



ARIZONA EDUCATION DATA STANDARDS

AZEDS - ASSESSMENT

VERSION 1.0

06/12/2014

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INTRODUCTION

DOCUMENT OVERVIEW

The Arizona Education Data Standards, AzEDS, is the family of standards for exchanging data with the Arizona Department of Education. AzEDS – Assessment is the component of the standard for exchanging assessment data.

This document defines a common standardized data elements and format when exchanging student assessment data. It proposes the actual file that would need to be exchanged to achieve conformity. Additionally, it will contain a data dictionary for the attributes that are mentioned in the actual files and lists the limitations and constraints for the data.

The purpose of this document is to articulate the specifications for the data exchange of student assessment data. This is being circulated to all parties who send data to the State for the assessments that are delivered and scored for the students at LEAs in the state.

By collecting the student assessment data in a common standard's based format, it will enable the state to make available standard reports and dashboards to educators, parents, and students which will help towards student achievement and progress.

It will aid in data mismatches and reduce time spent converting data from one format to another.

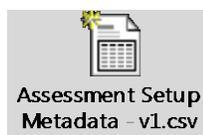
DATA EXCHANGE FILE FORMATS

LEARNING STANDARDS

The State will provide the learning standards and associated codes that the assessment service provider will have to use when defining an assessment and when sending the assessment results/scores back to state.

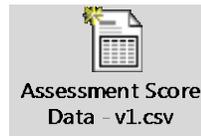
ASSESSMENT METADATA

The assessment service provider provides the details of administered assessment. This file will facilitate the capturing of assessment/test related information, the learning standards being assessed and the assessment items involved in the assessment. It will also facilitate other relevant information regarding the administration and grading scales associated with the assessment.



ASSESSMENT SCORE DATA

This file will facilitate the transfer of the assessment scores (results) for individual students for an already administered assessment.



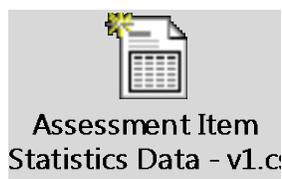
ASSESSMENT ITEMS DATA

The assessment service provider provides the details of the test questions/items used in an assessment. This file will facilitate the capturing of the test questions/items related to Meta-Data that are used in an assessment.

