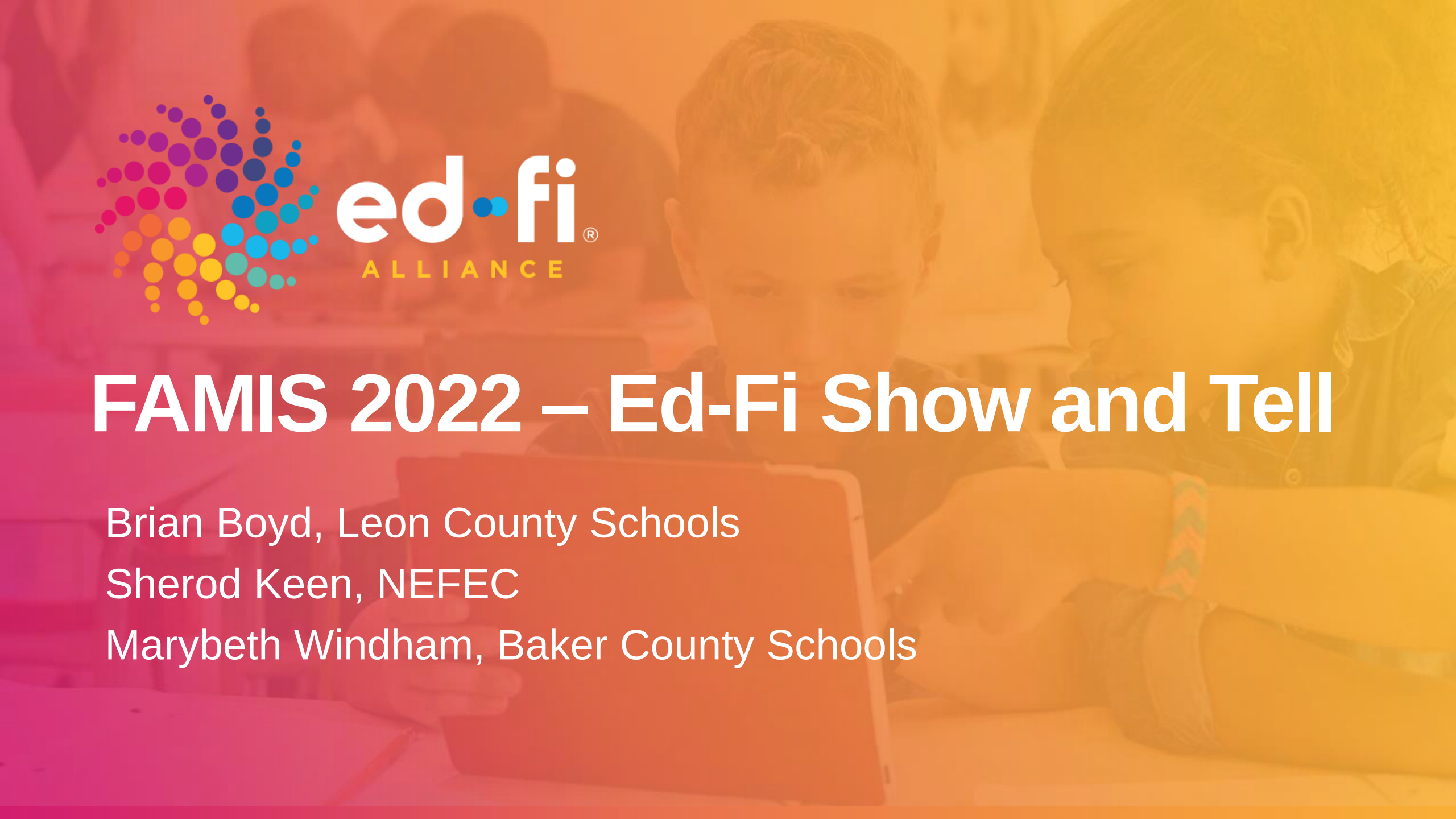
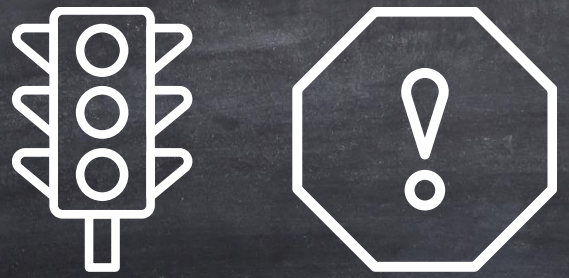


FAMIS 2022 – Ed-Fi Show and Tell

Brian Boyd, Leon County Schools
Sherod Keen, NEFEC
Marybeth Windham, Baker County Schools

Ed-Fi Data Standard

A standard makes complex systems run smoothly, coherently, and efficiently for all parties



Traffic lights and road signs

Bluetooth™

USB

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Interoperability Levels

Application Integration	*What additional application behavior is expected?*
Transport	*What protocols are used to move data*
Serialization	*How are data elements represented in transit?*
Data Model	*How do data entities relate to each other?*
Data Dictionary	*How are data elements defined?*

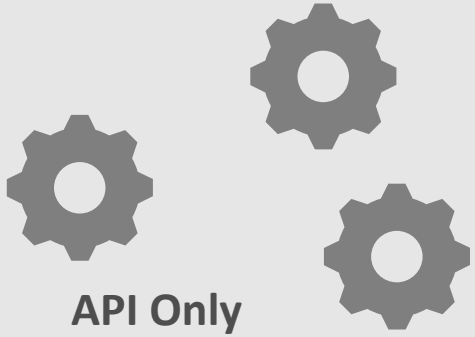
VENDOR ACCEPTANCE AND CERTIFICATION

IMPLEMENTATION

Ed-Fi ODS API

- Production-ready reference implementation

Other (Future) ODS APIs



API Only Implementations

DATA EXCHANGE

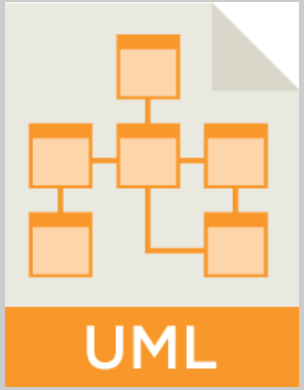
API Standards

- Deal with specific use cases
- Defined in Open API and normative guidelines
- Data modeled in JSON

