



Ed-Fi Extension and Semantic Analysis: Texas

Purpose and Brief of the Analysis

The purpose of this report is to work with the Texas Education Agency 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 Texas is completely aligned with Ed-Fi core semantically, which means the 198 data elements in the Ed-Fi core are always used by the State as intended.

The large Ed-Fi model Texas put in use has substantial amount data elements created as part of their extension mechanism in Ed-Fi. They were created for areas where the core data standard did not meet specific needs of the state. In fact, over one third of the total number of attributes collected are in extensions. The major areas of extension include accountability data, summary attendance in reporting periods, student applications for enrollment, special education eligibility and program data, student academic record data, prior year leaver student information, and finance.

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 Texas 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 Texas extensions comprise 20 new entities, 2 new associations, and 491 attributes as outlined below.

- The StudentTitleIPartAProgramAssociation is extended to encapsulate student participation in a multivalued common StudentTitleIPartAProgramAssociation.StudentTitleIPartAProgramAssociationSet (with attributes StudentTitleIPartAProgramAssociation.StudentTitleIPartAProgramAssociationSet.TitleIPartAParticipant, StudentTitleIPartAProgramAssociation.StudentTitleIPartAProgramAssociationSet.StudentTitleIPartAProgramAssociationSetBeginDate, StudentTitleIPartAProgramAssociation.StudentTitleIPartAProgramAssociationSet.StudentTitleIPartAProgramAssociationSetEndDate).
- The StudentSpecialEducationProgramAssociation is extended in several ways:
 - StudentSpecialEducationProgramAssociation.PreferredHomeCommunicationMethod as added for preferred communication method.
 - The multivalued common encapsulates key special education data that may change over time in StudentSpecialEducationProgramAssociation.StudentSPEDProgramAssociationSet (with attributes: StudentSpecialEducationProgramAssociation.StudentSPEDProgramAssociationSet.MedicallyFragile, StudentSpecialEducationProgramAssociation.StudentSPEDProgramAssociationSet.MultiplyDisabled, StudentSpecialEducationProgramAssociation.StudentSPEDProgramAssociationSet.LEAOfRDSPDService, StudentSpecialEducationProgramAssociation.StudentSPEDProgramAssociationSet.ChildCountFunding,



- StudentSpecialEducationProgramAssociation.StudentSPEDProgramAssociationSet.
PPCDServiceLocation,
StudentSpecialEducationProgramAssociation.StudentSPEDProgramAssociationSet.
ProgramBeginDate, and
StudentSpecialEducationProgramAssociation.StudentSPEDProgramAssociationSet.
ProgramEndDate).
- Similarly the multivalued common encapsulates instructional settings that may change over time in StudentSpecialEducationProgramAssociation.InstructionalSettingSet (with attributes:
StudentSpecialEducationProgramAssociation.InstructionalSettingSet.InstructionalSetting,
StudentSpecialEducationProgramAssociation.InstructionalSettingSet.InstructionalSetting
BeginDateand
StudentSpecialEducationProgramAssociation.InstructionalSettingSet,InstructionalSetting
EndDate).
- A multivalued common is added to
StudentSpecialEducationProgramAssociation.Disability to capture changes in disability diagnosis in StudentSpecialEducationProgramAssociation.Disability.DisabilitySet (with attributes:
StudentSpecialEducationProgramAssociation.Disability.DisabilitySet.OrderOfDisability,
StudentSpecialEducationProgramAssociation.Disability.DisabilitySet.EligibilityDateDisabil
ities,
StudentSpecialEducationProgramAssociation.Disability.DisabilitySet.DisabilitySetBeginD
ate, and
StudentSpecialEducationProgramAssociation.Disability.DisabilitySet.DisabilitySetEndDat
e).
- A new multivalued common is added specific for language services
StudentSpecialEducationProgramAssociation.LanguageAcquisition (with attributes
StudentSpecialEducationProgramAssociation.LanguageAcquisition.FrequencyOfServices
,
StudentSpecialEducationProgramAssociation.LanguageAcquisition.HoursSpentReceivin
gServices, and
StudentSpecialEducationProgramAssociation.HearingAmplification.HearingAmplification
Type).
- A new multivalued common is added specific for hearing amplification
StudentSpecialEducationProgramAssociation.HearingAmplification (with attributes:
StudentSpecialEducationProgramAssociation.HearingAmplification.HearingAmplification



Type,

StudentSpecialEducationProgramAssociation.HearingAmplification.HearingAmplification
Access, and

StudentSpecialEducationProgramAssociation.HearingAmplification.HearingAmplification
DailyUse)

