<Add Doc Header/Footer for Watson Education>

Story and Requirements Sepecification

# Whoami

I am <SomeoneChooseMyName>. I am a Curriculum Director/Partner for the <Org Name>, Washington. My school has some advanced curriculum programs in which we would like to take advantage of some of the IBM Watson Education’s offerings. As part of the offering I wish to use, my curriculum needs to be digitized into a format that the offerings can use.

My standards are uniquely organized for my district/product to meet the needs of our students. I would like the option to start from a loaded set, or import my own standards.

When I import my standard, I understand they need to be in a digitized format, but I might get them in different formats from different vendors. EdFi, IMS Global CASE, and certain tabular formats need to be considered.

When I attach a standards file, I need to be able to connect columns to the required IBM Columns. I might have an standard formatted set ( EdFi, IMS CASE ), or My formats may not be the same, and the orders might be different. I expect to be able to split columns and extract codes from specific rows based on patterns as well.

Once loaded, I need to verify that the loaded standards fit my hierarchical needs. I might need to split some standards in order to unpack their meanings into teachable statements. I might also need to re-arrange hierarchies as well. I should be able to insert and delete standards easily and be able to assign parents in the hierarchy.

As I save my standards, I expect to know if a version was saved while I have been editing and merge those changes in, so I can work with my team when multiple subject area experts are entering data.

Once editing of the standards is complete, I expect to be able to enable/publish to other IBM Watson Education services to use the standards that we create for our district.

# Display

A Tab needs to be added to the Curriculum Manager for ‘Standards’. This Tab will be setup to be the Editor

# Architecture

As with all IBM Watson Education tools, a MicroServices design is required. This will update the existing architecture for Curriculum Manager. It will add new load methods and formats for learnings standards. The output of the tooling will be a formatted file that can be used to load directly into IBM Watson’s SIH Learning Standards layouts, thus enabling it for the other IBM Watson Education Offerings that require Learning Standard content..

<Insert Micro Services Archtiecture Diagram>

# Data Design

Mongo Standards Record Layout

{ Tenant\_ID:<String>,

StandardSetName:<String>,

StandardSetJurisdiction:<String>,

SavedBy:<String>,

Data [ { STG\_STANDARDS Learning Standard Row>, < Row Metadata >} ],

MetaData { < IBM Additional MetaData > } “

}

STG\_STANDARDS will be the output and saved format of the data.

<Insert Standards\_CSV Format

# Load.

As a, I need to be able to utilize My digitized standards into Watson Education products. I need the Curriculum Manager to be able to recognize the common formats that I may have them in.

In many cases the learning standard code may need to be pulled out of the Standard Text column using one or more patterns, either combined, or different patterns.

## IBM Standard Set ( \*\*Offering, need to determine Price )

IBM Watson Education Offerings have ‘starter’ learning standard sets for a district. For certain states we, given the offering selection you can start with a pre-formatted set of standards.

Eg. The IBM Watson Education products have obtained a standard set from a vendor for use in or products. CCWA is the jurisdiction we use for this standard set for the state of Washington for 4 subjects. Mathematics, Language Arts and Reading, Social Studies and Science.

*Note: Prior to export options being available for any Client, the purchase of this offering needs to occur. Deployment to any Services or Products Past CM Require the purchase.*

*Remove from Doc: Pricing, if we have 1 client per jurisdiction, Should recover $600 for the 4 core. 2 Clients, $300, Etc, to break even. Recommend Pricing at $50/Subject/State for clients not in Watson Classroom Suite of tooling..*

*Custom Request of Acquisition of Standard set offering under a custom pricing scheme. Contact Sales Rep button. Cost to load a set Needs to be determined*

## Additional Standards Set options

If it is EdFi or CASE data formats, I expect the load function to automatically recognize the relevant columns and pre-select them, providing a view for me to verify the mapping of the data as it come’s in.

### Formatted file Options

1. Columnar file. Parent Standard specified on a row.
2. Complex Columnar file. Child Standards to the Right of their parents.
3. Basic File. Learning Standard Code and Text Only. Maybe ID and other columns. Non Hierarchical

### Defaults

Level 0 is the Jurisdication. If a Parent can’t be determined the application will set parent to the level 0 id.

Level 1 is Standard Content Record.

Level 2 and up are measurable/Assessed.

### RowStatus[] Array

The Row Status Json array will hold all values that need to be resolved before a row is ready to be written to the database. As each row is loaded certain items need to be assessed and flags raised where work is needed to complete the digitization.