XML (Bulk) Standards

- Deal with specific use cases
- Defined in XSD
- Fading away…

FOUNDATION (Conceptual)

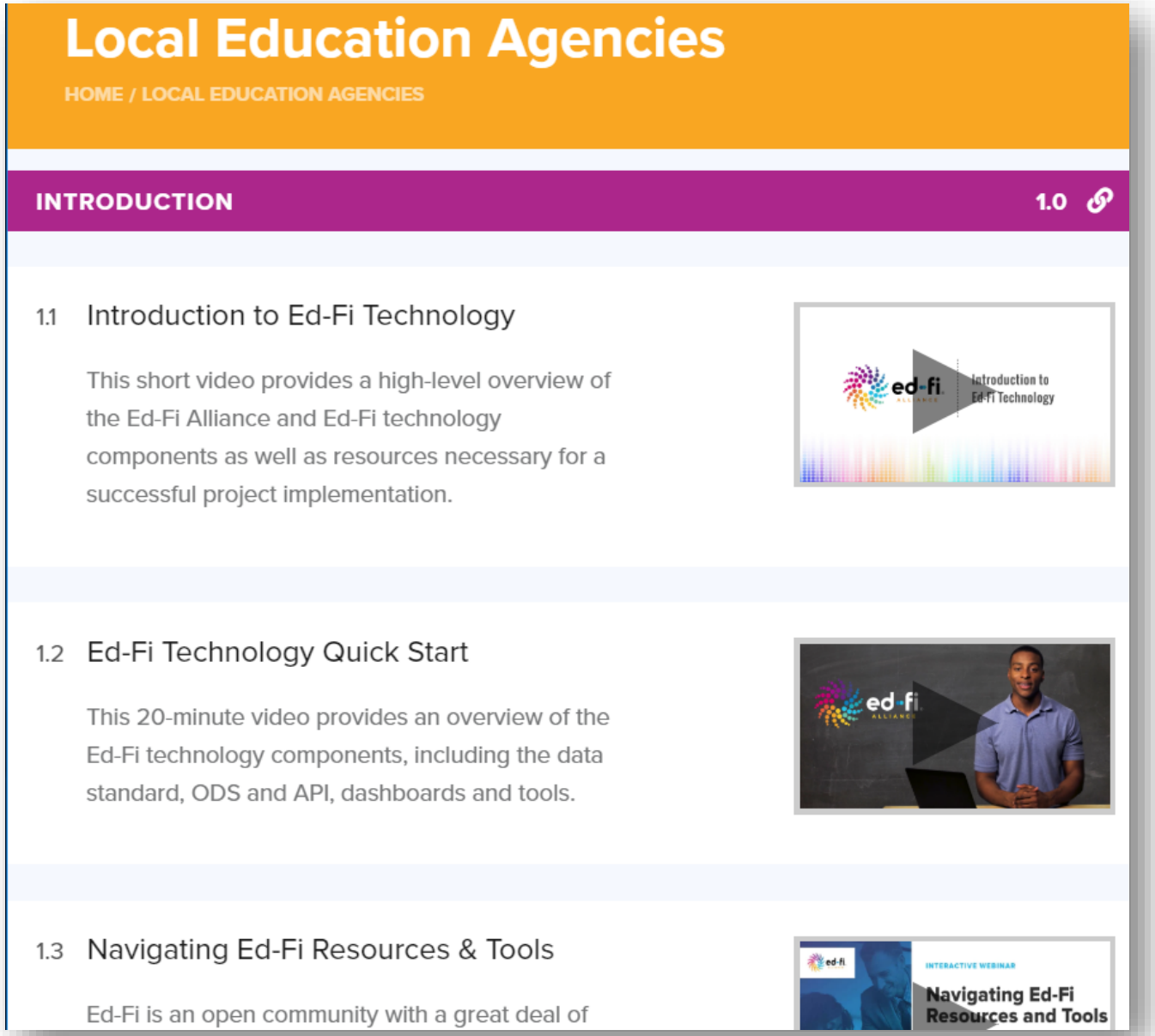


Ed-Fi Unifying Data Model

- Logical model in UML and a Data Handbook
- Foundation of all Ed-Fi technical standards
- Ensures that all standards are compatible