- A new multivalued common is added specific for special education assessment results
StudentSpecialEducationProgramAssociation.Assessment (with attributes:
StudentSpecialEducationProgramAssociation.Assessment.ToolOrAssessmentUsed and
StudentSpecialEducationProgramAssociation.Assessment.AssessmentResultsObtained).
- A new multivalued common is added regarding a student's association with a residential
facility
StudentSpecialEducationProgramAssociation.StudentResidentialFacilityAssociation (with
attributes:
StudentSpecialEducationProgramAssociation.StudentResidentialFacilityAssociation,.
ResidentialFacilityId,
StudentSpecialEducationProgramAssociation.StudentResidentialFacilityAssociation.
DateEnteredRF,
StudentSpecialEducationProgramAssociation.StudentResidentialFacilityAssociation.Date
ExitedRF,
StudentSpecialEducationProgramAssociation.StudentResidentialFacilityAssociation.
StudentResFacAssoSet.StudentResFacAssocSetBeginDate,
StudentSpecialEducationProgramAssociation.StudentResidentialFacilityAssociation.
StudentResFacAssoSet.StudentResFacAssocSetEndDate,
StudentSpecialEducationProgramAssociation.StudentResidentialFacilityAssociation.
StudentResFacAssoSet.AttendanceZoneCampus,
StudentSpecialEducationProgramAssociation.StudentResidentialFacilityAssociation.
StudentResFacAssoSet.EducatedAtResidentialFacility,
StudentSpecialEducationProgramAssociation.StudentResidentialFacilityAssociation.
StudentResFacAssoSet.SurrogateParentAssigned.
StudentSpecialEducationProgramAssociation.StudentResidentialFacilityAssociation.
StudentResFacAssoSet.NumberOtherStudentsAssignedSameSurrogateParent,
StudentSpecialEducationProgramAssociation.StudentResidentialFacilityAssociation.
StudentResFacAssoSet.ResidentialFacilityStudentSchoolDayLength,and
StudentSpecialEducationProgramAssociation.StudentResidentialFacilityAssociation.
StudentResFacAssoSet.CampusIdOfEnrollmentSchoolDayLength).



- RestraintEvent is extended with attributes RestraintEventExtension.RestraintStaffType and RestraintEventExtension.NonMembershipDisciplineRestraintIndicator.
- A new multivalued common is added for parent permissions for language instruction StudentLanguageInstructionProgramAssociation.ParentalPermissionSet (with attributes: StudentLanguageInstructionProgramAssociation.ParentalPermissionSet.ParentalPermission, StudentLanguageInstructionProgramAssociation.ParentalPermissionSet.ParentalPermissionSetBeginDate, and StudentLanguageInstructionProgramAssociation.ParentalPermissionSet.ParentalPermissionSetEndDate).
- Assessment extensions are as follows:
 - An alternative to Assessment.AssessmentTitle (which is a string) is defined in the extension Assessment.TitleOfAssessment (which is a descriptor) that is to be used for Early Childhood assessments.
 - Assessment.ReportAssessmentType is used to indicate the TEA collection where the assessment should be reported.
- Discipline extensions include:
 - DisciplineIncident.SafeSupportiveSchoolProgramTeamReview extension indicates whether the Safe and Supportive School Program (SSSP) team conducted a threat assessment related to a reported disciplinary incident.
 - Instead of using the core attributes DisciplineAction.DisciplineActionLength and DisciplineAction.ActualDisciplineActionLength, extensions were defined for DisciplineAction.OfficialLengthOfDisciplinaryAssignment and DisciplineAction.ActualLengthOfDisciplinaryAssignment, respectively, to better clarify “official” vs actual discipline lengths, with the reason captured in the extension DisciplineAction.DisciplineActionLengthDifferenceReason.
 - The extension DisciplineAction.InconsistentCodeOfConduct indicates whether an out-of-school suspension, disciplinary alternative education program placement, or expulsion action is inconsistent with a local education agency’s student code of conduct.
- Extensions for education organization data are made to record accountability data, as follows:
 - The LocalEducationOrganization entity is extended with the following attributes: LocalEducationAgency.TotalNumSchoolBoardRequests, LocalEducationAgency.TotalCostSchoolBoardRequests, LocalEducationAgency.FamilyEngagementPlanLink, LocalEducationAgency.ArmedServicesVocAptBattery, LocalEducationAgency.ProgramOfStudy,



- LocalEducationAgency.GiftedTalentedProgram, and
LocalEducationAgency.PKProgramEvaluationType
- A new association extension is defined for SSAOrgAssociationExt denotes organizations associated with shared service arrangements (with attributes SSAOrgAssociationExt.EducationOrganization, SSAOrgAssociationExt.SSAType, and SSAOrgAssociationExt.FiscalAgentDistrictId).
- The School entity is extended as follows:
 - Additional accountability attributes: School.PKFullDayWaiver, School.AdditionalDaysProgram, School.NumberOfBullyingIncidents, School.NumberOfCyberbullyingIncidents, and School.ExpandedLearningOpportunity.
 - New multi-valued common School.CampusEnrollmentTypeSet for recording the method(s) by which the campus draws student enrollment, with attributes School.CampusEnrollmentTypeSet.CampusEnrollmentType, School.CampusEnrollmentTypeSet.BeginDate, and School.CampusEnrollmentTypeSet.EndDate.
 - New multi-valued common School.NSLPTypeSet for National School Lunch Program (NSLP) participation status with attributes School.NSLPTypeSet.NSLPType, School.NSLPTypeSet.BeginDate, and School.NSLPTypeSet.EndDate.
 - New common School.CharterWaitlistSet for charter school waitlist and capacity data with attributes School.CharterWaitlistSet.NumberCharterStudentsEnrolled, School.CharterWaitlistSet.CharterEducationalEnrollmentCapacity, and School.CharterWaitlistSet.CharterAdmissionWaitlist.
 - New multi-valued common School.ELOSet for Expanded Learning Opportunities (ELO) with attributes School.ELOSet.ELOType, School.ELOSet.ELOActivity Set.ELOActivity, School.ELOSet.ELOActivity Set.ELODaysScheduledPerYear, and School.ELOSet.ELOActivity Set.ELOMinutesScheduledPerDay
- The StudentSchoolAssociation is extended with additional enrollment attributes: StudentSchoolAssociation.ADAEligibility, StudentSchoolAssociation.StudentAttribution, and StudentSchoolAssociation.EnrollmentTrackingVerification.
- The Ed-Fi Finance domain is replaced with a set of new entity extensions:
 - ActualExt entity with attributes: ActualExt.EducationOrganization, ActualExt.FiscalYear, ActualExt.ActualAmount, ActualExt.Fund, ActualExt.Function, ActualExt.Object, ActualExt.Organization, ActualExt.ProgramIntent, ActualExt.BeginDate, and ActualExt.EndDate.