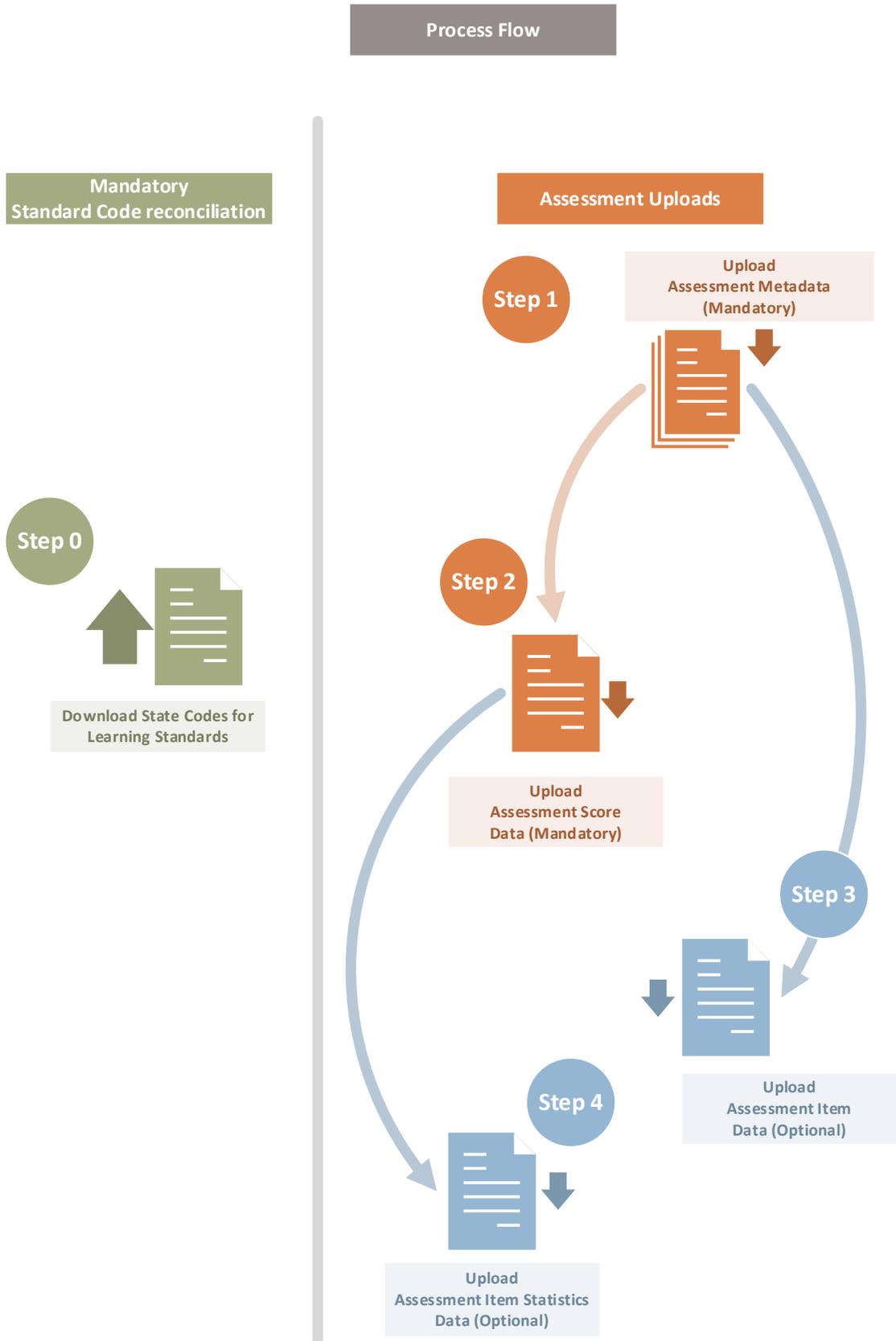


ASSESSMENT ITEM STATISTICS DATA

This file will facilitate the transfer of statistics about individual assessment items when they are administered in an administration and students have attempted those assessment items.



PROCESS FLOW



DATA DICTIONARY

ASSESSMENT METADATA



Assessment Setup
Metadata - v1.xlsx

For more details refer this excel file:

Element Name	Definition	Option Set	Format	Mandatory
Vendor	Name of the vendor as agreed upon Example: ATI Pearson ...	Yes	NVARCHAR (60)	Yes
AssessmentFamilyTitle	The title or name of the assessment family. Represents a logical grouping or association of assessments that share a common purpose, heritage or content standard. Example: AIMS AIMS A ...	Yes	NVARCHAR (60)	Yes
AssessmentTitle	The title or name of the assessment.	No	NVARCHAR(60)	Yes
AcademicSubject	The description of the content or subject area of an assessment. Example: Arts Mathematics Reading Stenography Foreign language ...	Yes	NVARCHAR(50)	Yes
AssessedGradeLevel	The typical grade level for which an assessment is designed. If the test assessment spans a range of grades, then this attribute holds the highest grade assessed. If only one grade level is assessed, then only this attribute is used. Example: Adult Prekindergarten First grade Second grade...	Yes	NVARCHAR(50)	Yes
AssessmentCategoryType	The category of an assessment based on format and content. Example: Achievement test ACT Advanced placement test Alternate assessment/grade-level standards Attitudinal test Benchmark test Cognitive and perceptual skills test SAT TAKS ...	Yes	NVARCHAR(50)	Yes
AssessmentForm	Identifies the form of the assessment, for example a regular versus makeup form, multiple choice versus constructed response, etc.	No	NVARCHAR(60)	No
AssessmentPeriodDescriptor	The period or window in which an assessment is supposed to be administered.	Yes	NVARCHAR(50)	Yes
ContentStandard	An indication as to whether an assessment conforms to a standard. Example: Local standard Statewide standard Regional standard Association standard School standard ...	Yes	NVARCHAR(75)	No
LowestAssessedGradeLevelType	If the test assessment spans a range of grades, then this attribute holds the lowest grade assessed. If only one grade level is assessed, then this attribute is omitted. Example: Adult Prekindergarten First grade Second grade ...	No	NVARCHAR(50)	No