* Subject/Grade/Leanring Standard Code should be unique. If it isn’t, those rows need with ‘NotUnique’ added to the RowStatus[] array. interface can show them as red. When not null.
* Required Columns. Each required column that is missing will have value in the RowStatus[] Array. ‘MissingText’,’MissingCode’,’MissingID’
* Text to Long. Mongo can store it, but when going to certain Watson systems, certain text needs to be a certain size or less. A function to evaluate the length of all columns needs to be created for the ‘TextLong’ value.

#### Messages

‘NotUnique’: Learning Standards codes should be unique by Standard Subject, Grade and Code.

‘MissingText’: Learning Standards need Text to be displayed properly in Mastery related services.

’MissingCode’: Learning Standards need Codes to be displayed properly in Mastery related services.

‘TextLong’: Learning Standard Text > 400 Characters., ( Subject, Jurisdiction, Grade, Text, Code, etc.

## Columnar Files

Columnar File import. We will need to identify columns that may be in the set for Standard ID, Standard Code, Standard Text, Hierarchical Level, Parent Code, Parent ID, Subject, Grade level.

## Complex Columnar Files

Complex File import. We will need to identify the columns for each level set of standards. If the parent data isn’t filled down through the rows that will need to be done for any merged cells. Heirarchy will be derived on the load of the file based on the levels defined in the matching. The Basic data is needed at each level. Hierachical Level Name ( type In ), Subject, Grade, Course Subject, Standard ID, Standard Code, Standard Text

## Basic Files

We will need to identify any columns they have. In many cases it may be a single column with just standard and text and rules may be needed to split them. Calculate Level determined by the number of punctuation marks in the standard code.

# Editing Standards and Hierarchy.

Layout Tabular with Scrolls

Column Headers to match STG\_STANDARDS descriptive name.

Columns

First Column Row Number.

Second Column Button with <- Arrow ( Level Change Out ) (Only active when > Level 1)

Third Column Button with -> Arrow ( Level Change in ) ( Only active not at leaf level )

Fourth Column + Data in STG\_STANDARDS Format after import/load from Mongo.

Last Column is Delete X button

Editing needs to be in a tabular format.

Select a Parent.

Click the Parent Cell of a given row. Red Highlights will be on ones that aren’t matching correctly. When clicked, cell color should highlight with a light tan background. Mouseover on each row should be set to row level, and mouseover also highlight each row with a tan background. When Click, Change Background slightly Darker Tan. If scroll while click down, selection moves with scroll. When Click released, assign selected row as parent to standard and place at the bottom of the hierarchy under that standard.

Drag a row for re-ordering.

When a the row # is selected and drug upwards or downwards, the row should move upwards or downwards through the hierarchy at the same level. It should stop at its parent and scroll the parent to the top of the box as the upper scroll limit while selected. Lower scroll limit at bottom of the Parent. Parent would have to be selected and changed in order to move to out of parent.

Level Change Ident clicked.

Push row out to next level ( 3->4, 1->2 etc). If prior row at new level, append under prior row’s parent. Else set parent to prior row if at same level. Cannot push a leaf out without inserting a standard..

Level Change Outdent clicked.

Push row up (2->1, 4->3 etc) to next level. Shift any peers at same level following standards to be children of the newly outdented rows.

Insert Standard

Double-Click on any row will insert a row. Inserted row becomes a child of the double-clicked row, standard code is copied, post-fixed with a Period, with entry in the standard Code Cell after double click operation complete.

Delete Standard. The Red X Button Is clicked on a row. If Deleted Rows Peer directly above is at same level, all children of deleted row become children of it’s Peer above. Else if Peer above is Parent, then Deleted Row’s children Promote a level under and get placed under the deleted Rows Parent.

Save/SaveAs

A Save Button will be at the Bottom of the Table. It will save the current state into Mongo. When a Standard set is loaded from mongo the date should be captured from the data set’s Object ID and confirmed prior to save that the prior saved set matched the current date. Else, post warking Save occurred from other Session Message.

Merge/Reconcile

When Save Button is clicked and prior changes have been saved, The two sets are merged together by walking down the hierarchy tree. This sets Merged ‘ Flag on Save settings so save buttons overrides Prompt to confirm.

Overwrite/Reconcile   
When Save Button is clicked, If override button clicked will overwrite any previously saved set.

# Micro-Services

Save Standards

Get Standards

Publish Standards

Export Standards