

Unifying Data Model - Introduction

A primary component of the Ed-Fi Technical Suite is an educational data model that empowers educators with real-time, actionable information on every student in their classroom, school, or district.

The Ed-Fi Unifying Data Model integrates and organizes raw education data and information from a broad range of data sources so it can be sifted, analyzed, and put to everyday use.

By using products based upon the Unifying Data Model, educators are equipped with the information they need to understand the individual needs of students, and can prepare to address those needs on the first day of school. In addition, on-demand access means that action plans for students can be monitored and refined throughout the school year. Most importantly, technology based on the Unifying Data Model can be implemented in any school, district, regional education service agency, or state education agency today.

The Unifying Data Model v3.0 aligns with version 7.0 of the [Common Education Data Standard \(CEDS\)](#) developed by the [National Center for Education Statistics \(NCES\)](#). The Ed-Fi Alliance works closely with NCES to support the CEDS effort. Ed-Fi Alliance staff and community members actively participate in CEDS technical and stakeholder groups.

Ed-Fi Data Standards in Action

The foundation of the Ed-Fi Data Standards is this Unifying Data Model, which is an enterprise data model of commonly exchanged and shared K–12 education data. The model is expressed in Unified Modeling Language (UML), and includes entities such as students, teachers, assessment results, attendance, and many others.

The role of the Ed-Fi UDM is to harmonize the information model and data types across all Ed-Fi Data Standards and products in the Ed-Fi Technical Suite. This means that Ed-Fi technologies share common models and data definitions with all other Ed-Fi technologies such as the [Ed-Fi Operational Data Store and API](#). That API, for example, includes a representation of the UDM as API resources in JavaScript Object Notation (JSON) format for exchange over HTTPS using RESTful API conventions.

Similarly, a companion Extensible Markup Language (XML) data exchange framework supports the sharing of student data among disparate source systems in bulk format, such as gradebook applications, curriculum and lesson planning systems, plus benchmark testing and reporting systems. The data exchanged among these systems can include records on students' grades, absence rates, transcripts, and standardized test scores.

The Unifying Data Model is built on open industry protocols and conventions and is therefore vendor-neutral. The Unifying Data Model and its derivative products can be implemented on any hardware and software platform.

UDM Documentation Contents

Explore the Ed-Fi Unified Data Model: