Attendance Baseline Profile

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1. Preface

This document details the Proposed Attendance Baseline Profile (ABP) for 2015. It specifically outlines behaviour associated with the 3.x, SIF RESTful Infrastructure.

1.1. Purpose

The SIF Specification contains objects for interaction between an Attendance vendor and a Student Information System. The Attendance Baseline is being prepared for attendance tracking vendors as a guide which would, once agreed, provide a set of SIF Objects and behaviours which will enable near 'plug and play' interoperability between a SIS at the School or Jurisdiction Level and a 3rd party Attendance vendor, which has developed its agent, up to the base line level.

1.2. Principles

The following principles underpin this document:

- Guidance, not regulation
- Drive simple interoperability, not just allow
- Consistency in expectation of behaviours between consumers and providers of information
- Adherence to SIF rules
- Working together for the benefit of all implementations but based on the experiences of real and specific implementations

This document and any object changes will be based on an alliance between vendor and Jurisdiction members of the SIF AU Data Standards Working Group.

2. SIF Guidance

2.1. Objects Guidance

Provisioning objects, daily attendance:
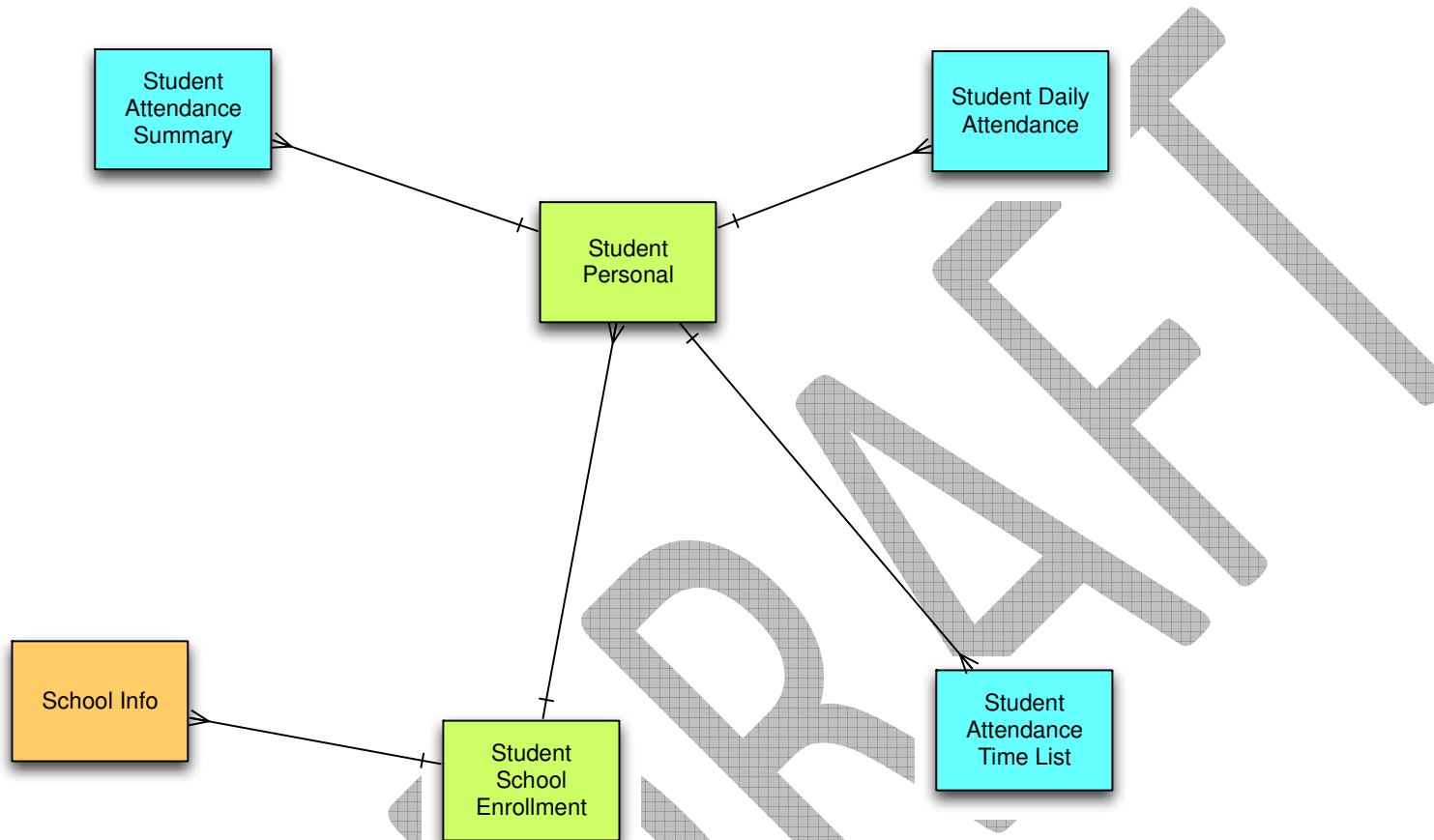- StudentPersonal
- StudentSchoolEnrollment (retrieve all students in a school, for multi-school zones)
- SchoolInfo (retrieve all provisioning data for a school, for multi-school zones)