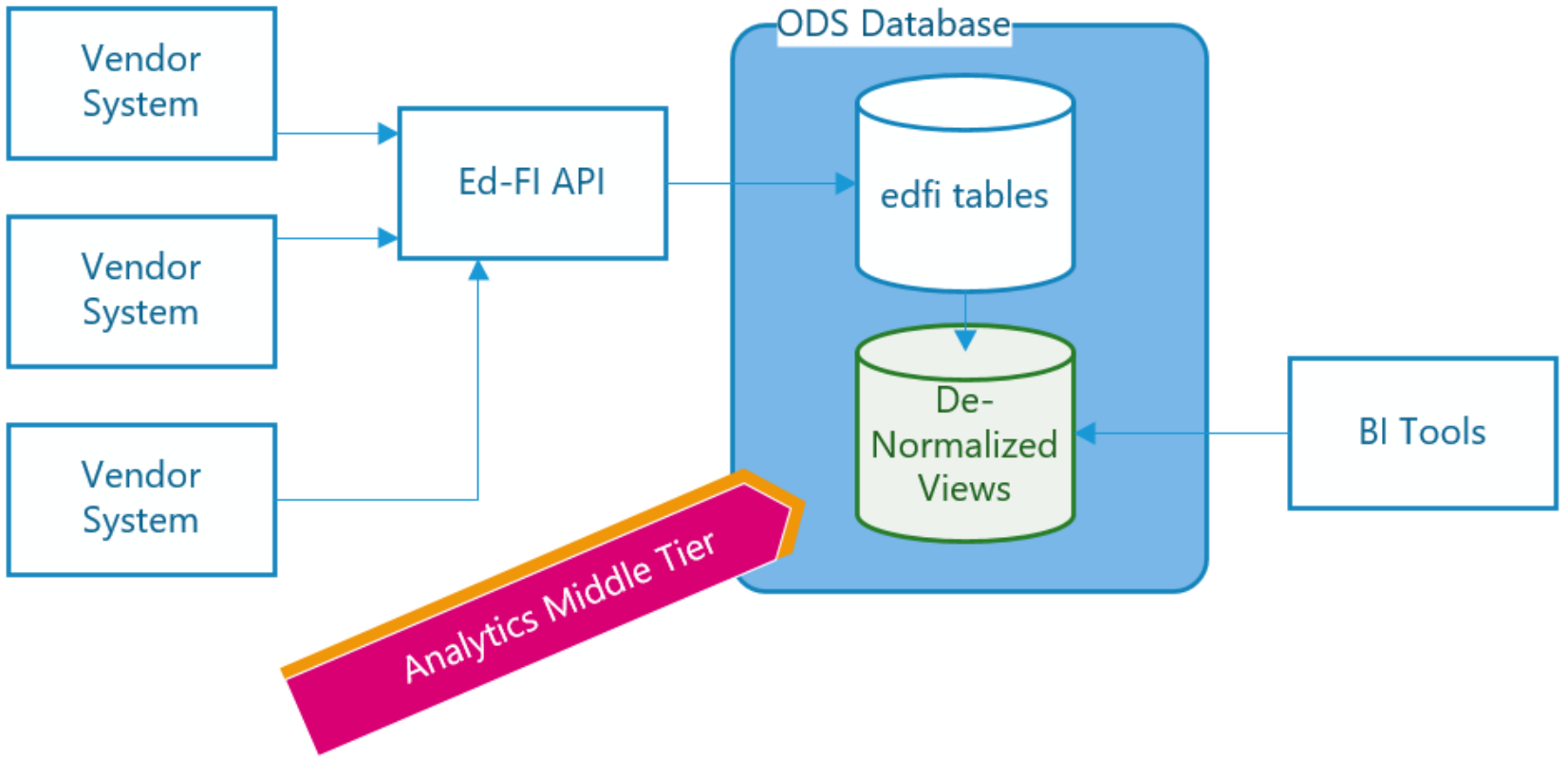
Note: the Ed-Fi ODS **database schema** is not a standard. The **logical** data model is a standard.

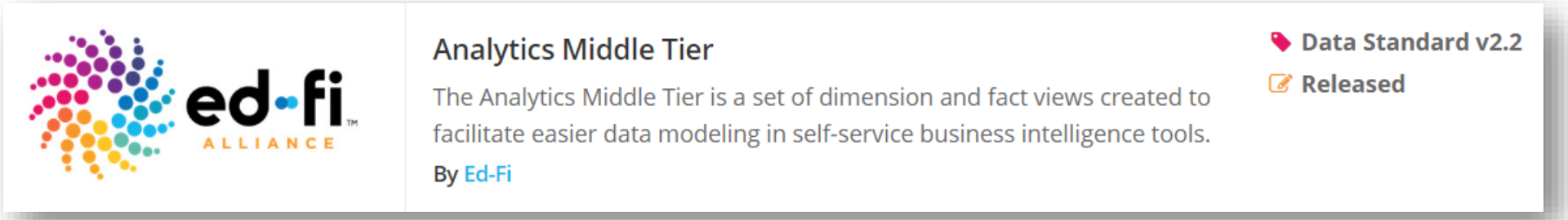
Ed-Fi Academy



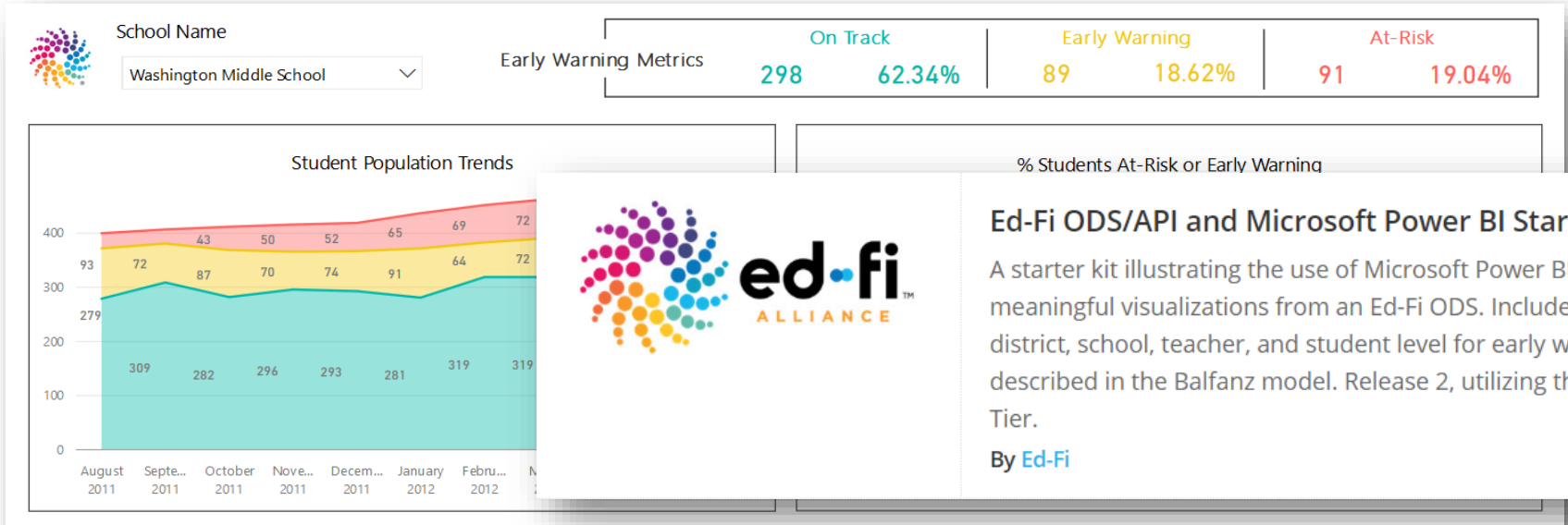
https://www.ed-fi.org/academy/

Analytics Middle Tier





BI Starter Packs



Ed-Fi ODS/API and Microsoft Power BI Starter Kit (v2)

A starter kit illustrating the use of Microsoft Power BI to create meaningful visualizations from an Ed-Fi ODS. Includes reports at the district, school, teacher, and student level for early warning indicators described in the Balfanz model. Release 2, utilizing the Analytics Middle Tier.

