Ed-Fi EE-MARSS Program Ambiguity Resolution Proposal

Last Updated 2023-03-14

Problem Description

MDE's Ed-Fi system is the first time that non-MARSS Early Education program enrollment (ECFE and SR) is collected in the same system as MARSS Early Education program enrollment (ECSE, SR+, VPK, and PS).

- For non-MARSS Early Education program enrollment, the GradeLevel in the StudentSchoolAssociation (school enrollment) record is "EE" (ECFE and SR).
- For MARSS Early Education program enrollment, the GradeLevel in the StudentSchoolAssociation (school enrollment) record is program-specific (EC for ECSE, RA-RJ for SR+, PA-PJ for VPK, and PS for PS).

The problem happens when the same student is enrolled in both a non-MARSS Early Education program and a MARSS Early Education program at the same school, during the same time period. This creates an ambiguity conflict, because Ed-Fi does not allow two StudentSchoolAssociation records to be submitted for the same student, at the same school, with the same begin date. Below is the Ed-Fi 3.1 Documentation showing the three "Identity" fields for StudentSchoolAssociation (meaning that the combination of those fields must be unique for each StudentSchoolAssociation record – also known as a composite key).

StudentSchoolAssociation

Entity Type: Association

Ed-Fi ID: 613

Definition

This association represents the School in which a student is enrolled. The semantics of enrollment may differ slightly by state. Non-enrollment relationships between a student and an education organization may be described using the StudentEducationOrganizationAssociation.
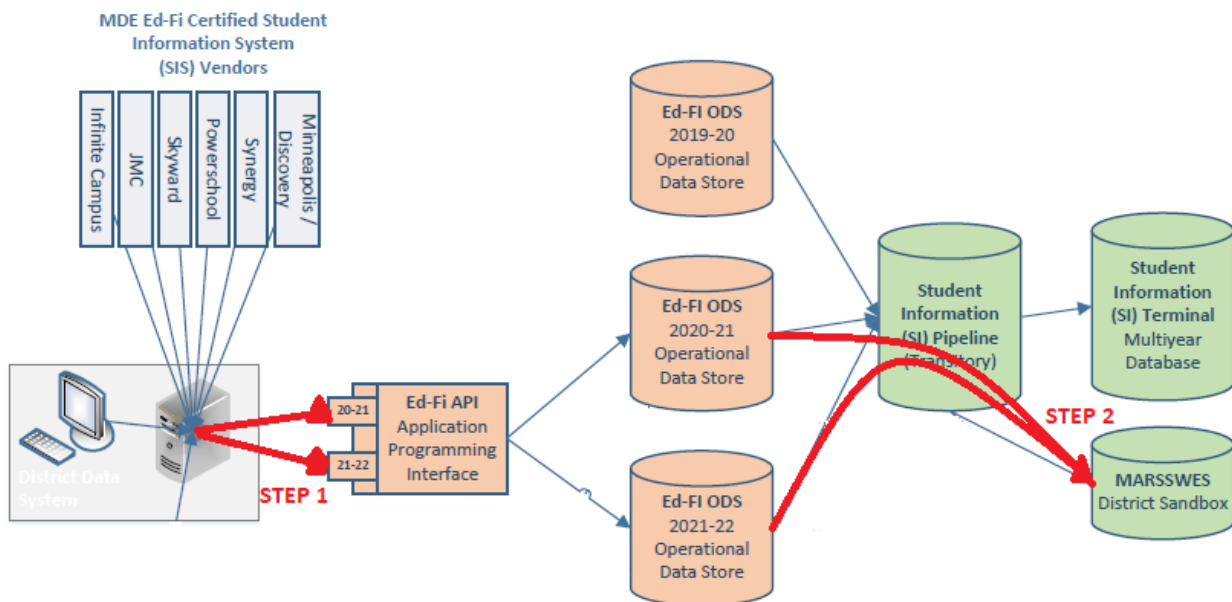
References

Property	Datatype	Identity	Cardinality	Definition	Merge
EntryDate	DateProperty	Yes	required	The month, day, and year on which an individual enters and begins to receive instructional services in a school.	
School	DomainEntityProperty	Yes	required	School enrolling the Student.	
Student	DomainEntityProperty	Yes	required	Student enrolled in the School.	

Proposed Solution

The proposed solution is to change how the GradeLevel is sent to Ed-Fi for Early Education program enrollment, while still sending enough context information in Ed-Fi to allow MNIT's data extraction process from Ed-Fi to generate the Early Education program enrollment records to send (or not send) to MARSSWES.

NOTE: This proposal is for implementation for the 2023-24 school year[1] since it requires changes to the Ed-Fi API, SIS vendor implementation and vendor certification scenarios. The Ed-Fi-only districts in 2021-22 and 2022-23 will use a [documented short-term workaround](#) to resolve their MARSS/EE Ed-Fi data submission conflicts.

In the above diagram[2], STEP 1 represents the Ed-Fi submission of data records from the district SIS, and STEP 2 represents MNIT's data extraction process from Ed-Fi to load data to MARSSWES.

The key to preserving Early Education program enrollment context is for the SIS to also send StudentEarlyEducationProgramAssociation records for each of the Early Education programs in which the student is enrolled. Each StudentEarlyEducationProgramAssociation record must indicate the program type and any other context information necessary in order for MNIT's data extraction process from Ed-Fi to generate the Early Education program enrollment records to send (or not send) to MARSSWES. *This proposal does NOT require any changes to the MARSSWES or MARSS data structure.*

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[1] The decision to move this proposal to school year 2023-24 was made in November of 2022. The initial draft of this document proposed implementing the solution in school year 2022-23.

[2] This diagram was created before the decision to implement the project in the 2023-24 school year. Hence, the dates in the diagram should be considered as illustrations only.

The following example shows a student with a single StudentSchoolAssociation record enrolled in multiple Early Education program(s) at the same school with the same specified begin date.

StudentSchoolAssociation record

Student ID	School ID	Entry Date	Exit Withdraw Date	Entry Grade Level
0123123456789	010123012	09/01/2021		EE

StudentEarlyEducationProgramAssociation records

Student ID	School ID	Ed-Fi EE Program Type	Begin Date	End Date	Reason Exited	Program Section
0123123456789	010123012	EE-ECFE	09/01/2021			
0123123456789	010123012	EE-SR	09/01/2021			
0123123456789	010123012	EE-SR+	09/01/2021			A-J
0123123456789	010123012	EE-ECSE	09/01/2021			
0123123456789	010123012	EE-VPK	09/01/2021			A-J

StudentEarlyChildhoodScreeningProgramAssociation record

Student ID	School ID	Ed-Fi EE Program Type	Begin Date	End Date	EC Screening Exit Status
0123123456789	010123012	EE-ECS	09/01/2021		

Q&A

1. *Why doesn't Preschool Screening also use StudentEarlyEducationProgramAssociation?*

The StudentEarlyChildhoodScreeningProgramAssociation record was created to collect additional preschool screening information in Ed-Fi: EarlyChildhoodScreener and EarlyChildhoodScreeningExitStatus.

The StudentEarlyEducationProgramAssociation record was originally created for the collection of ECFE and SR program information in Ed-Fi.

Decision 4/21/2022: Change the program type descriptor code for Early Childhood Screening to "EE-ECS" for additional consistency with the other EE program types.

2. *What about the Preschool Screening school number?*

In MARSS, Preschool Screening records are always reported at school number 005 (i.e. Ed-Fi SchoolID 010123005). School number 005 is not a real school number, but was created because of a variation of the same problem: kindergarten students sometimes also participate in preschool screening at the same school starting on the same date.

This proposed change of how to translate StudentEarlyChildhoodScreeningProgramAssociation records in Ed-Fi into PS grade level records loaded into MARSSWES would allow us to eliminate the need to fabricate school number 005 in the Ed-Fi ODS. Instead, school number 005 would be substituted in the translation code from the Ed-Fi ODS to the MARSSWES Sandbox.

Decision 4/21/2022: Align school number on StudentEarlyChildhoodScreeningProgramAssociation with StudentSchoolAssociation – MNIT will need to document the Ed-Fi to MARSS transformation rules.

3. Which resource should contain Membership and Attendance Hours?

Every student will have a StudentSchoolAssociation record which contains membership and attendance information. While previous iterations also had that information on Program Association records, some vendors said that they currently don't send ServiceMembershipHours and ServiceAttendanceHours on the StudentEarlyEducationProgramAssociation record.

Decision 4/21/2022: Remove membership and attendance hours from StudentEarlyEducationProgramAssociation and instead use the StudentSchoolAssociation to collect this information.

4. How will the MARSS student record begin/end dates be determined?

If the entry date and exit withdraw date on the StudentSchoolAssociation overlap but do not match exactly the begin and end dates of the StudentEarlyEducationProgramAssociation and StudentEarlyChildhoodScreeningProgramAssociation, then we need rules for how to determine the begin/end dates that the MNIT data extraction process from Ed-Fi will use to load data to MARSSWES. Ideally we should require alignment of these dates to simplify this logic.

Decision 4/21/2022: Vendors and districts need to create new StudentSchoolAssociation records if StudentEarlyEducationProgramAssociation change – we will need to get more fine-grained (e.g. non-MARSS vs. MARSS program types) and MNIT will need to document the Ed-Fi to MARSS transformation rules and the SIS vendor certification scenarios.

5. Do we also need the Program Section on StudentEarlyEducationProgramAssociation?

The School Readiness Plus and Voluntary Pre-Kindergarten Early Education program enrollment records in MARSS both include the program section: grade levels RA-RJ for SR+ and grade levels PA-PJ for VPK. We will now collect that information in StudentEarlyEducationProgramAssociation since the we will no longer carry that information as part of the EE grade level.

Resolution: Add a new optional programSection data element with a ProgramSectionDescriptor value list to the StudentEarlyEducationProgramAssociation. The programSection is only be submitted for SR+ and VPK.

Mapping	Descriptor Name	Code	Short Description	Description
Extension	ProgramSectionDescriptor	A	Section A	Section A
Extension	ProgramSectionDescriptor	B	Section B	Section B
Extension	ProgramSectionDescriptor	C	Section C	Section C
Extension	ProgramSectionDescriptor	D	Section D	Section D
Extension	ProgramSectionDescriptor	E	Section E	Section E
Extension	ProgramSectionDescriptor	F	Section F	Section F
Extension	ProgramSectionDescriptor	G	Section G	Section G
Extension	ProgramSectionDescriptor	H	Section H	Section H

Mapping	Descriptor Name	Code	Short Description	Description
Extension	ProgramSectionDescriptor	I	Section I	Section I
Extension	ProgramSectionDescriptor	J	Section J	Section J

Decision 4/21/2022: Adding this programSection data element for SR+ and VPK will allow the us to load the SR+ and VPK records into MARSS.

6. How do these EE Program Types align with the EE-MCCC Program Types in Ed-Fi?

The Ed-Fi Program Type descriptors are used in multiple places in the Ed-Fi data model. The Common Course Catalog (MCCC) data model in Ed-Fi currently previously referenced EE-MCCC program types for EE-MCCC courses.

Resolution: Replace current EE-MCCC specific program types with the standard EE program types as defined in this document.

Current EE-MCCC Program Types	Description	Ed-Fi EE Program Type	Notes
MCCC-EI	MCCC Early Intervention (Birth to 2)	EE-ECSE	Use for both Parts B/619 or C
MCCC-ESCE	MCCC Early Childhood Special Education	EE-ECSE	Use for both Parts B/619 or C
MCCC-VPK	MCCC Voluntary Pre-Kindergarten	EE-VPK	

7. How are calendar grades handled within this resolution?

The MDE team is aware of this gap in the resolution: the calendar resource needs a grade level reference, that grade level reference comes from the grade level descriptor table, and LEAs often need different calendars (with different day lengths and number of instructional days) for different sections of School Readiness Plus or Voluntary Pre-K. By removing grade levels PA-PJ and RA-RJ, this removes the ability for LEAs to use those grade levels for section-specific calendars.

Proposed Resolution Option 1: Add a new optional elements to the Calendar resource:

- programSection data element with a ProgramSectionDescriptor value (just as with StudentEarlyEducationProgramAssociation, the programSection would only be submitted for SR+ and VPK.)
- programType data element referencing whether or not the calendar is for VPK or SR+

Challenge with Option 1: the key challenge with this option is the fact that the calendar resource allows for multiple grade levels, so this option would require a separate calendar resource record just for each of the EE grade levels that need a section like this – therefore requiring that LEAs wouldn't be able to submit a calendar resource with multiple grade levels.