Return path objects, daily attendance:
- StudentDailyAttendance
- StudentAttendanceSummary
- StudentAttendanceTimeList (SIF 1.4)

(see Scenarios section for details on the Elements included for each object.)

Entity Relationship Diagram – ABP, Daily Attendance

The ABP for daily attendance has simple Entity Relationships: the objects to be provisioned are the orange and green objects, the return path objects are in blue.

2.1.2. Consumer's guidance

The provider should send all objects in order, and a subscriber should request precedent objects in order. For the Attendance Baseline Profile, these are:

- Daily Attendance

- o   Provisioning: SchoolInfo, StudentPersonal, StudentSchoolEnrollement
- o   Return Path: order is irrelevant

When first synchronising (done by sending an unbounded request for an object), requests should be made for these precedent objects first.

The dependencies for the objects are:
- ➢ StudentSchoolEnrollment requires StudentPersonal, SchoolInfo.

2.2.3. Service Paths

For implementations using SIF 3 infrastructure, service paths can optionally be implemented. The following service paths are recommended for the typical workflows around attendance. Query service paths depend on whether it is necessary to isolate data about a single school (e.g. from a school authority data hub), or whether all instances of the object may be retrieved (because the SIS only describes a single school, or because the client is trusted to do their own filtering)

Daily Attendance Queries, single school data source

/SchoolInfos	GET	SchoolInfo/OperationalStatus = "O"
/StudentPersonals	GET	StudentSchoolEnrollment/TimeFrame = "C", StudentPersonal@RefId = StudentSchoolEnrollment/StudentPersonalRefId
/StudentSchoolEnrollments	GET	StudentSchoolEnrollment/TimeFrame = "C"

Daily Attendance Queries, multiple school data source

/SchoolInfos/{SchoolInfoRefId}	GET	
/SchoolInfos/{SchoolInfoRefId}/StudentSchoolEnrollments	GET	StudentSchoolEnrollment/SchoolInfoRefId = { SchoolInfoRefId }, StudentSchoolEnrollment/TimeFrame = "C"
/SchoolInfos/{SchoolInfoRefId}/StudentPersonals	GET	StudentSchoolEnrollment/SchoolInfoRefId = { SchoolInfoRefId }, StudentSchoolEnrollment/TimeFrame = "C", StudentPersonal@RefId = StudentSchoolEnrollment/StudentPersonalRefId

/StudentDailyAttendances	POST	Multiple record payload
/StudentDailyAttendances/StudentDailyAttendance	POST	Single record payload
/StudentDailyAttendances/StudentDailyAttendance/{RefId}	PUT	Single record payload with given RefId (optional)
/StudentAttendanceSummarys	POST	Multiple record payload
/StudentAttendanceSummarys/StudentAttendanceSummary	POST	Single record payload
/StudentAttendanceSummarys/StudentAttendanceSummary/{RefId}	PUT	Single record payload with given RefId (optional)
/StudentAttendanceTimeLists	POST	Multiple record payload
/StudentAttendanceTimeLists/StudentAttendanceTimeList	POST	Single record payload
/StudentAttendanceTimeLists/StudentAttendanceTimeList/{RefId}	PUT	Single record payload with given RefId (optional)

2.3.1. Key for Tables:

Attribute/Key Identifier	Element/Attribute	Char	Baseline Char	Description	Business Rules
Identifies attribute of element or object key	SIF (Australia) r1.x Implementation Specification Object/Element Name	As identified by the SIF Implementation (Australia) 1.x	Identifies Baseline requirements for SIF Implementation (Australia) 1.x optional elements M = Mandatory S = Strongly Suggested C = Conditional R = Repeatable O = Optional N = Not Used	Object/Element SIF Implementation (Australia) 1.x description	Identifies Baseline SIS business rules for object/element

3. Scenarios

The scenarios identified here are considered 'typical'. They do not necessarily map exactly to the specific needs of any given jurisdiction. Therefore it is expected that some specific implementations may wish to extend this document to exactly match their needs.