By Ed-Fi

Data Standard v2.0
ODS/API v2.3
Released

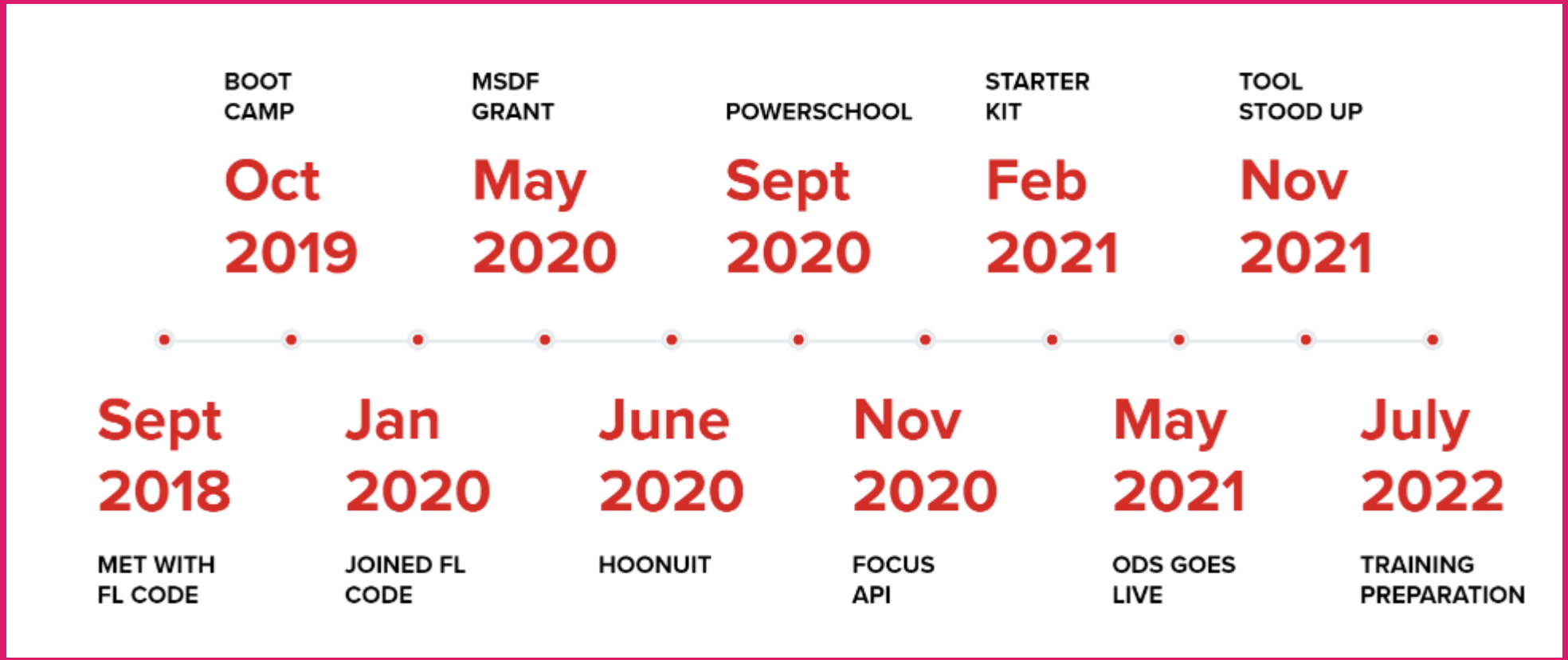
Ed-Fi Analytics Views for Google Data Studio

This project contains a set of scripts that can extract data from an Ed-Fi ODS to create analytics views in Google Sheets and Google Cloud SQL. The extracted data is transformed to meet a format that's optimal for building data dashboards in Google Data Studio. The repository also comes with Data Studio report templates that can be copied into your Data Studio instance.

By DataViz Starter Pack / InnovateEdu

Data Standard v2.2
ODS/API v2.5
Released

Our Ed-Fi Journey



Dr. Kathleen L. Rodgers

LEON COUNTY SCHOOLS IN FLORIDA • ASSISTANT SUPERINTENDENT

"Leon County's vision is to be an engaging, safe, and respectful learning environment that embraces change and produces successful learners who value diversity and are conscientious contributors to society. We use our data to provide all students with equitable access to programs, courses, highly effective teachers, technology, and other district resources free of bias based on ethnicity, race, sex, gender, or any other demographic differences across our diverse group of students."

Equitable Access for Who?

All Students Regardless of…

- Ethnicity
- Gender
- Age
- Lunch Status
- ELL
- 504
- ESE
- Pretty much everything

Data Quality

- Data Governance
- Who enters the data?
- Validation
- Standardization

Equitable Access To What?

Secondary Academic Programs:

- AP
- Dual Enrollment
- IB

Discipline Outcomes

Highly Effective or Experienced Teachers

Assessment

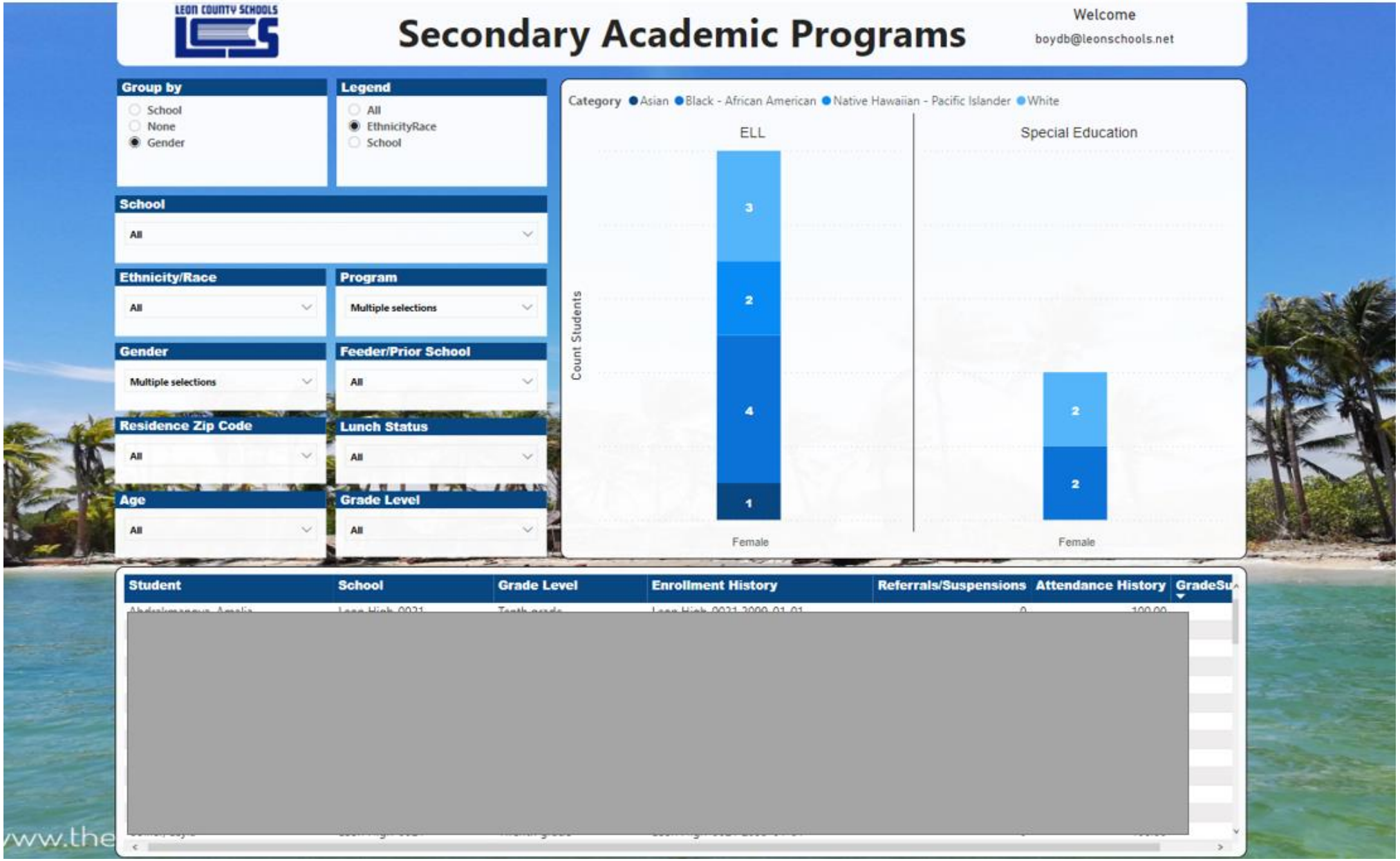
What Potential Barriers Exist?