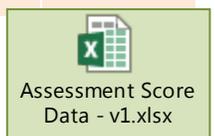
AZEDS – ASSESSMENT

MaxRawScore	The maximum raw score achievable across all assessment items that are correct and scored at the maximum.	No	INTEGER	No
RevisionDate	The month, day, and year that the conceptual design for the assessment was most recently revised substantially.	No	DATE	No
AssessmentVersion	The version identifier for the test assessment.	No	INTEGER	Yes
AssessmentIdentificationSystemType	Code for AssessmentIdentificationSystem type.	Yes	NVARCHAR(50)	No
AssessmentContentStandardAuthor	The person or organization chiefly responsible for the intellectual content of the standard.	No	NVARCHAR(255)	Yes
LanguageTypeCode	Code for Languages type.	Yes	NVARCHAR(50)	Yes
EducationOrganizationID	Education Organization Unique identifier as published by ADE	No	NVARCHAR(75)	No
NameOfInstitution	The full, legally accepted name of the institution.	No	NVARCHAR(75)	No
ProgramName	The formal name of the program of instruction, training, services or benefits available through federal, state, or local agencies.	Yes	NVARCHAR(60)	Yes
AssessmentReportingMethodType	Code for AssessmentReportingMethod type Example: ACT score Adaptive scale score Age score C-scaled scores ...	Yes	NVARCHAR(50)	Yes
MinRawScore	The minimum raw score achievable across all assessment items that are correct and scored at the minimum.	No	INTEGER	No
ScoreResultDatatype	What is the unit of measure for score result Example: Integer Decimal Percentile Range Level ...	Yes	NVARCHAR(50)	No
BeginDate	The first date the assessment is to be administered.	No	DATE	Yes
EndDate	The last date the assessment is to be administered.	No	DATE	Yes
ClassPeriodName	An indication of the portion of a typical daily session in which students receive instruction in a specified subject Example: Morning Sixth period Block period AB schedules ...	No	NVARCHAR(20)	No
ClassroomIdentificationCode	A unique number or alphanumeric code assigned to a room by a school, school system, state, or other agency or entity.	No	NVARCHAR(20)	No
LocalCourseCode	The local code assigned by the LEA or Campus that identifies the organization of subject matter and related learning experiences provided for the instruction of students.	No	NVARCHAR(20)	Yes
TermType	The name of the term in which the section is offered Example: First semester Second semester Year long Summer school ...	Yes	NVARCHAR(50)	Yes
SchoolYear	The identifier for the school year Example: 2010/11 ...	Yes	SMALLINT	Yes
PerformanceBaseConversionType	Defines standard levels of competency or performance that can be used for dashboard visualizations Example: Advanced Proficient Basic At Risk ...	Yes	NVARCHAR(50)	Yes
PerformanceMaximumScore	The maximum score to make the indicated level of performance.	No	NVARCHAR(35)	Yes

PerformanceMinimumScore	The minimum score required to make the indicated level of performance.	No	NVARCHAR(35)	Yes
LearningStandardCode	The Identifier for the specific learning standard Example: W.6.TTP ...	No	NVARCHAR(60)	No
LearningStandardMaxRawScore	The maximum raw score achievable across all assessment items for the objective that are correct and scored at the maximum.	No	INTEGER	No
LearningStandardObjectiveItem	Lower level objectives or sub-objectives that are assessed and scored.	No	INTEGER	No
LearningStandardPercentOfAssessment	The percent of the assessment that tests this objective.	No	DECIMAL(6,2)	No
LearningObjectiveCode	The Identifier for the specific learning objective in the context of a standard Example: W.6.TTP.3.a ...	No	NVARCHAR(60)	No
AssessmentItemCode	The Identifier for the specific Item/ Question Example: AZID000120	No	NVARCHAR(60)	No
AssessmentItemSequence	The sequence of Assessment Item in a test Example: 1 12 32 57 ...	No	INTEGER	No
AssessmentItemCorrectResponse	The correct response for the assessment item. Example: 1	No	NVARCHAR(20)	No
AssessmentItemExpectedTimeAssessed	The duration of time allotted for the assessment item.	No	NVARCHAR(30)	No
AssessmentItemCategoryType	Category or type of the assessment item. Example: Multiple choice Analytic Prose Extended Response ...	Yes	NVARCHAR(50)	No
AssessmentItemMaxRawScore	The maximum raw score achievable is all assessment items are correct and scored at the maximum.	No	INTEGER	No
AssessmentItemVersion	The version identifier for the test assessment.	No	INTEGER	No
AssessmentItemAcademicSubject	The description of the content or subject area (e.g., arts, mathematics, reading, stenography, or a foreign language) of an assessment.	Yes	NVARCHAR(50)	No
AssessmentItemAssessedGradeLevel	The typical grade level for which an assessment is designed. If the test assessment spans a range of grades, then this attribute holds the highest grade assessed. If only one grade level is assessed, then only this attribute is used. Example: Adult Prekindergarten First grade Second grade ...	Yes	NVARCHAR(50)	No
AssessmentItemLearningObjectiveCode	The Identifier for the specific learning objective in the context of a standard (Example: W.6.TTP.3.a) to which Item (Example: AZED000120) is associated.	No	NVARCHAR(60)	No
AssessmentMasteryPercentage	The percent of the score required to master Assessment Learning objective or Learning Standards or Assessment.	No	DECIMAL(6,2)	No