All said, the intent of this document is as a baseline such that there is minimal difference between implementations. This reduces the rework required by suppliers and instils consumer confidence in the ability of SIF to work out-of the-box.

We consider here two major classes of scenario:
- School provisions Attendance Application with provisioning objects for daily attendance. Attendance Application generates daily attendance rosters for School.
- School updates provisioning objects for daily attendance. Attendance Application generates updates to daily attendance rosters for School.

3.1. Scenario Summary Matrix

The following is a list of the scenarios that comprise an Australian ABP.

	Scenario	AU Object element/behaviour	Message	Behaviour	SBP Rules
A	School authority provides attendance application with objects necessary to create daily attendance roster for the school SchoolInfo, StudentPersonal, StudentSchoolEnrollment, CalendarDate, CalendarSummary				
	Scenario	AU Object	Message	Behaviour	SBP Rules
a.1	Consume School Data	SchoolInfo	GET	Consume	StateProvinceId must be stated in the query. OperationalStatus = Open
a.2	Consume Enrollments	StudentSchoolEnrollment	GET	Consume	TimeFrame = Current
a.3	Consume Students	StudentPersonal	GET	Consume	
B	Attendance application provides daily attendance objects to the school authority, based on the objects it was provisioned with for the school StudentDailyAttendance, StudentAttendanceSummary , StudentAttendanceTimeList				
	Scenario	AU Object	Message	Behaviour	SBP Rules
b.1	Provide Daily Attendance	StudentDailyAttendance	POST	Create	
b.2	Provide Daily Attendance Times	StudentAttendanceTimeList	POST	Create	
b.3	Provide Attendance Summary	StudentAttendanceSummary	POST	Create	

3.A. School Authority Provisions 3rd Party Vendor for Daily Attendance

3.A.1 Consume School Data

School Info

The vendor should only request information about currently open schools and campuses.

Attribute/ Key	Element/Attribute	Char	Baseline Char	Description	Business Rules
Identifier					
@K	RefId	M	M	The GUID that identifies this school/campus	
	LocalId	M	M	The locally-assigned identifier for this school/campus	
	StateProvinceId	O	S	The state-assigned identifier for this school/campus	
	SchoolName	M	M	Name of school/campus.	
	SchoolType	O	S	An indication of the level of the educational institution	
	SchoolSector	M	M	Government or Non Government	
	Campus (and associated elements)	O	C	Campus identifier	Must be included if the school is defined as multi-campus. (Used to identify type of Campus)
	Campus/AdminStatus	M	M	Is this Campus the Administration Campus?	Must be included if the school is defined as multi-campus
	Campus/CampusType	O	O	Type of campus.	Supply if different from the School Type.
	Campus/ParentSchoolId	C	CS	Parent School Identifier	Parent School Id needs to be supplied if this Campus is not the Admin

					Campus. This number should be the state-assigned identifier for this school or the locally-assigned identifier for this school. Only available from 1.3 onwards.
	OperationalStatus	O	S	Operational condition of a school.	"O" = Open is a condition on a request.
	SchoolEmailList/Email	O	S		SchoolEmailList is an Optional List of Emails associated with a School.
	AddressList	O	S		AddressList is an Optional List of Addresses associated with a School. It is strongly suggested that at least one address is sent by the authoratitve Jurisdiction.
	AddressList/Address	MR	MR		If an Address is supplied it is mandatory to send the Type and Role Attributes. e.g. <Address Type="0123" Role="012B">
	AddressList/Address/StateProvince	C	S	The state or province code eg NSW, Vic, ACT	Only supply if in Australia
	AddressList/Address/City	M	M	The city part of the address	
	AddressList/Address/PostalCode	M	M	The ZIP/Postal code	
	AddressList/Address/Street/StreetNumber	O	S	The address number assigned to the building	
	AddressList/Address/Street/StreetName	O	S	The name of the street	
	AddressList/Address/GridLocation/Longitude	O	O	Longitude of school location	
	AddressList/Address/GridLocation/Latitude	O	O	Latitude of school location	
	AddressList/Address/SchoolGeographicLocation	O	O	School Location from MCEETYA.	

3.A.2 Consume School Enrollments

StudentSchoolEnrollment

The vendor should only request information about current enrollments.

Attribute/ Key	Element/Attribute	Char	Baseline Char	Description	Business Rules
@K	RefId	M	M	The ID (GUID) that uniquely identifies a particular enrollment.	
AK	StudentPersonalRefId	M	M	The ID (GUID) of the student to whom this information is linked.	
AK	SchoolInfoRefId	M	M	The ID (GUID) of the school to which this enrollment applies.	
	MembershipType	M	M	The type of this enrollment as it relates to the school identified in SchoolInfoRefId	
AK	SchoolYear	M	M	School year for which this enrollment is applicable, expressed as the four-digit year in which the school year ends (e.g. 2007). StudentSchoolEnrollment instances must not span multiple school years.	Must be the current SchoolYear
	TimeFrame	M	M	The timeframe of the enrollment based on the SIF_Date in the SIF_Header of the message. For events, it is determined as of the date the event is generated. For requests and responses, it is calculated based on the date of the request.	='C' for current
	YearLevel	O	M	Expected Year level of student when their enrolment becomes 'Current'.	
	FTE	O	S	Full-time equivalent numeric value of the student's course load during this enrollment, expressed in decimal form, where 1.00 represents a full-time	

				enrollment	
	EntryDate	M	M	The date from when this enrollment will be valid.	
	ExitDate	C	C	The last school calendar day of this enrollment. If the student has exited the school or the enrollment has a `RecordClosureReason`, `ExitDate` must have a value.	RecordClosureReason has not been requested by TT vendors
	StudentSubjectChoiceList	O	S	List of Student Subject Choices where available	If collected by jurisdiction should be supplied. If this is done in the 3rd party product – this is not required.
	StudentSubjectChoiceList/StudentSubjectChoice	MR		Subjects Students choose	
	StudentSubjectChoiceList/StudentSubjectChoice/PreferenceNumber	O		Subject Priority	
	StudentSubjectChoiceList/StudentSubjectChoice/SubjectLocalId	M		Local Subject Id	
	StudentSubjectChoiceList/StudentSubjectChoice/StudyDescription	O		Description about Study Mode	
	StudentSubjectChoiceList/StudentSubjectChoice/OtherSchoolLocalId	O		LocalId of a school where the student studies this subject if not at the home school	
	Homeroom	O		Homeroom for this enrollment	

3.A.3 Consume Students

StudentPersonal

The vendor should only request information about currently enrolled students.

Attribute /Key	Element/Attribute	Char	Baseline Char	Description	Business Rules

Identifier						
@K	RefId	M	M	The GUID of the student.	
	LocalId	M	M	The locally-assigned identifier for this student.	
	StateProvinceId	O	S	The state-assigned identifier for this student.	Provide if this is available.
	OtherIdList	O	O	Lists all "other" identifiers associated with the student.	
	OtherIdList/OtherId	OR	O	Lists an "other" identifier associated with the student.	
	OtherIdList/OtherId@Type	M	M	Code that defines the type of this other ID.	
	PersonInfo/Name/FamilyName	C	M	Family name. That part of the person's name which is used to describe family, clan, tribal group, or marital association.	
	PersonInfo/Name/GivenName	C	M	Given name of the person.	
	PersonInfo/Name/MiddleName	C	S	All other given or middle names, each separated with a single space character.	
	PersonInfo/Name/PreferredGivenName	O	S	The given name preferred most by the person (as written).	If you don't store preferred name then provide GivenName
	MostRecent/YearLevel	O	M	The current or most recent grade level of the student in the district.	National Standards for reporting on attendance includes attendance against year level.
	PersonInfo/EmailList	O	S	The person's e-mail address(es).	
	PersonInfo/EmailList/Email	O	S	The Primary e-mail address associated with an individual or organization. (as per business rule)	If this attribute value is captured and available within the SIS it is suggested that it is published wherever possible. It is recognised that not all SIS make this attribute mandatory, nor do school processes enforce the capture.
@	PersonInfo/EmailList/Email/Type	M	M	Type of email address.	='01' Email Address provided must be the Primary Email address.