- BudgetExt entity with attributes: BudgetExt.EducationOrganization, BudgetExt.FiscalYear, BudgetExt.BudgetAmount, BudgetExt.Fund, BudgetExt.Function, BudgetExt.Object, BudgetExt.Organization, BudgetExt.ProgramIntent, BudgetExt.BeginDate, and BudgetExt.EndDate.
- SharedServiceArrangementExt entity with attributes: SharedServiceArrangementExt.EducationOrganization, SharedServiceArrangementExt.SSAMemberDistrictId, SharedServiceArrangementExt.SSAType, SharedServiceArrangementExt.FiscalYear, SharedServiceArrangementExt.ActualAmount, and SharedServiceArrangementExt.Fund.
- PayrollExt entity with attributes: PayrollExt.EducationOrganization, PayrollExt.Staff, PayrollExt.FiscalYear, PayrollExt.PayrollAmount, PayrollExt.Fund, PayrollExt.Function, PayrollExt.Object, PayrollExt.Organization, PayrollExt.ProgramIntent, PayrollExt.PayrollActivity, PayrollExt.BeginDate, and PayrollExt.EndDate.
- ContractedInstructionalStaffFTEExt entity with attributes: ContractedInstructionalStaffFTEExt.EducationOrganization, ContractedInstructionalStaffFTEExt.School, ContractedInstructionalStaffFTEExt.ProgramIntent, and ContractedInstructionalStaffFTEExt.TotalContractedInstrStaffFTE.
- A set of new entities and an association capture data about prior year leaver students and their parents: PriorYearLeaver, PriorYearLeaverParent, and PriorYearLeaverStudentParentAssociation.
 - PriorYearLeaver entity has attributes: PriorYearLeaver.StudentUId, PriorYearLeaver.School, PriorYearLeaver.GradeLevel, PriorYearLeaver.ExitWithdrawDate, PriorYearLeaver.ExitWithdrawType, PriorYearLeaver.LocalStudentId, PriorYearLeaver.StudentId, PriorYearLeaver.GenerationCode, PriorYearLeaver.Sex, PriorYearLeaver.HispanicLatinoEthnicity, PriorYearLeaver.Race, PriorYearLeaver.AssociateDegreeIndicator, PriorYearLeaver.FinancialAidApplication, PriorYearLeaver.AsOfStatusLastFridayOctober,



PriorYearLeaver.ParentalPermission,
PriorYearLeaver.EndorsementCompleted,
PriorYearLeaver.LanguageInstructionProgramService,
PriorYearLeaver.StudentCharacteristic,
PriorYearLeaver.TitlePartAParticipant,
PriorYearLeaver.EconomicDisadvantage,
PriorYearLeaver.EmergentBilingualIndicator,
PriorYearLeaver.FosterCareType,
PriorYearLeaver.HomelessStatus,
PriorYearLeaver.MilitaryConnectedStudent,
PriorYearLeaver.SpecialEducationStudent,
PriorYearLeaver.Name.FirstName,
PriorYearLeaver.Name.MiddleName,
PriorYearLeaver.Name.LastSurname,
PriorYearLeaver.BirthData.BirthDate,
PriorYearLeaver.Language.Language,
PriorYearLeaver.Language.LanguageSet.LanguageUse,
PriorYearLeaver.Language.LanguageSet.BeginDate,
PriorYearLeaver.Language.LanguageSet.EndDate,
PriorYearLeaver..IndustryBasedCertificationSet.DateCertTaken,
PriorYearLeaver.IndustryBasedCertificationSet.PostSecondaryCertificationLicensure,
PriorYearLeaver..IndustryBasedCertificationSet.PostSecondaryCertLicensureResult,
PriorYearLeaver..IndustryBasedCertificationSet.IBCExamFeeAmount,
PriorYearLeaver..IndustryBasedCertificationSet.IBCVendor,
PriorYearLeaver.GraduationSet.DiplomaAwardDate,
PriorYearLeaver.GraduationSet.DiplomaType,
PriorYearLeaver.GraduationSet.AchievementCategory,
PriorYearLeaver.GraduationSet.IndividualGraduationCommitteeGraduateIndicator,
PriorYearLeaver.GraduationSet.MilitaryEnlistmentIndicator,
PriorYearLeaver.GraduationSet.FHSPDistingLevelGraduate,
PriorYearLeaver.GraduationSet.TexasFirstEarlyHSCompletionProgram,
PriorYearLeaver.Address.AddressType,
PriorYearLeaver.Address.StreetNumberName,
PriorYearLeaver.Address.ApartmentRoomSuiteNumber,
PriorYearLeaver.Address.City,
PriorYearLeaver.Address.StateAbbreviation,



