



ASSOCIATION
FOR INSTITUTIONAL
RESEARCH

The Data Literacy Institute (the Institute) is built with recognition that higher education institutions, the students they enroll, and the faculty and staff they employ collectively realize great achievements through teaching, research, and community engagement. This success grows out of environments that foster and support learning and inquiry, require exploration and evaluation, and strive for innovation and continuous improvement. A goal of the Institute is to help institutions realize those cultures by valuing and investing in professionals' abilities to be sophisticated consumers and, where relevant, producers of data and information with contextual understanding of their environments.

THE CURRICULUM

The curriculum delivered in the Institute is part of the Association for Institutional Research (AIR) Data and Decisions® Academy Data Literacy Program. The curriculum establishes the knowledge, skills, mindsets, and habits needed to empower individuals to use and apply data strategically to make better and ethical decisions.

THE DESIGN

The Data Literacy Institute is a 12-week experience that brings together a cohort of up to 30 individuals from across your institution, including faculty, advisors, administrators, and other staff. The Institute's curriculum establishes the knowledge, skills, mindsets, and habits of a data literate professional. The Institute follows AIR's data-informed decision-making process through six sections:

- Start with a question
- Connect questions to data
- Reveal data's information
- Communicate information
- Take prudent action
- Close the loop... and continue it

COURSE EXPERIENCE

The Institute includes the following weekly activities and approximate time commitments:

Tutorials – One hour

Virtual Seminars – Two hours

Group Capstone – Two hours*

*The cohort is separated into 3 cross-functional teams that work together weekly to apply Institute learning to action through a capstone project that explores an institutional challenge. Each team will develop a question and follow the 6 sections of the Institute content.

RELEVANCE AND VALUE

Data have little to no intrinsic value. It is through engagement with data—from collection, to analysis, to interpretation, to communication, to action—that we unlock meaning and insights to inform our practices and our decisions that impact and shape the student experience and improve the effectiveness of our institutions. This requires data literacy. To do this work, we must be sophisticated producers and consumers of data within our realms of control and spheres of influence. The curriculum delivered at the Institute is designed to introduce the **knowledge, skills, mindsets, and habits** needed to develop and support data literacy.



Knowledge: What we know. A data literate person understands that data do not tell us what to do. Rather, data are used to measure and explore outcomes with the goal to learn what works, what does not work, and why. It is the discovery of the why that leads to replicable organizational and individual practices and habits that fuel continuous improvement.



Skills: What we can do. A data literate person knows how to use data to measure and explore outcomes with the goal of developing and communicating actionable insights to inform decisions.



Mindsets: What we think. A data literate person thinks about, approaches, and uses data in a way that supports a data-informed decision culture. These attitudes include belief that data comprise a language that anyone can learn to understand and speak; curiosity; confidence; mindfulness; collaboration; commitment; integrity; and acknowledgement that biases exist.



Habits: What we do. A data literate person works in a way that supports a data-informed decision culture. These behaviors include utilization of data; sharing data; advocacy for data; maintenance of ethical standards; identification of one's own biases; attention to the human element of data and information; and enthusiastic sharing of data literacy among colleagues and stakeholders.

Format and Schedule

The format of the Data Literacy Institute follows a flipped-classroom model. Prior to the live lecture, participants watch tutorials (~1 hour of content/week) and respond to a discussion board post. After the live lecture, there is an assignment to complete prior to the next live lecture. Those assignments are predominantly related to your Capstone Project but will also include some reflective exercises or tasks.

Weekly Lecture Topics

Week 1: Student Success

Week 2: Research

Week 3: Assessment and CQI

Week 4: Understanding Data

Week 5: Collecting Data

Week 6: Basic Statistics

Week 7: Advanced Statistics

Week 8: Interpreting Results

Week 9: Data Visualizations and Storytelling

Week 10: Effective Reporting

Week 11: Making Decisions

Week 12: Change Management

PROGRAM OBJECTIVES

As a result of the program, participants will understand:

- the importance of curiosity in data-informed decision cultures
- the process of developing and answering research questions
- how to locate appropriate published scholarship and institutional information related to research questions
- how to recognize constraints that can impact the ability to explore research questions
- how to identify the impacts of biases on data collection, analysis, and use
- common data-related higher education terminology
- how to identify sources of administrative, non-administrative, and external data
- basic concepts related to data governance and management
- when and why surveys are used to collect data
- common statistics used to analyze higher education data
- the principles of sampling, reliability, and validity
- how to interpret the results of analyses within the context of their collaborative research projects and their institutions
- how data are transformed into information
- how to interpret the results of analyses within the context of their projects and their institutions
- the ethical consideration around data use

As a result of the program, participants will be able to:

- describe the various audiences for project reports and identify their reporting needs
- identify common types of data visualizations, when to use them, and common pitfalls
- articulate the principles of data storytelling
- create data stories

- identify how personal and professional biases can inhibit data stories
- identify the key components of data-informed decision making cultures
- articulate models for decision making
- describe how personal and professional differences affect decision making
- discuss the importance of transparency in decision making
- define the aspects of institutional culture that contribute to, and inhibit, decision making
- articulate the key components of the assessment cycle
- identify decisions that need to be reviewed
- critically evaluate decisions and determine if adjustments are needed

MORE THAN A SINGLE INITIATIVE

The Institute is not designed to be a one-off professional development program, nor is it a panacea. Rather, it is part of a larger, coordinated effort to transform institutions into evidence-based learning organizations. Thus, sustainability is a key consideration in the design and development of the program and surrounding support structures. The Institute helps establish a viable data literacy model that indicates how much institutions need to invest to support their own data literacy training in subsequent years. We expect institutions will differ in their levels of interest and commitment to additional data literacy training beyond the Institute. In anticipation of these differences, AIR is planning a variety of add-on options to help support institutions in their quests to achieve their data literacy goals.