PersonInfo/Demographics/Sex	O	M	'Sex' is the distinction 'male' and 'female', as reported by the person	National Standards for reporting on attendance includes attendance against sex.
PersonInfo/Demographics/IndigenousStatus	O	M	Whether or not the person identifies themselves as being of Aboriginal and/or Torres Strait Islander descent	National Standards for reporting on attendance includes attendance against indigeneity.

3.B. Create Attendance Scenario: Return daily Attendance Roster

Agents may provide any of the StudentDailyAttendance, StudentAttendanceSummary, or StudentAttendanceTimeList objects, depending on the business requirements around the request. The StudentDailyAttendance object provides information around reasons for absences, and a single time in and out for each day for a student. The StudentAttendanceTimeList object allows multiple times in and out to be recorded per day per student, each with its own reason. The StudentAttendanceSummary provides an aggregate report for a student, counting the number of days in a given time period that the student is absent, and the days for which absence is excused or unexcused, or tardy.

For the National Standards, agents are expected to track part-day attendance, to a granularity of at least 0.5, as defined by the school authority. This is done using StudentDailyAttendance/AbsenceValue where StudentDailyAttendance/DayValue = Partial. The attendance day counts in StudentAttendanceSummary, and the partial attendance day counts in StudentAttendanceTimeList/AttendanceTimes/AttendanceTime/DurationValue are all xs:decimal.

Agents are expected to track instances where the student was away from class but which do not count as failures to attend (e.g. internal suspension, approved educational absence, attending a tutorial centre). The student is considered present during those days, and these will be included in StudentAttendanceSummary/DaysAttended.

Agents are expected to track instances where the student could not have potentially attended school, and which should not count as possible school days. These include school closure days, but also expulsion and notified detention by a government authority. Attendance is not counted for the student during those days, and these are excluded from both StudentAttendanceSummary/DaysAttended and StudentAttendanceSummary/DaysInMembership.

3.B.1 Provide Daily Attendance

3.B.1 StudentDailyAttendance

Attribute / Key Identifier	Element / Attribute	Char	Baseline Char	Description	Business Rules
@K	RefId	M	M	The ID (GUID) assigned to uniquely identify this attendance record.	
	StudentPersonalRefId	M	M	The ID (GUID) of the student for whom this attendance information is being reported.	
	SchoolInfoRefId	M	M	The ID (GUID) of the school for which this attendance information is being reported.	Since zone may be shared with multiple zones, school should be identified
	Date	M	M	The calendar date to which this attendance information relates.	At least one record is expected to be provided for each enrolled student in a school, for each day of the school calendar in which the student is enrolled. Several StudentDailyAttendance objects can be sent about the same student on the same day, if those objects have partial coverage of the day (as indicated in DayValue = Partial). If The object provider should ensure that those objects combine to provide attendance information across the whole day. If multiple absences about the same student on the same day will be subsequently updated, and particularly if they may be collapsed or expanded, they become very difficult to manage through the StudentDailyAttendance object. In such circumstances, the StudentAttendanceTimeList is preferable.
	SchoolYear	M	M	School year for which this enrollment is applicable, expressed as the four-digit year in which the school year ends (e.g. 2007).	
	DayValue	O	M	Value of a day this instance, represents.	
	AttendanceCode	M	M	Locally defined code for attendance.	
	AttendanceStatus	M	M	Approved or Unapproved status of this attendance code.	

	TimeIn	C	M	The time the student entered or returned to school. Must be provided if 'Partial' chosen for DayValue.	
	TimeOut	C	M	The time the student left school. Must be provided if 'Partial' chosen for DayValue..	Several StudentDailyAttendance objects can be sent about the same student on the same day, if those objects have partial coverage of the day (as indicated in DayValue = Partial). The object provider should ensure that those objects do not overlap in their time spans (TimeIn to TimeOut), as that would lead to ambiguity over which record to refer to for a given time of day.
	AbsenceValue	C	C	Must be provided if the DayValue is "Partial" or "Other". The amount of absence represented by AttendanceCode, up to three decimal places.	The National Standards require granularity of either 0.5, or up to two decimal places.
	AttendanceNote	O	O	Note related to this particular attendance.	