- PriorYearLeaver.Address.PostalCode,
- PriorYearLeaver.ElectronicMail.ElectronicMailAddress
- PriorYearLeaver.ElectronicMail.ElectronicMailType,
- PriorYearLeaver.Telephone.TelephoneNumber, and
- PriorYearLeaver.Telephone.TelephoneNumberType.
- PriorYearLeaverParent entity has attributes:
 - PriorYearLeaverParent.ParentUId,
 - PriorYearLeaverParent.GenerationCode,
 - PriorYearLeaverParent.Name.FirstName,
 - PriorYearLeaverParent.Name.MiddleName,
 - PriorYearLeaverParent.Name.LastSurname,
 - PriorYearLeaverParent.Address.AddressType,
 - PriorYearLeaverParent.Address.StreetNumberName,
 - PriorYearLeaverParent.Address.ApartmentRoomSuiteNumber,
 - PriorYearLeaverParent.Address.City,
 - PriorYearLeaverParent.Address.StateAbbreviation
 - PriorYearLeaverParent.Address.PostalCode,
 - PriorYearLeaverParent.ElectronicMail.ElectronicMailAddress,
 - PriorYearLeaverParent.ElectronicMail.ElectronicMailType,
 - PriorYearLeaverParent.Telephone.TelephoneNumber, and
 - PriorYearLeaverParent.Telephone.TelephoneNumberType.
- PriorYearLeaverStudentParentAssociation association has attributes:
 - PriorYearLeaverStudentParentAssociation.PriorYearLeaverParent,
 - PriorYearLeaverStudentParentAssociation.PriorYearLeaver,
 - PriorYearLeaverStudentParentAssociation.Relation, and
 - PriorYearLeaverStudentParentAssociation.ContactPriority.
- CalendarDate is extended with the attributes CalendarDate.CalendarWaiverEventType, CalendarDate.SchoolDayOperationalMinutes, CalendarDate.SchoolDayInstructionalMinutes, and CalendarDate.SchoolDayWaiverMinutes.
- A new entity extension ReportingPeriod is defined for attendance reporting, with attributes ReportingPeriod.School, ReportingPeriod.SchoolYear, ReportingPeriod.CalendarDate, ReportingPeriod.ReportingPeriod, ReportingPeriod.BeginDate, ReportingPeriod.EndDate, ReportingPeriod.CalendarCode, ReportingPeriod.CalendarType, and ReportingPeriod.NumberDaysTaught.
- Staff entity extensions are as follows:



- New attributes: Staff.GenerationCode, Staff.TotalYearsProfExperience, Staff.TotalYearsPriorTeachingExperience, Staff.CreditableYearOfService, Staff.YearsExperienceInDistrict, Staff.PKTeacherRequirement, Staff.StaffId, Staff.TeacherIncentiveAllotmentDesignation, Staff.AdditionalDaysProgramTeacher, and Staff.StaffDoNotReportTSDS.
- New multivalued common StaffTypeSet with attributes: Staff.StaffTypeSet.StaffType, Staff.StaffTypeSet.BeginDate, and Staff.StaffTypeSet.EndDate.
- New common ParaprofessionalCertificationSet with attributes: Staff.ParaprofessionalCertificationSet.ParaprofessionalCertification, Staff.ParaprofessionalCertificationSet.BeginDate, and Staff.ParaprofessionalCertificationSet.EndDate.
- StaffEducationOrganizationAssignmentAssociation has extensions:
 - New attribute
StaffEducationOrganizationAssignmentAssociation.SharedServiceArrangementStaff.
 - New multivalued common StaffServiceSet with attributes:
StaffEducationOrganizationAssignmentAssociation.StaffServiceSet.StaffService,
StaffEducationOrganizationAssignmentAssociation.StaffServiceSet.GradeLevel,
StaffEducationOrganizationAssignmentAssociation.StaffServiceSet.PopulationServed,
StaffEducationOrganizationAssignmentAssociation.StaffServiceSet.MonthlyMinutes,
StaffEducationOrganizationAssignmentAssociation.StaffServiceSet.StaffServiceBeginDate, and
StaffEducationOrganizationAssignmentAssociation.StaffServiceSet.StaffServiceEndDate.
- StaffEducationOrganizationEmploymentAssociation has extensions:
 - New attributes StaffEducationOrganizationEmploymentAssociation.PercentDayEmployed and StaffEducationOrganizationEmploymentAssociation.NumberDaysEmployed.
 - New multivalued common AuxiliaryRoleIdSet with attributes
StaffEducationOrganizationEmploymentAssociation.AuxiliaryRoleIdSet.AuxiliaryRoleId,
StaffEducationOrganizationEmploymentAssociation.AuxiliaryRoleIdSet.BeginDate, and
StaffEducationOrganizationEmploymentAssociation.AuxiliaryRoleIdSet.EndDate.
- Extensions to the StudentAcademicRecord are as follows:
 - Attributes relating to participation in the Foundation High School Program:
StudentAcademicRecord.EndorsementPursuing,
StudentAcademicRecord.IndividualGraduationCommitteeReview,
StudentAcademicRecord.AssociateDegreeIndicator,
StudentAcademicRecord.FHSPParticipant,



- StudentAcademicRecord.FHSPDistingLevelParticipant, and StudentAcademicRecordEndorsementCompleted.
- New multivalued common IndustryBasedCertificationSet for industry-based certifications with attributes: StudentAcademicRecord.IndustryBasedCertificationSet.DateCertTaken, StudentAcademicRecord.IndustryBasedCertificationSet.PostSecondaryCertificationLicense, StudentAcademicRecord.IndustryBasedCertificationSet.PostSecondaryCertLicenseResult, StudentAcademicRecord.IndustryBasedCertificationSet.IBCExamFeeAmount, and StudentAcademicRecord.IndustryBasedCertificationSet.IBCVendor.
- Extensions to the common StudentAcademicRecord.Diploma with attributes: StudentAcademicRecord.Diploma.IndividualGraduationCommitteeGraduateIndicator, StudentAcademicRecord.Diploma.MilitaryEnlistmentIndicator, StudentAcademicRecord.Diploma.FHSPDistingLevelGraduate, StudentAcademicRecord.Diploma.FinancialAidApplication, and StudentAcademicRecord.Diploma.TexasFirstEarlyHSCCompletionProgram.
- Attribute extensions to CourseTranscript are: CourseTranscript.CollegeCreditHours, CourseTranscript.DualCreditIndicator, and CourseTranscript.ATCIndicator.
- A new entity extension StudentApplication is defined to represent applications for enrollments, with attributes: StudentApplication.ApplicationIdentifier, StudentApplication.EducationOrganization, StudentApplication.SchoolYear, StudentApplication.StudentUid, StudentApplication.Sex, StudentApplication.EntryGradeLevel, StudentApplication.ApplicationDate, StudentApplication.ApplicationType, StudentApplication.StudentId, StudentApplication.Name.FirstName, StudentApplication.Name.MiddleName, StudentApplication.Name.LastSurname, and StudentApplication.BirthData, BirthDate.
- An attribute extension is made to the StudentProgramAttendanceEvent: StudentProgramAttendanceEvent.InstructionalSetting.
- Summary student attendance is reported with the entity extension BasicReportingPeriodAttendance, with attributes: BasicReportingPeriodAttendance.School, BasicReportingPeriodAttendance.Student, BasicReportingPeriodAttendance.CalendarCode, BasicReportingPeriodAttendance.ReportingPeriod, BasicReportingPeriodAttendance.GradeLevel, BasicReportingPeriodAttendance.NumberDaysTaught, BasicReportingPeriodAttendance.TotalDaysAbsent, BasicReportingPeriodAttendance.TotalIneligibleDaysPresent,



BasicReportingPeriodAttendance.TotalEligibleDaysPresent,
BasicReportingPeriodAttendance.RSTotalEligibleDaysPresent, and
BasicReportingPeriodAttendance.RATotalEligibleDaysPresent.

- Reporting period attendance for special programs is reported with the entity extension SpecialProgramsReportingPeriodAttendance, with attributes:
SpecialProgramsReportingPeriodAttendance.School,
SpecialProgramsReportingPeriodAttendance.Student,
SpecialProgramsReportingPeriodAttendance.CalendarCode,
SpecialProgramsReportingPeriodAttendance.ReportingPeriod,
SpecialProgramsReportingPeriodAttendance.GradeLevel,
SpecialProgramsReportingPeriodAttendance.NumberDaysTaught,
SpecialProgramsReportingPeriodAttendance.TotalEligPregRelSvcsDaysPresent,
SpecialProgramsReportingPeriodAttendance.RSTotalEligPregRelSvcsDaysPresent,
SpecialProgramsReportingPeriodAttendance.RATotalEligPregRelSvcsDaysPresent,
SpecialProgramsReportingPeriodAttendance.TotalEligSpEdMainstreamDaysPresent,
SpecialProgramsReportingPeriodAttendance.RSTotalEligSpEdMainstreamDaysPresent,
SpecialProgramsReportingPeriodAttendance.RATotalEligSpEdMainstreamDaysPresent,
SpecialProgramsReportingPeriodAttendance.TotalEligResidentialFacilityDaysPresent,
SpecialProgramsReportingPeriodAttendance.RSTotalEligResidentialFacilityDaysPresent, and
SpecialProgramsReportingPeriodAttendance.RATotalEligResidentialFacilityDaysPresent.
- Reporting period attendance for special education programs is reported with the entity extension SpecialEducationProgramReportingPeriodAttendance, with attributes:
SpecialEducationProgramReportingPeriodAttendance.School,
SpecialEducationProgramReportingPeriodAttendance.Student,
SpecialEducationProgramReportingPeriodAttendance.CalendarCode,
SpecialEducationProgramReportingPeriodAttendance.ReportingPeriod,
SpecialEducationProgramReportingPeriodAttendance.GradeLevel,
SpecialEducationProgramReportingPeriodAttendance.NumberDaysTaught,
SpecialEducationProgramReportingPeriodAttendance.InstructionalSetting,
SpecialEducationProgramReportingPeriodAttendance.EligibleDaysPresentInInstrSetting,
SpecialEducationProgramReportingPeriodAttendance.RSEligibleDaysPresentInInstrSetting,
SpecialEducationProgramReportingPeriodAttendance.RAEligibleDaysPresentInInstrSetting,
SpecialEducationProgramReportingPeriodAttendance.ExcessHoursInInstructionalSetting,
SpecialEducationProgramReportingPeriodAttendance.RSExcessHoursInInstructionalSetting,
SpecialEducationProgramReportingPeriodAttendance.RAExcessHoursInInstructionalSetting,



SpecialEducationProgramReportingPeriodAttendance.RegionalDaySchoolProgramForDeaf, and
SpecialEducationProgramReportingPeriodAttendance.LEAOfRDSPDService.

- Reporting period attendance for CTE programs is reported with the entity extension
CTEProgramReportingPeriodAttendance with attributes:
CTEProgramReportingPeriodAttendance.School,
CTEProgramReportingPeriodAttendance.Student,
CTEProgramReportingPeriodAttendance.CalendarCode,
CTEProgramReportingPeriodAttendance.ReportingPeriod,
CTEProgramReportingPeriodAttendance.GradeLevel,
CTEProgramReportingPeriodAttendance.NumberDaysTaught,
CTEProgramReportingPeriodAttendance.CTEServiceId,
CTEProgramReportingPeriodAttendance.EligibleDaysPresentV1,
CTEProgramReportingPeriodAttendance.RSEligibleDaysPresentV1,
CTEProgramReportingPeriodAttendance.RAEligibleDaysPresentV1,
CTEProgramReportingPeriodAttendance.EligibleDaysPresentV2,
CTEProgramReportingPeriodAttendance.RSEligibleDaysPresentV2,
CTEProgramReportingPeriodAttendance.RAEligibleDaysPresentV2,
CTEProgramReportingPeriodAttendance.EligibleDaysPresentV3,
CTEProgramReportingPeriodAttendance.RSEligibleDaysPresentV3, and
CTEProgramReportingPeriodAttendance.RAEligibleDaysPresentV3.
- Reporting period attendance for Bilingual programs is reported with the entity extension
BilingualESLProgramReportingPeriodAttendance with attributes:
BilingualESLProgramReportingPeriodAttendance.School,
BilingualESLProgramReportingPeriodAttendance.Student,
BilingualESLProgramReportingPeriodAttendance.CalendarCode,
BilingualESLProgramReportingPeriodAttendance.ReportingPeriod,
BilingualESLProgramReportingPeriodAttendance.GradeLevel,
BilingualESLProgramReportingPeriodAttendance.NumberDaysTaught,
BilingualESLProgramReportingPeriodAttendance.BilingualESLFunding,
BilingualESLProgramReportingPeriodAttendance.TotalEligBilingualESLDaysPresent,
BilingualESLProgramReportingPeriodAttendance.RSTotalEligBilingualESLDaysPresent, and
BilingualESLProgramReportingPeriodAttendance.RATotalEligBilingualESLDaysPresent.
- Reporting period attendance for flexible regular programs is reported with the entity extension
FlexibleRegularProgramReportingPeriodAttendance, with attributes:
FlexibleRegularProgramReportingPeriodAttendance.School,
FlexibleRegularProgramReportingPeriodAttendance.Student,



FlexibleRegularProgramReportingPeriodAttendance.CalendarCode,
FlexibleRegularProgramReportingPeriodAttendance.ReportingPeriod,
FlexibleRegularProgramReportingPeriodAttendance.GradeLevel,
FlexibleRegularProgramReportingPeriodAttendance.NumberDaysTaught,
FlexibleRegularProgramReportingPeriodAttendance.FlexAttendanceProgram,
FlexibleRegularProgramReportingPeriodAttendance.FlexAttendTotalEligibleMinutesPresent,
FlexibleRegularProgramReportingPeriodAttendance.FlexAttendTotalIneligibleMinutesPresent,
FlexibleRegularProgramReportingPeriodAttendance.FlexTotalEligPregRelSvcsDaysPresent,
FlexibleRegularProgramReportingPeriodAttendance.FlexTotalEligSpEdMainstreamDaysPresent,
and
FlexibleRegularProgramReportingPeriodAttendance.FlexTotalEligResidentialFacilityDaysPresent.

- Reporting period attendance for flexible special education programs is reported with the entity extension FlexibleSpecialEducationProgramReportingPeriodAttendance, with attributes:
FlexibleSpecialEducationProgramReportingPeriodAttendance.School,
FlexibleSpecialEducationProgramReportingPeriodAttendance.Student,
FlexibleSpecialEducationProgramReportingPeriodAttendance.CalendarCode,
FlexibleSpecialEducationProgramReportingPeriodAttendance.ReportingPeriod,
FlexibleSpecialEducationProgramReportingPeriodAttendance.GradeLevel,
FlexibleSpecialEducationProgramReportingPeriodAttendance.NumberDaysTaught,
FlexibleSpecialEducationProgramReportingPeriodAttendance.FlexAttendanceProgram,
FlexibleSpecialEducationProgramReportingPeriodAttendance.InstructionalSetting,
FlexibleSpecialEducationProgramReportingPeriodAttendance.FlexAttendDaysEligibleInInstrSetting, and
FlexibleSpecialEducationProgramReportingPeriodAttendance.FlexAttendExcessMinutesInInstrSetting.
- Reporting period attendance for flexible CTE programs is reported with the entity extension FlexibleCTEProgramReportingPeriodAttendance, with attributes:
FlexibleCTEProgramReportingPeriodAttendance.School,
FlexibleCTEProgramReportingPeriodAttendance.Student,
FlexibleCTEProgramReportingPeriodAttendance.CalendarCode,
FlexibleCTEProgramReportingPeriodAttendance.ReportingPeriod,
FlexibleCTEProgramReportingPeriodAttendance.GradeLevel,
FlexibleCTEProgramReportingPeriodAttendance.NumberDaysTaught,
FlexibleCTEProgramReportingPeriodAttendance.FlexAttendanceProgram, and
FlexibleCTEProgramReportingPeriodAttendance.FlexAttendTotalCareerTechMinutesPresent.



