

State

Texas

Agency

Texas Department of Information Resources

Award Category

Data Management Analytics and Visualization

Project Title

The Texas Data Literacy Program: Unlocking Insights and Driving Impact

Project Dates

January 2022 – April 2024

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Executive Summary

The Texas Data Literacy Program launched in January 2022 and completed its first phase in April 2024. It ensures consistency across agency data governance programs, which ultimately will improve the control and security of information collected by state agencies, promotes sharing of information (including customer information), and reduces information collection costs. The program provides guidance, training, and education on topics related to data management, open data, and data sharing. It offers eLearning courses on a learning management system platform that are available to staff working on their organization's data management programs. Video-only versions of data literacy courses are published to the DIR YouTube channel to reach a wider audience.

Through the Texas Data Literacy Program, Texas has embarked on a journey to embolden a new class of data heroes to take on the vastness of the data world with governance, ethics, security, and privacy.

Idea

What problem or opportunity does the project address?

Many Texas state agencies and institutions of higher education used to lack a formal data governance program. Then, in 2021, the Texas Legislature mandated that Texas state agencies and institutions of higher education designate a Data Management Officer (DMO) and tasked this DMO with establishing the agency's data governance program. Many designated DMOs were new to the role, and the Texas Chief Data Officer, housed within the Texas Department of Information Resources (DIR), determined that a data literacy program would help the DMOs with that task.

Why does it matter?

Data literacy matters more than ever in this increasingly digital world. For public sector organizations, data literacy helps to ensure government transparency and accountability to those they serve. State agencies have a legal and ethical responsibility to protect the private and sensitive information of employees, customers, business partners, and the public. Additionally, data governance programs: support data sharing initiatives, both within and between organizations, to improve decision-making; enhance the ability to provide more efficient and effective services; aid in the detection and prevention of fraud, waste, and abuse; increase cost savings; and increase transparency and constituent trust.

Communication is critical to a data governance program's success. Texas has over 100 state agencies and institutions of higher education with identified Data Management Officers, all tasked with establishing their organization's data governance program. The Texas Data Literacy Program promotes a common language so that Data Management Officers and key stakeholders, such as leadership on the business side of the organization, can understand each other, making it more likely for data governance programs to get the support they need to be successful. Successful data governance and data management programs are a catalyst for governmental entities to better serve their constituents.

Data governance programs help organizations improve the control and security of information, promote sharing of information, and reduce information collection costs. Consistency across organizations is key to meeting the data governance mandates outlined by the Texas Legislature.

What makes it different?

The Texas Data Literacy Program is a homegrown program. All course development, script development, graphic design, video production, and eLearning course development are done in-house by one full-time staff member in collaboration with individuals from other state agencies and institutions of higher education.

The Data Literacy Foundations level consists of ten introductory-level courses covering topics such as the history of data management in Texas, data quality, data privacy, data security, data ethics, and data governance roles and responsibilities.

Topics for course development are determined by an annual survey of DMOs and others in the Texas data community. Development of Level 2 courses has begun and will follow two tracks: Data Management Fundamentals and Data Analytics Fundamentals.

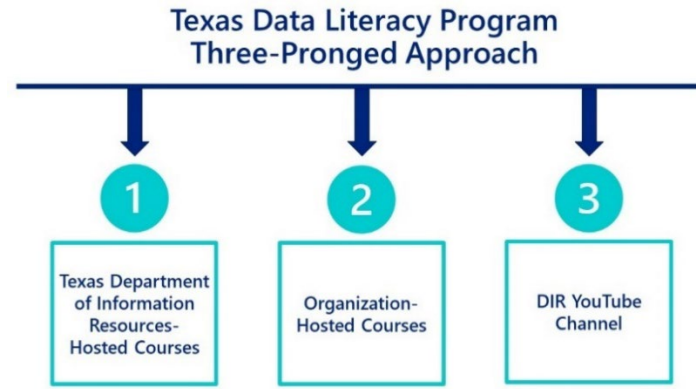


Figure 1: Texas Data Literacy Program Three-Pronged Approach to Distribution

The Texas Data Literacy Program takes a three-pronged approach in providing course content. In prong one, the Texas Data Literacy Program hosts courses on a learning management system, and participants who complete each level earn a certificate of completion from DIR. Access to Texas Data Literacy Program courses hosted on the learning management system is made available to Texas DMOs and their designees free of charge.

