



**Forum Data Model Task Force  
Domain Data Model Framework  
8/4/2006**

*National Forum on Education Statistics  
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## Introduction

The Domain Data Model Framework (DDMF) is a first attempt to create a framework for a comprehensive k-12 data model. The DDMF utilizes extant representations of education information as a starting point in identifying the data domains, and relationships among the domains, that will be part of the finished data model.

Four representations of education information will be used in this domain framework: the Schools Interoperability Framework (SIF) data model, the non-fiscal NCES Handbooks (NCES Handbooks Online), the EDEN/EDFacts data model, and the Forum Education Indicators. By examining the overlaps and differences among these representations of education information, we hope to create an initial view of a comprehensive data model.

Data element crosswalks among these different systems are in progress by several groups. Rather than create an extensive many-to-many crosswalk, this domain framework will focus upon data element domains or categories in order to reflect overlaps and differences. Also since we want to compare all four education information representations we will use the “spine” categories developed in a previous paper.

The DDMF effort consists of:

- One or more high-level diagrams contained in this document.
- A spreadsheet or similar representation showing connections among the identified domains or categories. (See attached document named DDMF\_ContentAnalysisv1p0.pdf)

The DDMF draws on the following sources:

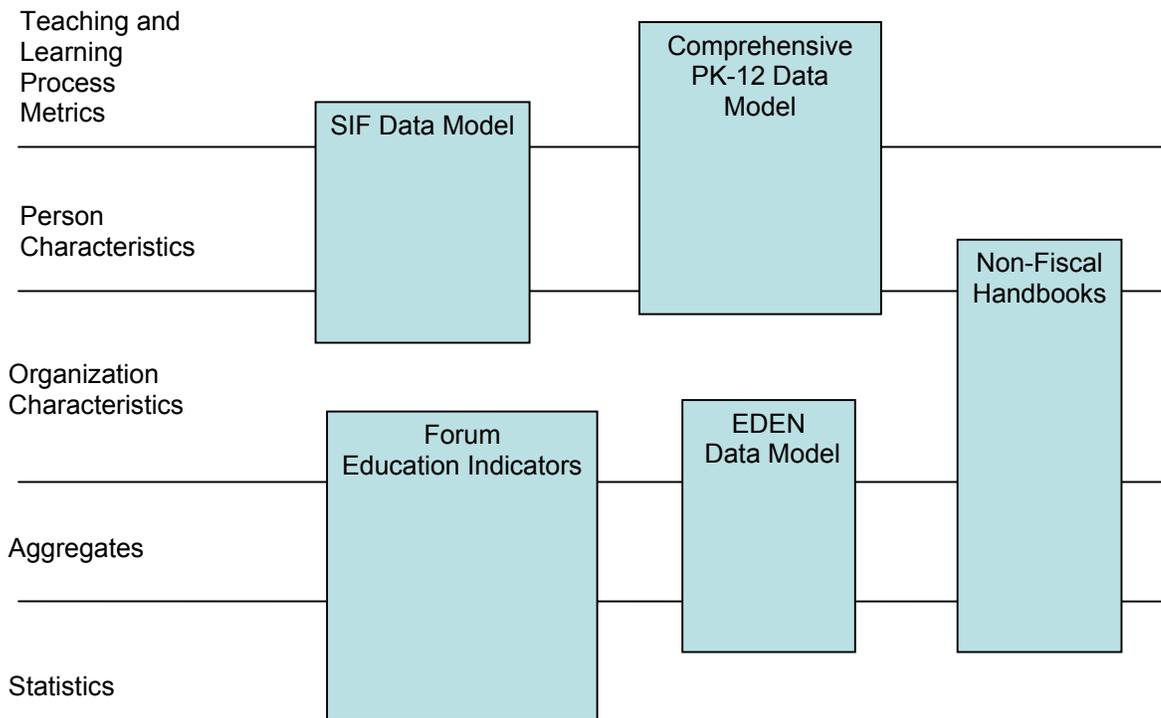
- Schools Interoperability Framework Specification, Draft Version 2.0
- NCES Handbooks Online, <http://nces.ed.gov/programs/handbook/>
- Education Data Exchange Network (EDEN) Workbook 2005-06
- Forum Guide to Education Indicators (2005)

## Differences

Figure 1 below illustrates some of the differences among each of the four data representations under examination, plus the proposed Comprehensive PK-12 Data Model. Although we want the Data Model to be aligned with our four data representations, we must take into account the differences in the types of data of uses of data for which each representation is constructed.

Figure 1

### Levels Diagram



Teaching and Learning Process Metrics

Includes individual-level outcomes and performance metrics such as assessment results, course history, grades, program participation, etc.

Person Characteristics

Includes individual-level characteristics such as ethnicity, poverty, etc.

Organization Characteristics

Non-aggregate characteristics of the organization such as school climate, location, type of organization.

Aggregates

Aggregations of the above levels by subgroup, class, school district, state, etc. Or, number of student per school, ethnic make up of an LEA, etc.

Statistics

Statistics made up composites of the above levels such as per pupil expenditures or dropout rate.

## Relationships

Figure 2 below show the relation between the four education information representations, the PK-12 Comprehensive Data Model, and other information representations. Each box or group of boxes in the stack depend upon or get their data from boxes below.

Figure 2

### Education Data Models Stack