- Reporting period attendance for flexible bilingual programs is reported with the entity extension FlexibleBilingualESLProgramReportingPeriodAttendance with attributes:
FlexibleBilingualESLProgramReportingPeriodAttendance.School,
FlexibleBilingualESLProgramReportingPeriodAttendance.Student,
FlexibleBilingualESLProgramReportingPeriodAttendance.CalendarCode,
FlexibleBilingualESLProgramReportingPeriodAttendance.ReportingPeriod,
FlexibleBilingualESLProgramReportingPeriodAttendance.GradeLevel,
FlexibleBilingualESLProgramReportingPeriodAttendance.NumberDaysTaught,
FlexibleBilingualESLProgramReportingPeriodAttendance.FlexAttendanceProgram,
FlexibleBilingualESLProgramReportingPeriodAttendance.BilingualESLFunding, and
FlexibleBilingualESLProgramReportingPeriodAttendance.FlexTotalEligBilingualESLDaysPresent.
- Reporting period attendance for extended school year programs is reported with the entity extension ExtendedSchoolYearServicesAttendance with attributes:
ExtendedSchoolYearServicesAttendance.School,
ExtendedSchoolYearServicesAttendance.Student,
ExtendedSchoolYearServicesAttendance.GradeLevel,
ExtendedSchoolYearServicesAttendance.FirstInstructionalSetting,
ExtendedSchoolYearServicesAttendance.TotalESYContactHoursInFirstInstructionalSetting,
ExtendedSchoolYearServicesAttendance.SecondInstructionalSetting, and
ExtendedSchoolYearServicesAttendance.TotalESYContactHoursInSecondInstructionalSetting.
- Extensions to Student are as follows:
 - Extended attributes Student.LocalStudentId, Student.StudentId,
Student.GenerationCode, Student.AsOfStatusLastFridayOctober,
Student.AsOfStatusLastDayEnrollment, and Student.StudentDoNotReportTSDS.
 - New multi-valued common StudentCensusBlockGroupSet with attributes:
Student.StudentCensusBlockGroupSet.StudentCensusBlockGroup,
Student.StudentCensusBlockGroupSet.BeginDate, and
Student.StudentCensusBlockGroupSet.EndDate.
 - New multi-valued common CrisisEventSet with attributes:
Student.CrisisEventSet.CrisisEvent, Student.CrisisEventSet.BeginDate, and
Student.CrisisEventSet.EndDate.
- Extension to Parent is the attribute Parent.GenerationCode.
- Extensions to the StudentEducationOrganizationAssociation are as follows:
 - New multi-values common EmergentBilingualSet with attributes:
StudentEducationOrganizationAssociation.EmergentBilingualSet.EmergentBilingualIndic



- ator, StudentEducationOrganizationAssociation.EmergentBilingualSet.BeginDate, and StudentEducationOrganizationAssociation.EmergentBilingualSet.EndDate.
- New multi-values common TruancySet with attributes:
StudentEducationOrganizationAssociation.TruancySet.Truancy and StudentEducationOrganizationAssociation.TruancySet.DateMet
- New multi-valued common DyslexiaServicesSet with attributes:
StudentEducationOrganizationAssociation.DyslexiaServicesSet.DyslexiaServices, StudentEducationOrganizationAssociation.DyslexiaServicesSet.BeginDate, and StudentEducationOrganizationAssociation.DyslexiaServicesSet.EndDate.
- New multi-valued common EconomicDisadvantageSet with attributes:
StudentEducationOrganizationAssociation.EconomicDisadvantageSet.EconomicDisadvantage, StudentEducationOrganizationAssociation.EconomicDisadvantageSet.BeginDate, and StudentEducationOrganizationAssociation.EconomicDisadvantageSet.EndDate.
- New multi-valued common FosterCareTypeSet with attributes:
StudentEducationOrganizationAssociation.FosterCareTypeSet.FosterCareType, StudentEducationOrganizationAssociation.FosterCareTypeSet.BeginDate, and StudentEducationOrganizationAssociation.FosterCareTypeSet.EndDate.
- New multi-valued common HomelessStatusSet with attributes:
StudentEducationOrganizationAssociation.HomelessStatusSet.HomelessStatus, StudentEducationOrganizationAssociation.HomelessStatusSet.BeginDate, and StudentEducationOrganizationAssociation.HomelessStatusSet.EndDate.
- New multi-valued common UnaccompaniedYouthSet with attributes:
StudentEducationOrganizationAssociation.UnaccompaniedYouthSet.UnaccompaniedYouth, StudentEducationOrganizationAssociation.UnaccompaniedYouthSet.BeginDate, and StudentEducationOrganizationAssociation.UnaccompaniedYouthSet.EndDate.
- New multi-valued common UnschooledAsyleeRefugeeSet with attributes:
StudentEducationOrganizationAssociation.UnschooledAsyleeRefugeeSet.UnschooledAsyleeRefugee, StudentEducationOrganizationAssociation.UnschooledAsyleeRefugeeSet.BeginDate, and StudentEducationOrganizationAssociation.UnschooledAsyleeRefugeeSet.EndDate.
- New multi-valued common EarlyReadingIndicatorSet with attributes:
StudentEducationOrganizationAssociation.EarlyReadingIndicatorSet.EarlyReadingIndicator, StudentEducationOrganizationAssociation.EarlyReadingIndicatorSet.BeginDate, and StudentEducationOrganizationAssociation.EarlyReadingIndicatorSet.EndDate.
- New multi-valued common MilitaryConnectedStudentSet with attributes:
StudentEducationOrganizationAssociation.MilitaryConnectedStudentSet.MilitaryConnect