Courses are designed to be general and, therefore, relevant across all Texas organizations. Each organization is encouraged to develop their own organization-specific program that can provide more granular information to meet their own specific needs. In prong two, Texas Data Literacy Program products are made available to organizations to jumpstart development of their programs. This allows DIR organizations to provide foundational-level information to their employees quickly, while they develop organization-specific products. All course files and supporting documentation are provided to organizations free of charge.

In prong three, the Texas Data Literacy Program provides video versions of the course contents on the [DIR YouTube channel](#) to make data literacy courses available to a wider audience who may not be interested in earning the certificate of completion.

What makes it universal?

The Texas Chief Data Office follows the internationally recognized data management principles endorsed by the Data Management Association (DAMA) International, making the information provided in the Texas Data Literacy Program widely appropriate and relevant. Additionally, the Texas Data Literacy Program relates directly to **NASCIO Top 2025 priority number four – Data Management and Data Analytics**. While some Texas Data Literacy Program courses may have Texas-specific information, such as descriptions of Texas legislation and laws, the content and format are easily adaptable for other states, especially those that also follow the DAMA data management principles.

Further, while the program aims to assist DMOs in establishing their data governance programs, the Data Literacy Foundations courses are designed to be appropriate for all data users, regardless of their role, including program leadership, executive leadership, and other stakeholders.

Implementation

What was the roadmap?

Cultivating a data-literate workforce is a goal set for the state in the [Texas State Strategic Plan for Information Resources Management](#): mature data management and privacy practices.

Development of the Texas Data Literacy Program began in early 2022. An interagency data literacy workgroup was formed, consisting of representatives from 21 state agencies and institutions of higher education. The workgroup met monthly during the first year to determine the proposed format of the program, design an organizational data literacy assessment to determine priority topics and intended audience, design an individual data literacy assessment to help measure the program's impact, and work on course content development. The first course, Introduction to Data Literacy, was published in October 2022. The tenth and final course of the Data Literacy Foundations level was published in June 2024.

The organizational data literacy assessment is distributed each February to DMOs and others in the Texas data community to identify new and changing priorities and to plan for course development for the year.

The individual data literacy assessment is presented at the beginning of the Introduction to Data Literacy course. The assessment is a Likert scale survey to evaluate the individual's perceived level of data literacy in each of six core areas of competency. Individuals completing all ten courses at the Foundations level will receive the individual data literacy assessment again six months after completion to gauge the effectiveness or impact of the courses. Data for this measure is being collected now. Additionally, each course hosted on the DIR learning management system provides the participants with an opportunity to evaluate the course.

Metrics currently monitored by the Texas Data Literacy Program include number of organizations participating in DIR-hosted courses, number of individuals participating, number of individuals completing Data Literacy Foundations level, and number of organizations hosting DIR-created courses.

Future impact measures may also include data collected on biennial data maturity assessments now mandated in the Texas Government Code.

2025 Texas Data Literacy Program Planning Timeline



Who was involved?

An interagency data literacy workgroup, representing 21 Texas state agencies and institutions of higher education, met monthly in 2022 to determine the proposed format of the program, design an organizational data literacy assessment to determine priority topics and intended audience, and design an individual data literacy assessment to help measure the program's impact. The workgroup now has representatives from 27 organizations and continues to meet quarterly to discuss future program development and best practices for developing organization-specific data literacy programs.

The Texas Data Literacy Program administrator wrote a program proposal and presented the proposal to the DIR Executive Director in March 2022 for buy-in and approval. Course content is developed by the Texas Data Literacy Program administrator in collaboration with members of the data literacy workgroup, DMOs, and other subject matter experts such as Information Security and General Counsel personnel.

Additional input and feedback on both program format and course content development are solicited from the designated DMOs, and updates on the program are provided to the DMOs and the DIR Board of Directors at quarterly meetings. Finally, course evaluation responses are reviewed, and any issues are addressed directly with the participant who provided the feedback.

The Texas Data Literacy Program administrator also works with DIR's Chief Experience Office for design and accessibility expertise, and with DIR's People and Culture Office for human resources and training expertise.

The Texas Data Literacy Program was rolled out in a three-month pilot phase, with participation limited to DMOs and members of the data literacy workgroup. Early course evaluation responses and workgroup discussions allowed the Texas Data Literacy Program administrator to make improvements to the courses. Updates and improvements were made, and access was opened up to a wider audience.

Outreach and marketing activities are done through program updates at the aforementioned quarterly meetings and through presentations at conferences and stakeholder meetings.

How did you do it?

All course development for the Texas Data Literacy Program is produced by the Chief Data Office in collaboration with subject matter experts from state agencies and institutions of higher education. Initial program development took eight months from conception to publication of the first course, and courses are published on a cadence of approximately every one to two months.

The Texas Data Literacy Program is administered by one full-time employee. Course development is accomplished using Microsoft products licensed by DIR. Additional licenses for video editing and course development software are also utilized.

Information provided by the Texas Data Literacy Program is delivered in multiple formats. DIR-hosted courses are provided on a learning management system with licenses required for access. However, transcripts of each course are also made available upon request. PowerPoint slide decks for courses are also available upon request for DMOs to use in developing presentations on their proposed data governance programs. Finally, course files and supporting documentation, including course videos and knowledge check question-answer keys, are provided to organizations utilizing courses for their own data literacy programs. These course files and documentation are considered building blocks and therefore appropriate for a variety of learning opportunity formats.

Impact

What did the project make better?

When the Texas Data Literacy Program first started in 2022, the primary focus was to provide foundational information on data management to assist newly designated DMOs in establishing their organization's data governance programs.

Today, there are 52 organizations participating in the DIR-hosted courses, including two local governmental entities. Some DMOs have recommended the program to members of their data governance councils and executive leadership teams, so the program has reached a wider audience beyond technical and analytics staff.

The number of individuals requesting access to the DIR-hosted courses grows every month, indicating the growing demand for data literacy education. As of May 2025, 63 individuals have completed all ten courses in the Data Literacy Foundations level, and course evaluation feedback has been overwhelmingly positive.

Additionally, DIR has provided course materials to 26 organizations who are developing their own organization-specific data literacy programs and wish to incorporate the Texas Data Literacy Program materials.

How do you know?

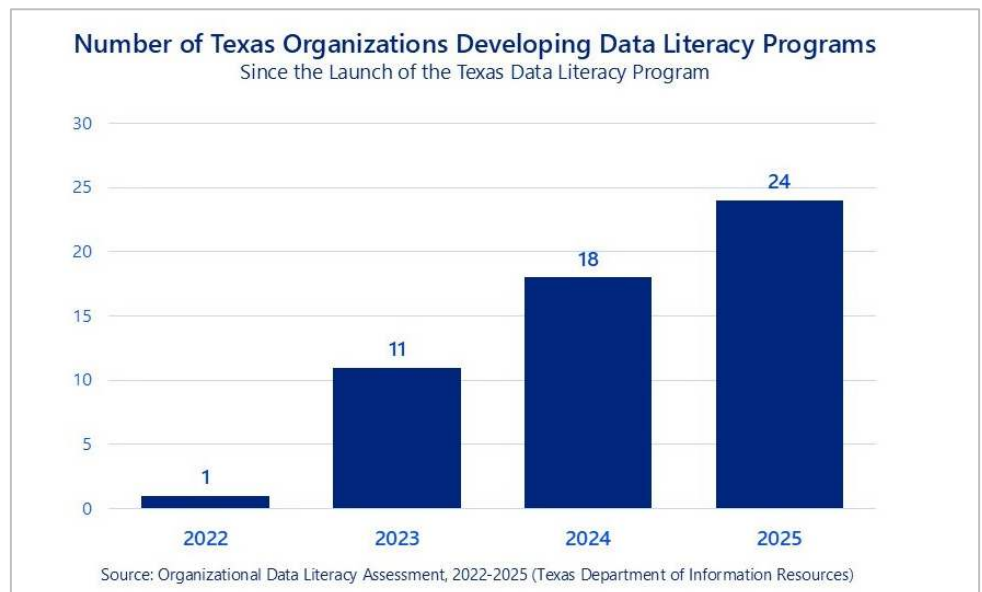
As the number of designated DMOs and established data governance programs has grown, so has participation in the Texas Data Literacy Program.

Feedback on the Texas Data Literacy Program has been overwhelmingly positive, and demand has been high. DMOs are starting to get buy-in from their leadership and stakeholders as evidenced by data governance council members taking the Texas Data Literacy Program courses. As of May 2025, there are 52 organizations (up from 42 in 2024) participating in the Texas Data Literacy Program, including 26 state agencies, 24 institutions of higher education, and two local governments. As of May 2025, 131 individuals have registered for the program, and 63 of those individuals, representing 24 organizations, have earned their certificate of completion in the Level 1 Data Literacy Foundations track.