Proposed Resolution Option 2: Add a new optional Calendar resource reference to the StudentEarlyEducationProgramAssociation. This would be similar to how we collect membership and attendance for SR+ and VPK programs.

Challenge with Option 2: Should be mostly on the MNIT side for MARSS translations, given that we'd need to combine information from StudentEarlyEducationProgramAssociation when processing calendar information for SR+ and VPK.

Summary: Early Education Change Proposal

Early Education Program	MARSS Grade Level	Current Ed-Fi Grade Level	Proposed Ed-Fi Grade Level	Ed-Fi Student Program Association & Program Type
Preschool Screening	PS	PS	EE	StudentEarlyChildhoodScreeningProgramAssociation, ProgramType = "EE-ECS" (replaces "Early Childhood Screening")
Early Childhood Family Education (ECFE)	n/a	EE	EE (no change)	StudentEarlyEducationProgramAssociation, ProgramType = "EE-ECFE" (existing)
School Readiness (SR)	n/a	EE	EE (no change)	StudentEarlyEducationProgramAssociation, ProgramType = "EE-SR" (existing)
School Readiness Plus (SR+)	RA – RJ	RA – RJ	EE	StudentEarlyEducationProgramAssociation, ProgramType = "EE-SR+" (new) ProgramSection = "A" – "J"
Early Childhood Special Education (ECSE)	EC	EC	EE	StudentEarlyEducationProgramAssociation, ProgramType = "EE-ECSE" (new)
Voluntary Pre-Kindergarten	PA – PJ	PA – PJ	EE	StudentEarlyEducationProgramAssociation, ProgramType = "EE-VPK" (new) ProgramSection = "A" – "J"

This change will make the following GradeLevelDescriptor values obsolete in Ed-Fi (but not in MARSS):

Mapping	Descriptor Name	Code	Short Description
Core	GradeLevelDescriptor	EC	Early Childhood
Core	GradeLevelDescriptor	PA	Voluntary Pre-Kindergarten (VPK) Section A
Core	GradeLevelDescriptor	PB	Voluntary Pre-Kindergarten (VPK) Section B
Core	GradeLevelDescriptor	PC	Voluntary Pre-Kindergarten (VPK) Section C
Core	GradeLevelDescriptor	PD	Voluntary Pre-Kindergarten (VPK) Section D
Core	GradeLevelDescriptor	PE	Voluntary Pre-Kindergarten (VPK) Section E
Core	GradeLevelDescriptor	PF	Voluntary Pre-Kindergarten (VPK) Section F
Core	GradeLevelDescriptor	PG	Voluntary Pre-Kindergarten (VPK) Section G
Core	GradeLevelDescriptor	PH	Voluntary Pre-Kindergarten (VPK) Section H

Mapping	Descriptor Name	Code	Short Description
Core	GradeLevelDescriptor	PI	Voluntary Pre-Kindergarten (VPK) Section I
Core	GradeLevelDescriptor	PJ	Voluntary Pre-Kindergarten (VPK) Section J
Core	GradeLevelDescriptor	PS	Early Childhood Health and Developmental Screening (Pre-School Screening)
Core	GradeLevelDescriptor	RA	School Readiness Plus Section A
Core	GradeLevelDescriptor	RB	School Readiness Plus Section B
Core	GradeLevelDescriptor	RC	School Readiness Plus Section C
Core	GradeLevelDescriptor	RD	School Readiness Plus Section D
Core	GradeLevelDescriptor	RE	School Readiness Plus Section E
Core	GradeLevelDescriptor	RF	School Readiness Plus Section F
Core	GradeLevelDescriptor	RG	School Readiness Plus Section G
Core	GradeLevelDescriptor	RH	School Readiness Plus Section H
Core	GradeLevelDescriptor	RI	School Readiness Plus Section I
Core	GradeLevelDescriptor	RJ	School Readiness Plus Section J

This change will make the following school number value obsolete in Ed-Fi (but not in MARSS):

School Number	Short Description
005	Early Childhood Screening Site (instead submit the school number where the student is enrolled)