education Policy Analysis Archives*, 27(36).

2 Federated States of Micronesia National Department of Education. (2019). *Education Indicator Report*.
Federated States of Micronesia National Department of Education. (2020). *Education Indicator Report*.

Source: This infographic is based in part on the *Forum guide to data visualization: A resource for education agencies* (NFES 2017-016). U.S. Department of Education. Washington, DC: National Center for Education Statistics. <https://nces.ed.gov/pubs2017/NFES2017016.pdf>. This infographic was prepared under Contract # ED-IES-17-C-0010 by Regional Educational Laboratory Pacific, administered by McREL International. The content does not necessarily reflect the views or policies of IES or the U.S. Department of Education, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.

Data Sources: Federated States of Micronesia National Department of Education, 2019 & 2020.

Qualified Teacher Attrition Rate from 2019 to 2020



CAPITALIZE ON CONSISTENCY

What this display shows: This simple chart shows a slight decrease in the percentage of FSM teachers who left their jobs from 2019 to 2020.

Visualization practice: Standardize the use of colors, fonts, and styles in your visualizations so that audiences can process the take-home message quickly. All of the charts and graphics in this infographic use consistent colors, fonts, and styles.

Rationale for visualization: Visualizations, such as pie charts, are useful for comparing percentages from year to year. All charts and graphics in this infographic use consistent colors, fonts, and styles to allow readers to quickly see relationships in the data.

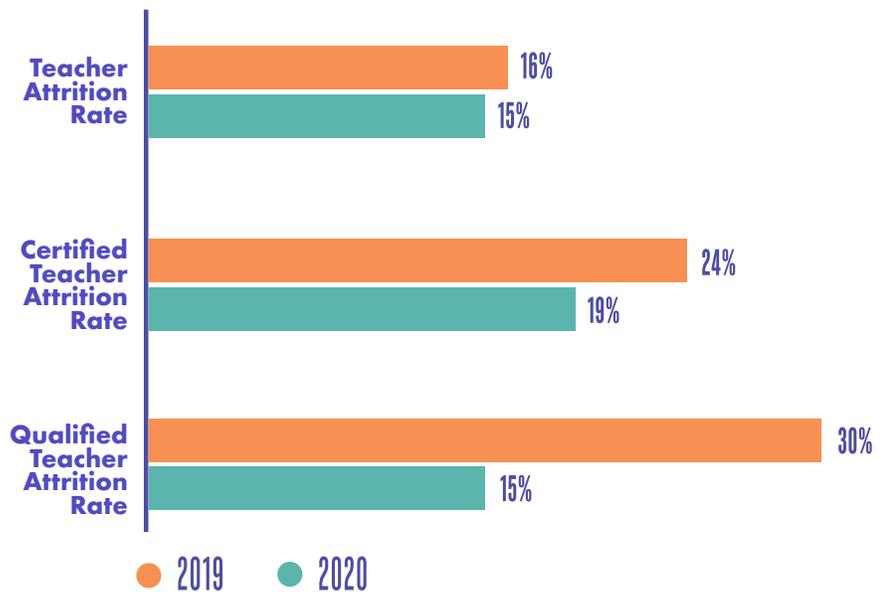
INTENTIONALLY GROUP TEXT AND IMAGES

What this display shows: These horizontal bar charts highlight how attrition rates vary for different groups of teachers. The overall attrition rate for all teachers is shown at the top, followed by the rates for certified teachers only and for qualified teachers only. Grouping text and images/data in this way allows the reader to quickly note differences between various subgroups.

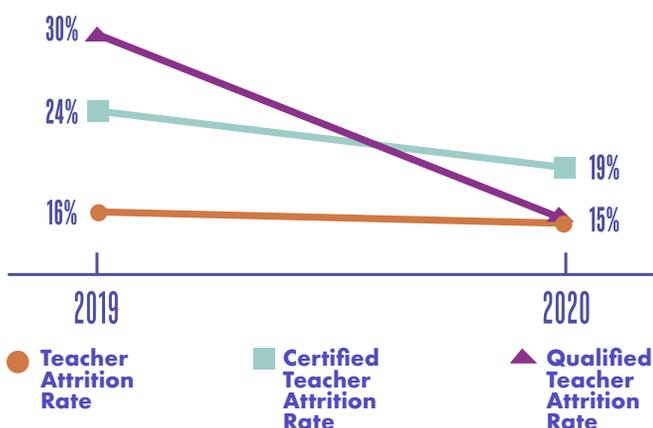
Visualization practice: Ensure that all text is legible so that the message is clearly conveyed. Complicated fonts can distract audiences from important messages. Boldface — and similarly, italics and underlined text — should also be used strategically and consistently.

Rationale for visualization: Creating visual groupings of text and images helps readers to compare teacher attrition by teacher type and year. Bar charts help audiences to see relationships quickly.

Overall FSM Teacher Attrition from 2019 to 2020



FSM Teacher Attrition Rates by Teacher Type, 2019/20



RECOGNIZE THE IMPORTANCE OF COLOR

What this display shows: This line chart displays changes in teacher attrition rates from 2019 to 2020, drawing attention to the large decrease in the overall attrition rate for qualified teachers during that time period.

Visualization practice: Standardize messaging by making graphics distinguishable by color, shape, and contrast so they can be represented in gray scale and black-and-white formats.

Rationale for visualization: Using color to differentiate between data further supports understanding.