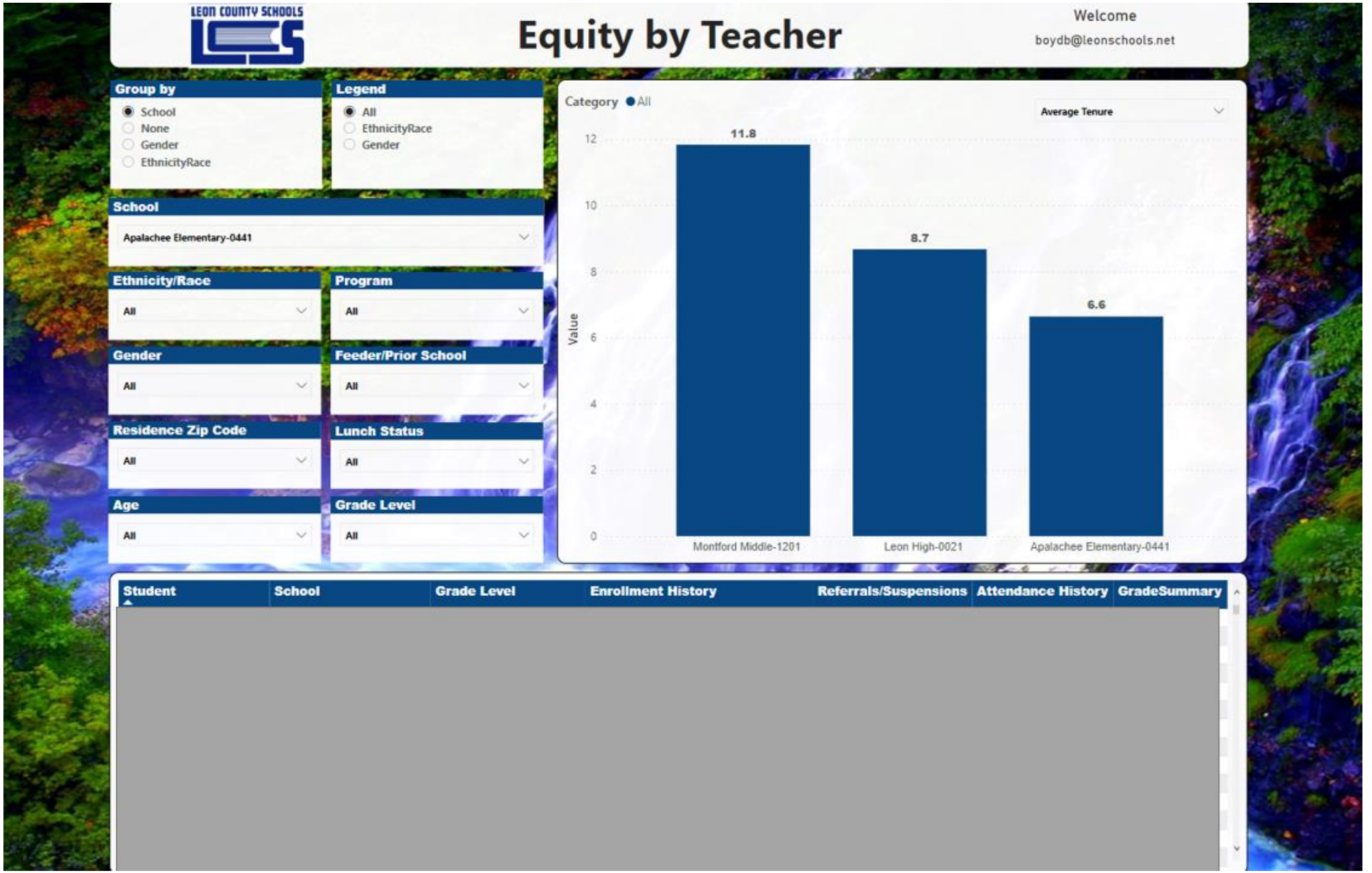
Feeder School

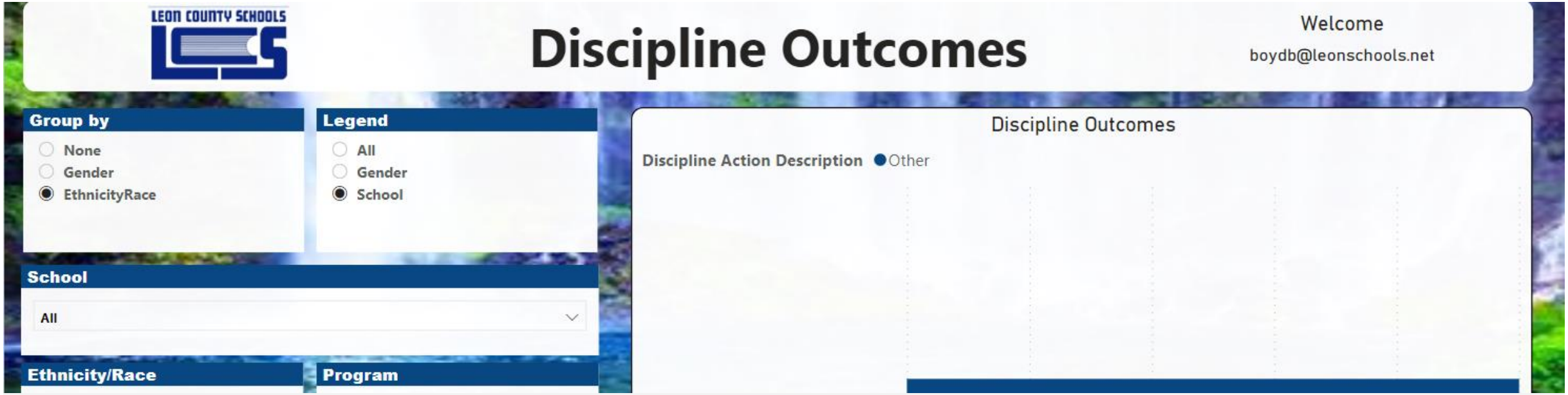
Discipline

Past Performance

Attendance


LEON COUNTY SCHOOLS
Secondary Academic Programs
Welcome
boydb@leonschools.net
Group by
School
None
Gender
Legend
All
EthnicityRace
School
School
All
Ethnicity/Race
All
Program
Multiple selections
Gender
Multiple selections
Feeder/Prior School
All
Residence Zip Code
All
Lunch Status
All
Age
All
Grade Level
All
Category Asian Black - African American Native Hawaiian - Pacific Islander White
ELL
Special Education
Count Students
3
2
4
1
2
2
Female
Female
Student
School
Grade Level
Enrollment History
Referrals/Suspensions
Attendance History
GradeSu


LEON COUNTY SCHOOLS
Equity by Teacher
Welcome
boydb@leonschools.net
Group by
School
None
Gender
EthnicityRace
Legend
All
EthnicityRace
Gender
School
Apalachee Elementary-0441
Ethnicity/Race
All
Program
All
Gender
All
Feeder/Prior School
All
Residence Zip Code
All
Lunch Status
All
Age
All
Grade Level
All
Category All
Average Tenure
Value
12
10
8
6
4
2
0
11.8
8.7
6.6
Montford Middle-1201
Leon High-0021
Apalachee Elementary-0441
Student
School
Grade Level
Enrollment History
Referrals/Suspensions
Attendance History
GradeSummary

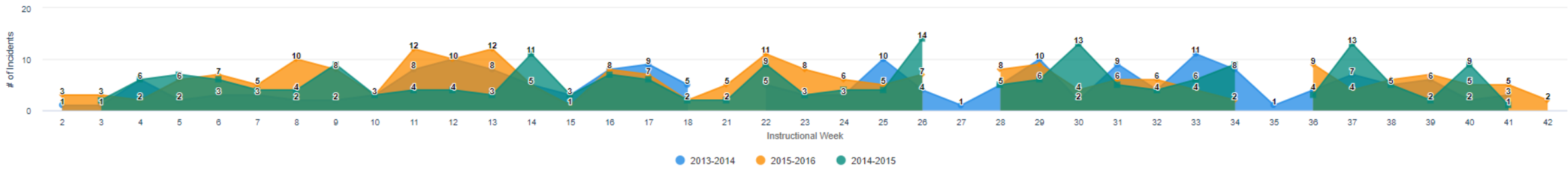


Overview of Student Behavior

Filter Data | Fox High School | Adams, MIREYA

Are incidents decreasing week over week?

The weekly trend of incident occurrences over the last 3 years.



