

Course Overview: Data Literacy for Teachers

Format: Online, self-paced with instructor support

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Course Description: *Data Literacy for Teachers*

In today's classrooms, teachers are surrounded by data—grades, assessments, attendance, observations, and even digital engagement metrics. But without the skills to interpret and apply that information, data can feel overwhelming and underutilized. *Data Literacy for Teachers* is designed to empower educators with the knowledge and confidence to turn raw information into meaningful insights that directly improve teaching and learning.

This course introduces the essential concepts of educational data literacy in a practical, classroom-focused way. Across ten interactive lessons, participants will explore different types of data, strategies for collection and organization, and methods for identifying patterns and trends. They'll learn how to visualize information using charts, graphs, and pivot tables that make student progress easy to see and share. From there, the course moves into application: using data to differentiate instruction, provide targeted interventions, and support diverse learners with equity and precision.

Collaboration is also a key theme. Educators will practice how to share data with colleagues effectively, engage in meaningful team discussions, and co-develop plans that address shared challenges. Each lesson features reflection prompts, practical activities, and real-world scenarios, ensuring that participants immediately connect theory to practice.

The course culminates in a capstone project, where educators design a one-week unit or intervention plan that demonstrates their ability to collect, analyze, and act on classroom data. This project gives participants a tangible product they can use in their own teaching, while also reinforcing the skills developed throughout the course.

By the end of *Data Literacy for Teachers*, participants will not only understand data but also know how to use it as a powerful tool for decision-making, progress monitoring, and student success. This course is about more than numbers—it's about creating a data-informed teaching practice that is flexible, equitable, and sustainable.

Lesson 1

Introduction to Data Literacy – What data is, why it matters in education, and how teachers can begin building a data-informed mindset.

Lesson 2

Types of Data – Understanding formative, summative, qualitative, and quantitative data and how each supports instruction.

Lesson 3

Collecting and Organizing Data – Best practices for gathering, storing, and structuring classroom data for analysis.

Lesson 4

Interpreting Student Data – Identifying trends, gaps, and key insights that inform instruction.

Lesson 5

Spotting Patterns in Data – Using averages, comparisons, and trends to uncover actionable insights.

Lesson 6

Visualizing Data – Creating charts, graphs, and pivot tables to make patterns clear and actionable.

Lesson 7

Differentiating Instruction with Data – Using evidence to group students, target instruction, and provide personalized feedback.

Lesson 8

Progress Monitoring & Interventions – Tracking student growth over time and adjusting strategies when progress plateaus.

Lesson 9

Collaborating with Colleagues Using Data – Sharing insights, reducing bias, and building collective responsibility for student success.

Lesson 10

Building a Data-Informed Teaching Practice (Capstone) – Synthesizing skills into a comprehensive, evidence-based teaching approach.

Course Outcomes

By the end of this course, educators will be able to:

- Explain the basics of data and its relevance to teaching and learning.
- Collect and organize classroom data effectively.
- Use visualizations to identify and communicate patterns.
- Apply data to differentiate instruction and support diverse learners.
- Monitor student progress and adjust interventions responsively.
- Collaborate with colleagues around data to strengthen teaching.
- Design a data-informed teaching practice that integrates these skills holistically.

Next Steps for Teachers

- Apply the capstone project in your own classroom or adapt it for your subject area.
- Share your learning with colleagues to build a culture of data use in your school.
- Continue building your data skills with advanced tools like dashboards, predictive analytics, and research-based assessment design.
- Reflect regularly on how data is shaping your practice and student outcomes.

Assessments & Certificate

Quizzes: Brief quizzes at the end of each module

Activities: Written reflections and applications that require you to apply what you have learned

Capstone Project: Redesigned assessment plan

Grading Weights

- ☐ Quizzes: 40% of final grade
- ☐ Activities: 40% of final grade
- ☐ Capstone Activities: 20% of final grade

Certificate of Completion issued automatically when you achieve:

- 80% mastery on quizzes
- 70% or higher on activities and capstone

EmpowerED Professional Learning Course Policies

- Refunds: We offer a 14-day refund policy. If you are unsatisfied with the course, email brian@empoweredpl.com within 14 days of purchase.

- **Accessibility:** All materials are designed with Universal Design for Learning (UDL) principles and digital accessibility best practices. If you need additional accommodations, contact the instructor.
- **Academic Integrity:** Learners are expected to submit original work. If AI tools are used, their role should be transparent. Plagiarism or misrepresentation may result in loss of certificate.
- **Participation & Engagement:** This is a self-paced course, but active engagement in activities and reflections will improve your experience.
- **Support: Technical help:** Visit the Help & Support course. Learning support: Contact brian@empoweredpl.com with course-related questions.