3.B.2 Provide StudentAttendanceTimeList

3.B.2 StudentAttendanceTimeList

Attribute / Key Identifier	Element / Attribute	Char	Baseline Char	Description	Business Rules
	StudentAttendanceTimeList			This object provides more detail about the attendance spans for a single student during the day: it provides more detailed information than the single TimeIn and TimeOut elements in StudentDailyAttendance.	
@ 🔑	RefId	M	M	The ID (GUID) assigned to uniquely identify this attendance record.	
	StudentPersonalRefId	M	M	The ID (GUID) of the student for whom this attendance	

			information is being reported.	
SchoolInfoRefId	M	M	The ID (GUID) of the school for which this attendance information is being reported.	Since zone may be shared with multiple zones, school should be identified
Date	M	M	The calendar date to which this attendance information relates.	A single record is expected to be provided for each enrolled student in a school, for each day of the school calendar in which the student is enrolled.
SchoolYear	m	M	School year for which this enrollment is applicable, expressed as the four-digit year in which the school year ends (e.g. 2007).	
AttendanceTimes	M	M	Breakdown of times that the student entered or returned to school.	
AttendanceTimes/AttendanceTime	MR	MR		
AttendanceTimes/AttendanceTime/ AttendanceCode	M	M	Locally defined code for attendance.	
AttendanceTimes/AttendanceTime/ AttendanceStatus	M	M	Approved or Unapproved status of this attendance code.	
AttendanceTimes/AttendanceTime/ StartTime	M	M	The start of this particular time span.	The object provider should ensure that the AttendanceTime elements do not overlap in their time spans (StartTime to EndTime), as that would lead to ambiguity over which entry to refer to for a given time of day.
AttendanceTimes/AttendanceTime/ EndTime	M	M	The end of this particular time span.	The object provider should ensure that the AttendanceTime elements do not overlap in their time spans (StartTime to EndTime), as that would lead to ambiguity over which entry to refer to for a given time of day.
AttendanceTimes/AttendanceTime/ DurationValue	O	O	The amount of absence represented by AttendanceCode, up to three decimal places.	The National Standards require granularity of either 0.5, or up to two decimal places.

Attribute / Key Identifier	Element / Attribute	Char	Baseline Char	Description	Business Rules
	AttendanceTimes/AttendanceTime/ AttendanceNote	O	O	Note related to this particular time span.	
	SIF_Metadata	O	O		
	SIF_ExtendedElements	O	O		

3.B.3 Provide Attendance Summary

3.B.3 StudentAttendanceSummary

Attribute / Key Identifier	Element / Attribute	Char	Baseline Char	Description	Business Rules
@K	StudentPersonalRefId	M	M	The ID (GUID) of the student for whom this attendance information is being reported.	
@K	SchoolInfoRefId	M	M	The ID (GUID) of the school for which this attendance information is being reported.	Since zone may be shared with multiple zones, school should be identified
@K	SchoolYear	M	M	School year for which the information is applicable.	
@K	StartDate	M	M	Starting date of this attendance reporting period.	Preconfigured by the object provider
@K	EndDate	M	M	Ending date of this attendance reporting period.	Preconfigured by the object provider
	StudentAttendanceSummaryRefId	O	M	An optional ID (GUID) for this summary of attendance information being reported on. This GUID would be used to form a REST URL.	
	StartDay	O		Number of the school day represented in StartDate.	
	EndDay	O		Number of the school day represented in EndDate.	
	FTE	O		Full time equivalent numeric value of the student's course load during this attendance period, expressed in decimal form, where 1.00 represents a full time enrollment.	

	DaysAttended	M	M	The number of days the student attended school when school was in session between the StartDate and EndDate, inclusive.	
	ExcusedAbsences	M	M	The number of days the student was absent from school with a valid excuse when school was in session between the StartDate and EndDate, inclusive.	
	UnexcusedAbsences	M	M	The number of days the student was absent from school without a valid excuse when school was in session between the StartDate and EndDate, inclusive.	
	DaysTardy	O		The number of days the student was tardy when school was in session between the StartDate and EndDate, inclusive.	
	DaysInMembership	M	M	The number of days the student was present plus the number of days the student was absent when school was in session during the period between the StartDate and EndDate, inclusive.	