



# CEDS Shining Stars

## Metro Nashville P.S.

### Metro Nashville Public Schools Focus on Data Standards

Consider the data interoperability challenge of a Local Education Agency (LEA). In an average size LEA a curious data spectator (if there is such a thing) might find all or a combination of the following systems of data:

- Student Information,
- Transportation,
- Lunch,
- Library,
- Learning Standards,
- Gradebook,
- Multiple variations of Assessment,
- Textbook,
- Inventory,
- Data Warehousing,
- Special Education,
- Human Resources,
- Professional Development,
- Facilities Management,
- Financial, and
- A variety of instructional learning resource technologies that are growing exponentially.

It would certainly be reasonable to understand why these data existed in silos and why the question of integration is often one that is placed on the list of future endeavors. Not the case for Metro Nashville Public Schools, who is attacking the idea of data integration and interoperability head on and is leading the charge for the continued adoption of data standards like the Common Education Data Standards nationwide.

When Laura Hansen, Director of Information Management and Decision Support at Metro Nashville, embarked on her first trip to the National Center for Education Statistics conference “Stats DC”, she quickly recognized that she was one of only a small handful of LEAs at the conference. Her first thought was, “Am I in the wrong place?” Actually, as it turned out, she was exactly where she needed to be. Stats DC is all about the data, but the conversation about data, about data integration, about data use, and about data vocabulary needs to start with the individuals who are responsible for where the data all begins—at the local level.

Almost all of the data collected and used by the United States Department of Education and State Departments of Education across the country originate at the LEA and local school level. This would mean the data used at the federal and state level to inform policy decisions, make both federal and state funding decisions, conduct analysis and research, and to perform every other data use task has its origin in the silo-challenged world of the LEA. Data standards and interoperability are all about the LEA’s ability to understand and integrate their data. Data reporting is all about the ability of the federal and state agencies to communicate their reporting requirements in a standard way the LEAs can easily interpret and respond to.

Metro Nashville has recognized that **standards** need to exist that allow for a **common** understanding of **data** elements related to **education**. The LEA is no stranger to standards. They utilize the Access for Learning (A4L) Schools Interoperability Framework (SIF) standard for interoperability between various systems, and because the Tennessee Department of Education is adopting Ed-Fi for state reporting, Metro Nashville is in the process of integrating this standard into their data structure. Both A4L and Ed-Fi align to the Common Education Data Standards (CEDS), which is a perfect fit because Metro Nashville’s approach to Master Data Management is based on CEDS.

Metro Nashville isn’t just creating a data dictionary, they are creating a data culture based in a standard way of communicating—a common way of communicating in vocabulary and a standard way of communicating between

systems. When data are shared locally from one system to another, there must be a level of certainty that the receiving system understands the definition and purpose of the data it is receiving and consumes the data appropriately for its intended use. Conversely, when that same system completes its purpose and returns a new set of data back to the first system or into a data warehouse, there must be a level of certainty the original data were interpreted correctly, processed correctly, and are now being returned to fulfill the understood purpose.

To misinterpret at any point along the way creates a cascading effect of inaccuracies proliferated from what was simply a misunderstanding of definition.

To ensure the adoption of this data culture throughout the district, Metro Nashville is doing the following:

- Investing in resources to work with school staff to ensure data quality,
- Using CEDS as the basis for their Master Data Management tool development,
- Creating a comprehensive data governance program,
- Utilizing CEDS to create a data dictionary,
- Transitioning to NCES course codes to facilitate a common understanding and alignment of course data up to the federal level,
- Publishing and linking to “data guides” to resource individuals using and reporting data,
- Improving data literacy fostered through data coaches, and
- Actively engaging in conversations about data standards at the local, state, and federal level

**Data Standards** in educational technology allow for easier integration of data, which to a local education agency...could mean the difference between selecting a more expensive system...and hiring one more high-quality educator.

Not only is Metro Nashville tearing down the silos of data systems in their own LEA by using standards to integrate so they can provide the best possible services to their students, they also have some best practices they would like to suggest to those who require LEA data and who build the systems to house education data.

- **State and Federal Departments of Education:** Communicate all reporting requirements using a common language such as CEDS. All requested data should be understood at the element level, with thorough definitions eliminating the need for interpreting requirements. The CEDS Connect tool is an excellent way to communicate any state or federal reporting requirement at the element level.
- **Education Software Vendors:** The interoperability of all of the systems the LEAs must integrate should not be part of the selection criteria for an LEA; it should be a given that integration can easily take place. Use standards and find ways to make the product as interoperable as possible without the need for the development of an elaborate Extract, Transform, and Load process.
- **LEAs and Schools:** Help set the standard by being involved in the data standards communities. LEAs and schools are the main source of data.

Data standards aligned to CEDS can create an environment that allows for higher quality data for reporting, improved data analysis leading to better outcomes for students, and increased efficiencies in providing data to educators, administrators, and policymakers. And, as if that was not enough, data standards in educational technology allow for easier integration of data, which to a local education agency trying to spend their resources wisely, could mean the difference between selecting a more expensive system for proprietary integration needs, and hiring one more high-quality educator to engage directly with students. For Metro Nashville, improved data standards nationwide equal classroom resources and a direct impact on students, and that is a priority anyone in education can understand.

### For More Information

For more information on CEDS, visit <https://ceds.ed.gov>



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