ASSESSMENT SCORE DATA

For more details refer this excel file:



Element Name	Definition	Option Set	Format	Mandatory
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AZEDS – ASSESSMENT

Vendor	Name of the vendor as agreed upon Example: ATI Pearson ...	Yes	NVARCHAR(60)	Yes
AssessmentTitle	The title or name of the assessment.	No	NVARCHAR(60)	Yes
AssessmentVersion	The version identifier for the test assessment.	No	INTEGER	Yes
EducationOrganizationID	Education Organization Unique identifier	No	NVARCHAR(75)	No
NameOfInstitution	The full, legally accepted name of the institution.	No	NVARCHAR(75)	No
SchoolYear	The identifier for the school year Example: 2010/11 ...	Yes	SMALLINT	Yes
ScoreResultDatatype	What is the unit of measure for score result Example: Integer Decimal Percentile Range Level ...	Yes	NVARCHAR(50)	Yes
LearningStandardCode	The Identifier for the specific learning standard Example: W.6.TTP ...	No	NVARCHAR(60)	Yes
LearningObjectiveCode	The Identifier for the specific learning objective in the context of a standard Example: W.6.TTP.3.a ...	No	NVARCHAR(60)	Yes
AcademicSubject	The description of the content or subject area of an assessment. Example: Arts Mathematics Reading Stenography Foreign language) ...	Yes	NVARCHAR(50)	Yes
BeginDate	The first date the assessment is to be administered.	No	DATE	Yes
EndDate	The last date the assessment is to be administered.	No	DATE	Yes
AdministrationDate	The month(s), day(s), and year on which an assessment is administered or first day of administration if over multiple days.	No	DATE	Yes
AdministrationEndDate	Assessment Administration End Date, if administered over multiple days.	No	DATE	No
AdministrationEnvironmentType	The environment in which the test was administered. Example: Electronic Classroom Testing Center ...	Yes	INTEGER	No
EventCircumstanceType	Describes event circumstance that occur before during or after the assessment session	Yes	NVARCHAR(50)	No
EventDescription	Describes special events that occur before during or after the assessment session that may impact use of results.	No	NVARCHAR(1024)	No
ReasonNotTestedType	The primary reason student is not tested. Example: Absent Refusal by parent Refusal by student Medical waiver Illness Disruptive behavior LEP Exempt ...	Yes	NVARCHAR(50)	No
RetestIndicatorType	Indicator if the test was retaken. Example: Primary administration First retest Second retest ...	Yes	NVARCHAR(50)	No
SerialNumber	The unique number of the assessment form or answer document.	No	NVARCHAR(60)	No
StudentUSI	A unique number or alphanumeric code assigned to a student by a state education agency.	No	INTEGER	Yes
WhenAssessedGradeLevel	The grade level of a student when assessed.	Yes	NVARCHAR(50)	No