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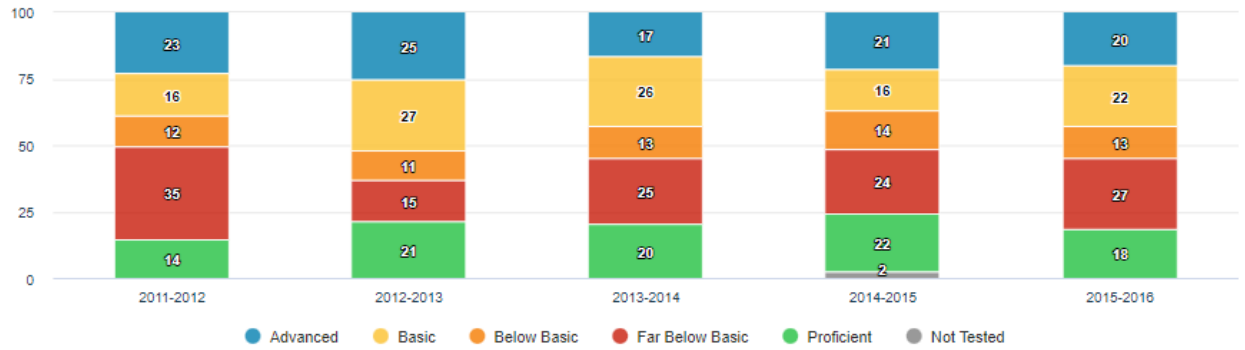
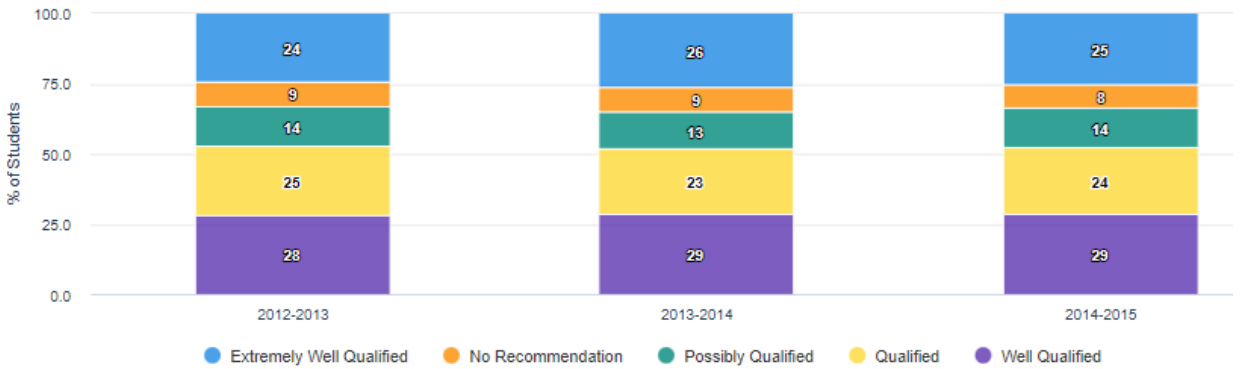
Assessments

State Achievement: Reading & Literature



AP Overall Performance by Year



Live Demo

- https://app.powerbi.com/
- https://data.leonschools.net/

NEFEC

— NORTH EAST FLORIDA —
EDUCATIONAL CONSORTIUM

The North East Florida Educational Consortium (NEFEC) has seen several districts make concrete and deliberate steps to "own their data" through **Ed-Fi** and **FLCODE**.

The standout districts are:
Baker, Bradford, Dixie, and Union.

Three areas where these districts have placed special emphasis are **Student Progress Monitoring, Early Warning Systems, and Student Discipline**.

Data visualizations and reporting are based solely on information contained in the **Operational Data Store**.

In combination with NEFEC's commitment to support districts, **Data Quality** is an area that is central to future successful initiatives.

Progress Monitoring

Mathematics Achievement and Learning Gains

Current Level

Gain Direction

- regressed	+ improved
531	300

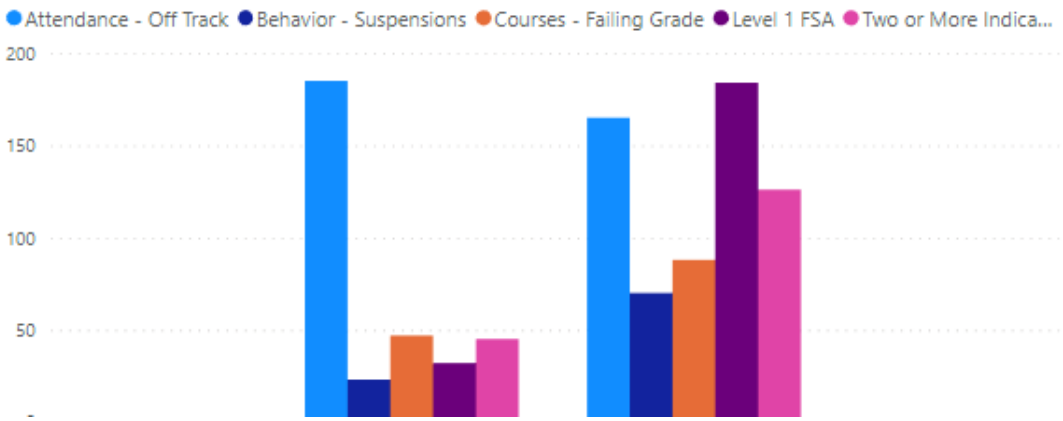
Student Name	OtherID	Grade	Prior Level	Prior Scale	Current Level	Current Scale	Gain Direction	FSA Date	Assessment	Assessed Grade
[redacted]	[redacted]		Level 5	362.00	5.00	537.00	+ improved	5/14/2021	FSA Geometry	8
[redacted]	[redacted]		Level 5	369.00	5.00	534.00	+ improved	5/14/2021	FSA Geometry	9
[redacted]	[redacted]		Level 3	310.00	2.10	312.00	- regressed	5/14/2021	FSA Mathematics	5
[redacted]	[redacted]		Level 1 High	279.00	1.30	295.00	- regressed	5/14/2021	FSA Mathematics	5
[redacted]	[redacted]		Level 4	357.00	3.00	509.00	- regressed	5/14/2021	FSA Geometry	10
[redacted]	[redacted]		Level 1 High	282.00	1.30	293.00	- regressed	5/14/2021	FSA Mathematics	5
[redacted]	[redacted]		Level 4	350.00	3.00	500.00	- regressed	5/14/2021	FSA Algebra I	9
[redacted]	[redacted]		Level 3	325.00	2.10	324.00	- regressed	5/14/2021	FSA Mathematics	8
[redacted]	[redacted]		Level 4	354.00	3.00	516.00	- regressed	5/14/2021	FSA Algebra I	9
[redacted]	[redacted]		Level 5	370.00	4.00	521.00	- regressed	5/14/2021	FSA Geometry	10
[redacted]	[redacted]		Level 4	340.00	3.00	511.00	- regressed	5/14/2021	FSA Algebra I	8
[redacted]	[redacted]		Level 3	316.00	3.00	327.00	+ improved	5/14/2021	FSA Mathematics	6
[redacted]	[redacted]		Level 5	349.00	3.00	338.00	- regressed	5/14/2021	FSA Mathematics	6

