



Data Modernization Project

Data modernization is the process of transforming large volumes of data into a more accessible, and therefore more useful, form so that users can make informed decisions based on clear insights and thorough analysis. The 2021 Montana Legislature appropriated funds for the OPI to undertake a data modernization project to benefit students statewide.

Connected Intelligence

Connected Intelligence (CI) is the name of the data lake the OPI Data Modernization Project will use. A data lake is an area where historical and current data can be stored and then easily accessed for analytical and reporting purposes. Data lakes are useful in that they can store data in structured or unstructured forms. The data lake technology behind Connected Intelligence is Snowflake.

Unified Insights/Analytics and Insights

Unified Insights, now called Analytics and Insights, is the dashboard system the Data Modernization Project will use to display data requested by authorized personnel. Users will have access to data based on their security clearance.

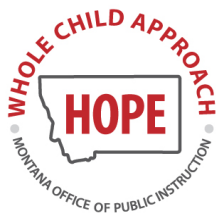
*Because the name of this product was changed partway through the implementation of the data modernization project, documentation may reference either Unified Insights or Analytics and Insights.

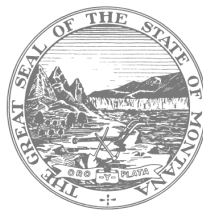
Community Engagement

Community Engagement is the module of Unified Insights/Analytics and Insights that the public will be able to access. It utilizes reported data to populate dashboard visualizations as a tool for driving data-informed decision making.

Data Collected

The student-level data is individualized information about students. This data includes details specific to each student, and it is used for various educational purposes, including assessment, analysis, and support. Student-level data may encompass a wide range of information, and examples include:





1. Personal Information

Includes the student's name, date of birth, address, contact details, and other demographic information.

2. Enrollment Information

Details about a student's enrollment status and grade level

3. Academic Performance

Information related to a student's academic achievements, test scores, attendance records, and any other assessment data.

4. Educational Progress

Details on a student's progression through their educational journey, including promotions, grade level advancements, and graduation status.

5. Special Education Information

If applicable, data about any special education services a student receives, including Individualized Education Programs (IEPs) and related support services.

6. Attendance Records

Information about a student's attendance, including days present and days absent.

7. Behavioral Data

Records of a student's behavior and disciplinary actions such as suspensions and expulsions.

It is important to note that the collection and use of student-level data are subject to privacy regulations, and educational institutions must adhere to laws such as the Family Educational Rights and Privacy Act (FERPA) to protect students' privacy and confidentiality.

Real-Time Data/Near Real-Time Data

Real-Time data is information that is available immediately after it is generated or collected. Near Real-Time data is information that can be accessed after only a slight delay. It is extremely valuable for OPI and school administrators to have access to information as quickly as possible to make the best decisions concerning students.