AZEDS – ASSESSMENT

FirstName	A name given to an individual at birth, baptism, or during another naming ceremony, or through legal change.	No	NVARCHAR(75)	Yes
LastSurname	The name borne in common by members of a family.	No	NVARCHAR(75)	Yes
BirthDate	The month, day, and year on which an individual was born.	No	DATE	Yes
SexType	A person's gender.	Yes	NVARCHAR(50)	Yes
EthnicityType	Previous definition of Ethnicity combining Hispanic/Latino and race. Example: American Indian or Alaskan Native Asian or Pacific Islander Black, not of Hispanic origin Hispanic White, not of Hispanic origin ...	Yes	NVARCHAR(50)	Yes
MasteryPercentage	The percent of the score required to master Assessment Learning objective or Learning Standards or Assessment.	No	DECIMAL(6,2)	No
PerformanceBaseConversionType	Defines standard levels of competency or performance that can be used for dashboard visualizations. Example: Advanced Proficient Basic At Risk ...	Yes	NVARCHAR(50)	Yes
PerformanceLevelMet	Indicator of whether the student met the designated performance level.	No	BIT	Yes
AcademicSubjectScore	Subject level score if available	No	INTEGER	No
Result	The value of a meaningful raw score or statistical expression of the performance of an individual. The results can be expressed as a number, percentile, range, level, etc.	No	NVARCHAR(35)	Yes
AssessmentItemCode	The Identifier for the specific Item/ Question Example: AZID000120 ...	No	INTEGER	Yes
AssessmentItemResultType	The analyzed result of a student's response to an assessment item. Example: Correct Incorrect Met standard ...	Yes	NVARCHAR(50)	Yes
AssessmentResponse	A student's response to a stimulus on a test.	No	NVARCHAR(60)	No
RawScoreResult	A meaningful raw score of the performance of an individual on a test assessment item.	No	INTEGER	No
ResponseIndicatorType	Indicator of the response. Example: Nonscorable response Ineffective response Effective response Partial response ...	Yes	NVARCHAR(50)	Yes
TimeAssessed	The overall time a student actually spent during the assessment item.	No	NVARCHAR(30)	No

ASSESSMENT ITEM DATA

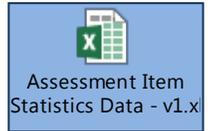


Assessment Item
Data - v1.xlsx

For more details refer this excel file:

Element Name	Definition	Option Set	Format	Mandatory
Vendor	Name of the vendor as agreed upon Example: ATI Pearson ...	Yes	NVARCHAR(60)	Yes
EducationOrganizationID	Education Organization Unique identifier	No	NVARCHAR(75)	No
NameOfInstitution	The full, legally accepted name of the institution.	No	NVARCHAR(75)	No
LearningStandardCode	The Identifier for the specific learning standard Example: W.6.TTP ...	No	NVARCHAR(60)	Yes
LearningObjectiveCode	The Identifier for the specific learning objective in the context of a standard Example: W.6.TTP.3.a ...	No	NVARCHAR(60)	Yes
AcademicSubject	The description of the content or subject area of an assessment Item. Example: Arts Mathematics Reading Stenography Foreign language ...	Yes	NVARCHAR(50)	Yes
GradeLevelTypeCode	The grade level of an Item.	Yes	NVARCHAR(50)	No
AssessmentItemCode	The Identifier for the specific Item/ Question Example: AZID000120	No	NVARCHAR(50)	Yes
Stem	Assessment Question Text	No	NVARCHAR(255)	No
AssessmentItemCategoryType	Category or type of the assessment item. Example: Multiple choice Analytic Prose Extended Response ...	Yes	NVARCHAR(50)	No
Correct Option	Correct Option of the item	No	NVARCHAR(50)	
MaxRawScore	The maximum raw score achievable for this assessment items	No	INTEGER	No
Passage Code	The Identifier that identifies aligned passage (When Items of type extended response)	No	NVARCHAR(50)	
Passage Title	Text - normally the passage title - that identifies each unique passage	No	NVARCHAR(255)	
DOK	Depth of Knowledge or Linguistic difficulty level Example: 1 2 3 ...	Yes	NVARCHAR(50)	No
FileName	Name of file associated with Assessment Item Example: Chart.png Circle.bmp ...	No	VARCHAR(255)	No
ContentType	Type of content of the item	Yes	NVARCHAR(50)	No
AssessmentItemVersion	The version identifier for the assessment. Item	No	INTEGER	Yes

ASSESSMENT ITEM STATISTICS DATA

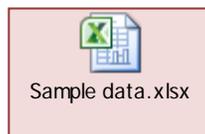


For more details refer this excel file:

Element Name	Definition	Option Set	Format	Mandatory
Vendor	Name of the vendor as agreed upon Example: ATI Pearson ...	Yes	NVARCHAR(60)	Yes
EducationOrganizationID	EducationOrganization Unique identifier	No	NVARCHAR(75)	No
NameOfInstitution	The full, legally accepted name of the institution.	No	NVARCHAR(75)	No
AssessmentItemCode	The Identifier for the specific Item/ Question Example: AZID000120 ...	No	NVARCHAR(50)	Yes
MaxRawScore	The maximum raw score achievable for this assessment items	No	INTEGER	No
AssessmentItemVersion	The version identifier for the assessment. Item	No	INTEGER	Yes
SchoolYear	The identifier for the school year Example: 2010/11 ...	Yes	SMALLINT	Yes
Status	Status of the Item for that assessment administration	Yes	NVARCHAR(50)	
AssessmentPeriodDescriptor	The period or window in which an assessment is supposed to be administered.	Yes	NVARCHAR(50)	Yes
BeginDate	The first date the assessment is to be administered.	No	DATE	Yes
EndDate	The last date the assessment is to be administered.	No	DATE	Yes
Sequencenumber	Sequence number on test Example: 1 13 26 ...	No	INTEGER	No
DomainSequencenumber	Sequence number within the domain (used when domain scored separately)	No	INTEGER	No
ItemDesignation	Item's detailed status	Yes	NVARCHAR(50)	No
CorrectAnswer	Correct Answer Key	No	NVARCHAR(50)	No
Anchoritem	Item was used as an anchor for the year.	Yes	NVARCHAR(50)	No
NCount	Total number of students in the calibration set that answered the item	No	INTEGER	No
Rasch	Difficulty parameter in Rasch 1PL model	No	INTEGER	No
ItemMean	Mean value of responses to the item. For Dichotomous items equal to the P-Value, For Polytomous items Mean of reponses.	No	INTEGER	No
Pvalue	Percent of calibration population answering the item correctly.	No	INTEGER	No
PtBiserial	Point biserial statistic for the correct answer option (Total Score)	No	INTEGER	No
Infit	Mean-Square infit statistic for Multiple Choice (MC) items	No	INTEGER	No
Outfit	Mean-Square outfit statistic for MC items	No	INTEGER	No
Core	Item was used as a core item, for the year.	Yes	NVARCHAR(35)	No
Comment	Any brief significant comments about the item	No	NVARCHAR(255)	No

SAMPLE DATA

Attached is a sample data file.



ASSUMPTIONS / CONSTRAINTS

- I. Files will be in csv format.
- II. Files for standards will be available on the state website at <URL of the site where this information will be made public will be provided at a later date>
- III. The 'csv' files need to be less than 2 GB before uploading.
- IV. Files ('csv') need to be uploaded to the Agencies secured FTP (details of which would be available at a later date)

FUTURE ENHANCEMENTS

1. Propose to publish the above csv files in XML format to facilitate assessment provider, to subscribe to an agency hosted service, and to post the same information using standards based web service protocol.
2. Implementation of an email notification service to receive notification with regards to the posted data for success, warnings, alerts and errors contact details.
3. User Interface to manage and fix simple errors that occur due to incorrect data and to reprocess the information without having to resubmit the information as a csv file or web service call.
4. Support for handling custom attributes associated to assessment scores using assessment metadata.

In case of any further clarification or to submit a change request, contact:

Poonam Singh
Project Manager
Arizona Department of Education
Information Technology
602-542-0862
Poonam.Singh@azed.gov

APPENDIX A: REFERENCES

The following table summarizes the documents referenced in this document.

Document Name and Version	Description	Location
Ed-Fi® Standard Interchange - Schemas Overview	Ed-Fi® interchange schemas define the structure of the XML that transports the data between systems.	http://www.ed-fi.org/assets/2013/11/Public-Ed-Fi-Standard-Interchange-Schema-Overview-1.2.pdf
CEDS-RTTA-elements-version3	These standards have been developed in conjunction with the SIF Association and IMS, the RTTA Consortia, states not involved in a consortium, and assessment consortia. They support the needs of the Assessment Interoperability Framework (AIF) — specific educational technology and assessment standards that can be used by any assessment implementation providers supporting RTTA.	https://ceds.ed.gov/pdf/aif-definitions-and-requirements.pdf
CEDS 3.0 Alignment Approach for Ed-Fi v1.2	The Common Education Data Standards (CEDS) is an initiative of the National Center for Education Statistics (NCES) involving a consortium of stakeholders from across the education sector. The Ed-Fi® solution uses CEDS as a reference model and aligns to it wherever possible.	http://www.ed-fi.org/assets/2013/04/Public-Ed-Fi-CEDS-3.0-Alignment-Approach-for-Ed-Fi-v1.2.pdf

APPENDIX B: KEY TERMS

The following table provides definitions for terms relevant to this document.

Term	Definition
CEDS	Common Education Data Standards
AIF	ASSESSMENT INTEROPERABILITY FRAMEWORK
LEA	LOCAL EDUCATION AGENCY
CSV (csv)	COMMA SEPARATED VALUES
MC	MULTI CHOICE