Course evaluation responses have been encouraging. **On a scale between one and five, with five being the highest score, participants rate overall satisfaction with the Texas Data Literacy Program courses at 4.7 and indicated they would recommend the courses to their colleagues.**

There has also been an increase in the number of organizations interested in incorporating Texas Data Literacy Program course materials into their own data literacy programs. When work on the Texas Data Literacy Program began in early 2022, only one other agency was identified that had plans to develop a data literacy program. In the organizational data literacy assessment conducted in February 2025, 24 responding organizations said they are developing, or planning to develop, an organization-specific data literacy program. Many of those



organizations are actively working with DIR and the Texas Data Literacy Program administrator on those efforts.

Note: Not all organizations complete the organizational data literacy assessment each year. The Texas Data Literacy Program shares course materials with 26 organizations. Therefore, the number of organizations developing data literacy programs is higher than indicated in the assessment.

Participants have provided the following testimonials on the Texas Data Literacy Program:

- “The TDLP courses are exceptional, and we have successfully integrated them across our business to foster a data-aware culture. I am deeply grateful for DIR for their invaluable support, guidance, and responsiveness. I look forward to seeing the continued growth of the TDLP and strongly encourage all

agencies to adopt these courses. They provide a well-structured, vendor-neutral foundation in best data practices, data governance, and more.” – Data Management Officer, Office of the Attorney General

- “Thank you once again for your amazing work in developing the Texas DIR Data Literacy Program and for sharing your SCORM files with us. Your encouragement to utilize these files to launch our Data Literacy program is greatly appreciated. None of this would be possible without your hard work. We truly appreciate all that you’re doing!” – Data Management Officer, Lamar University
- “Excellent resources provided by TDLP and superb customer service. Bravo!” – Data Management Officer, University of Texas at San Antonio

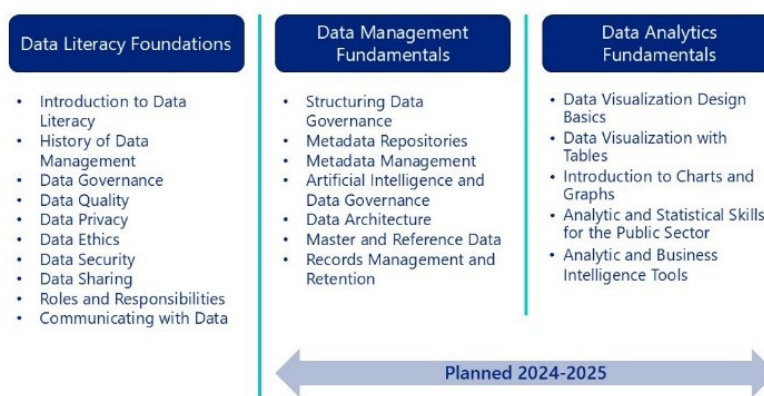
In April 2024, the Texas Data Literacy Program administrator was invited to present at the NASCIO mid-year conference. The presentation on how the data literacy program was developed and the importance of building a data culture within an organization was well attended and well received. In May 2024, the Texas Data Literacy Program won a Best in Texas Award at the annual Texas Digital Government Summit, sponsored by Government Technology.

What now?

The Level 1 Data Literacy Foundations courses are complete, and the development of Level 2 courses has begun. Topics for Level 2 courses were determined by the annual organizational data literacy assessments in 2024 and 2025. Level 2 Data Literacy Fundamentals will follow two tracks: Data Management Fundamentals and Data Analytics Fundamentals. Data Management Fundamentals will go deeper into data management principles. Four courses have been completed, and a fifth course is in development. Data Analytics Fundamentals will focus on data storytelling, data visualization design, and analytics for public sector organizations. The annual organizational data literacy assessment each February will provide information on changing needs and priorities and determine development of the program moving forward.

The first course in Level 1 Data Literacy Foundations is Introduction to Data Literacy. At the beginning of the course, participants completed an individual data literacy maturity assessment. Six months after the participant completes all courses in the level, the individual maturity assessment is sent back to the participant for reassessment to gauge the effectiveness of the program. Data collection and analysis are underway.

TDLP Courses by Level



Finally, the Texas Data Literacy Program framework, structure, and process have served as a model toward the development of an Artificial Intelligence (AI) Literacy program at DIR. Data literacy is foundational to AI literacy and the two programs are working together to aid Texas state agencies and institutions of higher education establish rigorous and effective AI solutions.