

Overview of the Materials

The Data Literacy Assessments Project at WestEd, in collaboration with Using Data Solutions, has produced four scenario-based exercises that can be used to measure data literacy. The materials can be used as assessments, as supplemental instructional materials to develop data literacy for educational professionals in professional development or college and graduate courses, and for research purposes. The scenarios are designed to depict typical instances when teachers need to use data to make decisions in the course of their practice or personal experiences. They will allow users to demonstrate a variety of data literacy skills as outlined in the construct Data Literacy for Teachers (DLFT) developed by Ellen Mandinach and Edith Gummer.

Teachers adjust their instruction (moment-to-moment, daily, etc.), based on how well students are learning curricular material. The first scenario focuses on short-term data. This is the *Formative Assessment* scenario. The second set of materials is built around an end-of-year assessment that can be used for multiple purposes, including curriculum planning. This is the *Summative Assessment* scenario. Third, we have developed a set of materials around indicators that provide evidence for which students may be at risk of failing to graduate, an increasingly problematic issue in education. This set of materials is called the *Early Warning Indicator* scenario. Academic achievement and student performance are not the only things about which educators care. Decisions are often made by teachers using other sources of data. We therefore have developed a scenario about teacher career decisions based on diverse educational data. It is called the *Workplace Decisions* scenario.

The scenarios are designed to be used in multiple ways. First and foremost, they are assessments that teacher preparation programs and professional development providers can use to determine how well the students or participants can demonstrate various data literacy skills and knowledge. The scenarios also can be used for self-assessment by practicing teachers or students in teacher preparation programs. Second, they can be used as instructional devices for educators to learn about and discuss how data can be used to inform practice. Finally, the scenarios can be used as research devices. The scenarios are intended to be used in classroom settings, professional development sessions, by individual educators, or by researchers. They can be used as a team exercise or for individual use. A pre-service educator may respond to either some or all of the problem scenarios. The materials are designed to complement one another but may be used separately.

The scenarios have accompanying materials. Data sets have been created for the first three scenarios. The Workplace Decision scenario relies on access to existing online databases. Answer Keys have been constructed for all the scenarios. There also is a List of Data Literacy Skills tapped by each scenario. The Early Warning Indicator scenario includes two articles to supplement understanding of the topic.

General information about the materials and data literacy can be found in the Introductory Materials section. These include:

- Definitions of Data Literacy Skills;
- Data Literacy for Teachers Inquiry Cycle;
- Scenario Objectives;
- List of Data Literacy Skills Across the Scenarios; and
- Instructions for how to use the scenarios.

Please contact Ryan Miskell at (202) 471-2463 or rmiskel@wested.org or Ellen Mandinach at (202) 674-9300 or emandin@wested.org for more information or assistance on accessing these free materials.

For additional information about Data Literacy for Teachers, please see:

Mandinach, E. B., & Gummer, E. S. (2016). *Data literacy for educators: Making it count in teacher preparation and practice*. New York, NY: Teachers College Press.

Mandinach, E. B., & Gummer, E. S. (2016). What does it mean for teachers to be data literate: Laying out the skills, knowledge, and dispositions. *Teaching and Teacher Education*, 60, 366-376.