- edStudent,
StudentEducationOrganizationAssociation.MilitaryConnectedStudentSet.BeginDate, and
StudentEducationOrganizationAssociation.MilitaryConnectedStudentSet.EndDate.
- New multi-valued common DyslexiaRiskSet with attributes:
StudentEducationOrganizationAssociation.DyslexiaRiskSet.DyslexiaRisk,
StudentEducationOrganizationAssociation.DyslexiaRiskSet.DyslexiaScreeningException
Reason, StudentEducationOrganizationAssociation.DyslexiaRiskSet.BeginDate, and
StudentEducationOrganizationAssociation.DyslexiaRiskSet.EndDate.
- New multi-valued common PKProgramTypeSet with attributes:
StudentEducationOrganizationAssociation.PKProgramTypeSet.PKProgramType,
StudentEducationOrganizationAssociation.PKProgramTypeSet.BeginDate, and
StudentEducationOrganizationAssociation.PKProgramTypeSet.EndDate.
- New multi-valued common PKFundingSourceSet with attributes:
StudentEducationOrganizationAssociation.PKFundingSourceSet.PKFundingSource,
StudentEducationOrganizationAssociation.PKFundingSourceSet.OrderOfPKFundingSou
rce, StudentEducationOrganizationAssociation.PKFundingSourceSet.BeginDate, and
StudentEducationOrganizationAssociation.PKFundingSourceSet.EndDate.
- New entity extension StudentSpecialEducationProgramEligibilityAssociation, with attributes:
StudentSpecialEducationProgramEligibilityAssociation.EducationOrganization,
StudentSpecialEducationProgramEligibilityAssociation.Program,
StudentSpecialEducationProgramEligibilityAssociation.Student,
StudentSpecialEducationProgramEligibilityAssociation.ConsentToEvaluationReceivedDate,
StudentSpecialEducationProgramEligibilityAssociation.EligibilityEvaluationDate,
StudentSpecialEducationProgramEligibilityAssociation.EvaluationDelayDays,
StudentSpecialEducationProgramEligibilityAssociation.EvaluationDelayReason,
StudentSpecialEducationProgramEligibilityAssociation.EligibilityDeterminationDate,
StudentSpecialEducationProgramEligibilityAssociation.IDEAIndicator,
StudentSpecialEducationProgramEligibilityAssociation.EligibilityDelayReason,
StudentSpecialEducationProgramEligibilityAssociation.OriginalECIServicesDate,
StudentSpecialEducationProgramEligibilityAssociation.TransitionNotificationDate, and
StudentSpecialEducationProgramEligibilityAssociation.TransitionConferenceDate.
- Section is extended with a multivalued common SectionSet, with attributes:
Section.SectionSet.PopulationServed, Section.SectionSet.GradeLevel,
Section.SectionSet.CourseSequence, Section.SectionSet.NonCampusBasedInstruction,
Section.SectionSet.PKCurricula, Section.SectionSet.HighQualityPKProgram,
Section.SectionSet.PKStudentInstruction, Section.SectionSet.PKSchoolType,



Section.SectionSet.ClassType, Section.SectionSet.CTEHours, Section.SectionSet.BeginDate, Section.SectionSet.EndDate, and Section.SectionSet.ChildCareOperationNumber.

- StaffSectionAssociation is extended with the following attributes:
StaffSectionAssociation.NumberOfStudentInClass, StaffSectionAssociation.MonthlyMinutes, StaffSectionAssociation.NumberDaysTaughtWeek1, StaffSectionAssociation.NumberDaysTaughtWeek2, StaffSectionAssociation.NumberDaysTaughtWeek3, StaffSectionAssociation.NumberDaysTaughtWeek4, StaffSectionAssociation.NumberMinutesTaughtWeek1, StaffSectionAssociation.NumberMinutesTaughtWeek2, StaffSectionAssociation.NumberMinutesTaughtWeek3, StaffSectionAssociation.NumberMinutesTaughtWeek4, and StaffSectionAssociation.SharedServiceArrangementStaff.
- StudentSectionAssociation is extended with the attribute StudentSectionAssociation.CourseCompletionIndicator.

Semantic Analysis

Texas is completely aligned with the Ed-Fi data standard with 198 data elements precisely aligned semantically with the Ed-Fi core. The State creates a new extension if the definition and/or data type does not exactly match the Ed-Fi definition and data type, even in cases where the intent is the same. For example, the Ed-Fi Staff.YearsOfPriorProfessionalExperience is not used and a new extension Staff.TotalYearsProfExperience is defined with the Texas-specific definition “number of verifiable years of creditable experience as specified in 19 TAC, Chapter 153.1021.”

Summary of Finds and Next Steps

The analysis found that Texas creates a large number of extensions to the Ed-Fi core in the areas that include accountability data, summary attendance in reporting periods, student applications for enrollment, special education eligibility and program data, student academic record data, prior year leaver student information, and finance. Texas extends the operational education data elements of Ed-Fi with summary and aggregate information required for accountability.

Specific suggestions for the State are as follows.

- The 10 new entity extensions defined for reporting period attendance could potentially be structured into a smaller set of entities.



- The two new entities and association extensions for prior year leavers could potentially be better integrated into the existing student/parent structure, reducing duplication.

In terms of the usage of the data elements in the Ed-Fi core model (aka semantic alignment), Texas is found to be using and aligned with the 566 attributes of Ed-Fi's unifying data model.

This analysis also provided Ed-Fi information on a need for the review of current design the area listed below:

- There were several student characteristics that were encapsulated in multi-valued common extensions to capture begin/end dates and therefore a historical record of how these characteristics change.

Based on these findings of the analyses, Ed-Fi would like to work closely with the Texas Education Agency as a part of its commitment to sustaining data standards. The following are opportunities for next steps for this collaboration between the State and Ed-Fi.

- As common a need across states becomes evident, leverage the extensions defined for special education and other programs, student academic record, and student applications.
- Analysis across states may identify specific common extension attributes for consideration into core where cross-state collaboration is recommended.