



Ed-Fi Extension and Semantic Analysis: South Carolina

Purpose and Brief of the Analysis

The purpose of this report is to work with the South Carolina Department of Education as the partner of Ed-Fi Alliance (Ed-Fi) and share Ed-Fi's findings for the assessment of extensions and semantic alignment of the state's usage of data elements in Ed-Fi's core data standard.

Our analysis has concluded that South Carolina is well-aligned with Ed-Fi core semantically, which means the data elements in the Ed-Fi core are almost always used by the State as intended. South Carolina has used the extension mechanism in Ed-Fi where the core data standard did not meet specific needs of the state in the area of assessment administration.

As found in the section below, the extension analysis looked at areas where there are current options available in the core; where there might be better alternatives for extension; and where extensions should be considered by Ed-Fi for inclusion into the core data model.

Body of the State Analysis

The Ed-Fi Alliance is committed to sustaining the Ed-Fi data standard to support the capture, usage, reporting, and exchange of educational data. As such the Ed-Fi data standard promotes data interoperability in the industry, enables data-driven decision making, and hence contributing to the advancement of educational outcomes.

In a continuing effort to better serve the community of users, this analysis is the first of a periodic evaluation of how the various Ed-Fi states are using and extending the Ed-Fi data model. In particular, the analysis is meant to investigate the following questions:

- Is the State using the core Ed-Fi data model as semantically defined and intended?
- Does the State follow good practices in extending the Ed-Fi data model, adhering to the overall conventions embodied in the data standard?
- Do extensions duplicate what could be reflected in the Ed-Fi core model, or are there subsequent updates to the core that now cover what previously required an extension?
- Are there extensions that point to common needs across states and/or potential model changes that would benefit the community at large?



The analysis findings specific to South Carolina are summarized in the following sections: *extension analysis* has a focus on the extensions the state introduced, and the *semantic analysis* evaluates the usage of the core data standard any deviations from the original purpose of the data element. The intent of this analysis is to improve the Ed-Fi data standard and its usage in the community. The analysis should be taken as an *opinion* based upon published materials by Ed-Fi and the states to stimulate further collaboration.

Extension Analysis

The South Carolina extensions comprise 2 new entities and 18 attributes as outlined below associated with an Assessment Roster extension coordinated with Ed-Fi in collaboration with other states. The extension is intended to capture and communicate data surrounding the expectation that a student will take an assessment.

- New entity AssessmentAdministration with attributes:
 - AssessmentAdministration.EducationOrganizationReference
 - AssessmentAdministration.AssessmentReference
 - AssessmentAdministration.AssessmentTitle
 - AssessmentAdministration.Period
 - AssessmentAdministration.AdministrationContact common with attributes:
 - AssessmentAdministration.AdministrationContact
 - AssessmentAdministration.AdministrationContact.ElectronicEmailAddress
 - AssessmentAdministration.AdministrationContact.FirstName
 - AssessmentAdministration.AdministrationContact.LastSurname
 - AssessmentAdministration.AdministrationContact.IdentificationCode
- New entity StudentAssessmentRegistration with attributes:
 - StudentAssessmentRegistration.AssessmentAdministrationReference
 - StudentAssessmentRegistration.StudentEducationOrganizationAssociationReference
 - StudentAssessmentRegistration.TestingEducationOrganizationReference
 - StudentAssessmentRegistration.ReportingEducationOrganizationReference
 - StudentAssessmentRegistration.PlatformTypeDescriptor
 - StudentAssessmentRegistration.AssessmentCustomization common with attributes:
 - StudentAssessmentRegistration.AssessmentCustomization.IdentificationCode
 - StudentAssessmentRegistration.AssessmentCustomization.CustomizationValue.



Semantic Analysis

South Carolina is well-aligned with the Ed-Fi data standard with 362 of 365 data elements precisely aligned semantically with the Ed-Fi core. The three exception data elements discussed below.

South Carolina uses the Ed-Fi Sex descriptor (defined by Ed-Fi as “A person's birth sex”) to represent the "legal gender" of individuals in the following attributes. Note that semantically, there is a difference.

- student.BirthSexDescriptorId
- staff.SexDescriptorId
- parent.SexDescriptorId

The Ed-Fi V5.0 defines a new attribute GenderIdentity to reflect gender (versus birth sex) that could be used instead:

- StudentEducationOrganizationAssociation.GenderIdentity
- Staff.Genderidentity
- Contact.GenderIdentity

However, the Ed-Fi definition is “the gender a person identifies themselves as” is also different from the “legal gender” used by South Carolina. Given the choice, Sex is closer in definition because a child’s sex at birth is their legal gender. The recommendation is for South Carolina to continue with using the Sex descriptor and have Ed-Fi change the definition of Sex to be “A person’s sex at birth or legal gender.”

Summary of Finds and Next Steps

The analysis found that South Carolina created a limited number of extensions to the Ed-Fi core for assessment administration as part of a collaboration defining assessment rosters. South Carolina is recommended to track Ed-Fi activities if it decides to bring the extension into core.

In terms of the usage of the data elements in the Ed-Fi core model (aka semantic alignment), South Carolina is found to be well- aligned, with 3 attributes partially aligned. The attributes in question revolve around the concepts of legal gender versus birth sex. It is recommended that Ed-Fi revisit the Sex descriptor definition include the semantic nuances of “legal gender.”

Based on these findings of the analyses, Ed-Fi would like to work closely with the South Carolina Department of Education as a part of its commitment to sustaining data standards. Analysis across states may identify specific common extension attributes for consideration into core where cross-state collaboration is recommended.