



QUANTITATIVE LITERACY AND MAVED

WHAT IS THE ROLE OF QUANTITATIVE LITERACY IN MAVED AND WHY IS IT IMPORTANT?

Quantitative literacy is the ability to **use mathematical thinking to solve real-world problems**, interpret numerical data, and communicate conclusions effectively. It is one of UNO's **four fundamental academic skills** in MavEd.

Key components include:

- Applying **arithmetic, algebra, or basic statistical reasoning**
- Interpreting graphs, charts, and tables
- Constructing **logical, quantitative arguments**
- Solving problems using numerical evidence
- Explaining reasoning and results clearly in context

What Quantitative Reasoning Is *Not*

- It is **not advanced mathematics** or abstract theory.
- It is **not limited to calculations** – it includes reasoning and explanation.
- It is **not about using software tools** to manipulate datasets (that's data literacy).
- It is **not context-free** – it requires students to apply math in **real-world or discipline-specific scenarios**.

HOW IS QUANTITATIVE LITERACY DIFFERENT FROM DATA LITERACY

Aspect	Quantitative Reasoning	Data Literacy
Focus	Applying math to solve structured, contextual problems	Working with data from diverse sources to generate insights
Skills	Mathematical reasoning, numerical analysis, interpreting charts	Data sourcing, cleaning, visualization, interpretation
Common Tools	Equations, formulas, tables, graphs	Excel, Tableau, data dashboards, GIS, coding tools
Typical Activities	Calculating interest rates, analyzing budgets, interpreting stats	Building charts, evaluating datasets, generating visual reports
Data Structure	Often uses clean, simplified or hypothetical data	Often involves messy, real-world data requiring processing
Core Questions	“What does this number mean?” “What conclusion can I justify?”	“What does the data say?” “How do I prepare and visualize it?”

Why Both Are Essential at UNO

- **Quantitative reasoning** helps students **think logically with numbers** and explain quantitative conclusions in various contexts (e.g., policy, science, finance).
- **Data literacy** equips them to **handle, analyze, and communicate data**, a skill increasingly required across fields.

Together, they ensure students are **numerically fluent and data-savvy**, capable of making informed decisions in both structured and uncertain environments.

Additional Resources at [MavEd.unomaha.edu](https://maved.unomaha.edu)