Early Warning

Attendance	Behavior	Courses	FSA Level 1	Early Warning - Students	Students Selected
Off Track	Suspensions	Failing Grade	Level 1 FSA	Two + Indicators	Enrollment
350	93	135	216	171	1186

School Name	Attendance - Off Track	Attendance Rate	Behavior - Suspensions	Courses - Failing Grade	Level 1 FSA	Two or More Indicators	Students
[redacted]	185	27.24	23	47	32	45	569
[redacted]	165	34.85	70	88	184	126	617
Total	**350**	**31.20**	**93**	**135**	**216**	**171**	**1186**

Early Warning by School



Students with One or More EWS Flags

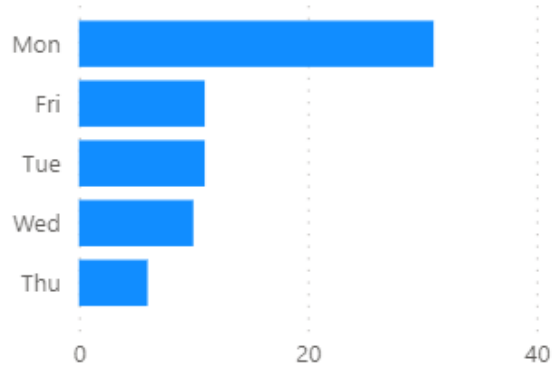
Student Name	EWS Flags	School
[redacted]	4	HIGH SCHOOL
[redacted]	4	HIGH SCHOOL
[redacted]	4	HIGH SCHOOL
[redacted]	4	HIGH SCHOOL
[redacted]	4	HIGH SCHOOL
[redacted]	4	HIGH SCHOOL
[redacted]	4	HIGH SCHOOL
[redacted]	4	HIGH SCHOOL
[redacted]	4	HIGH SCHOOL
[redacted]	4	HIGH SCHOOL
[redacted]	4	HIGH SCHOOL
[redacted]	4	HIGH SCHOOL
[redacted]	4	HIGH SCHOOL

Student Discipline

School Discipline Counts

School Name	Incidents	Offenses	Students	Actions
[redacted]	69	69	53	70
Total	**69**	**69**	**53**	**70**

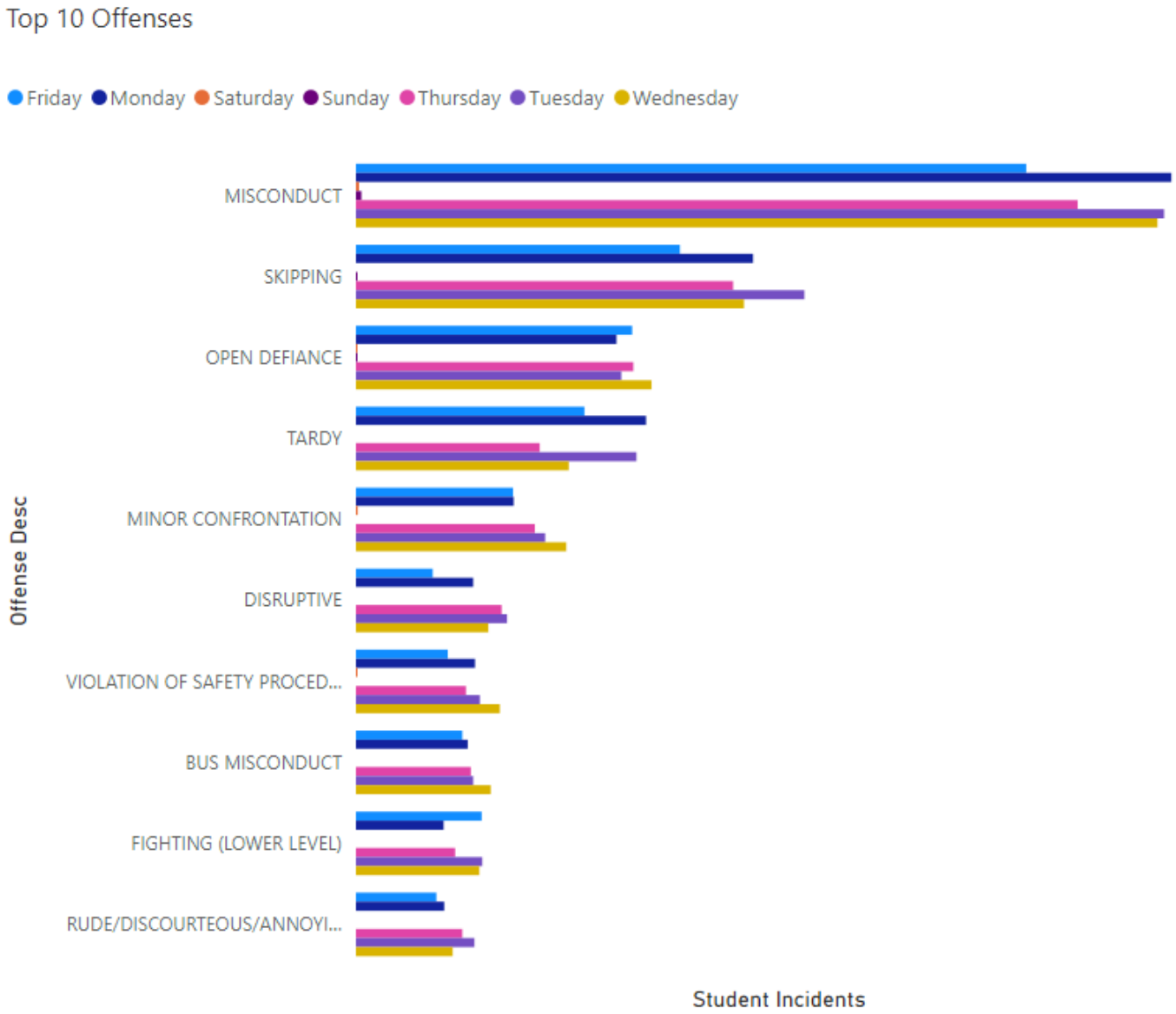
Incidents and Offenses by Day



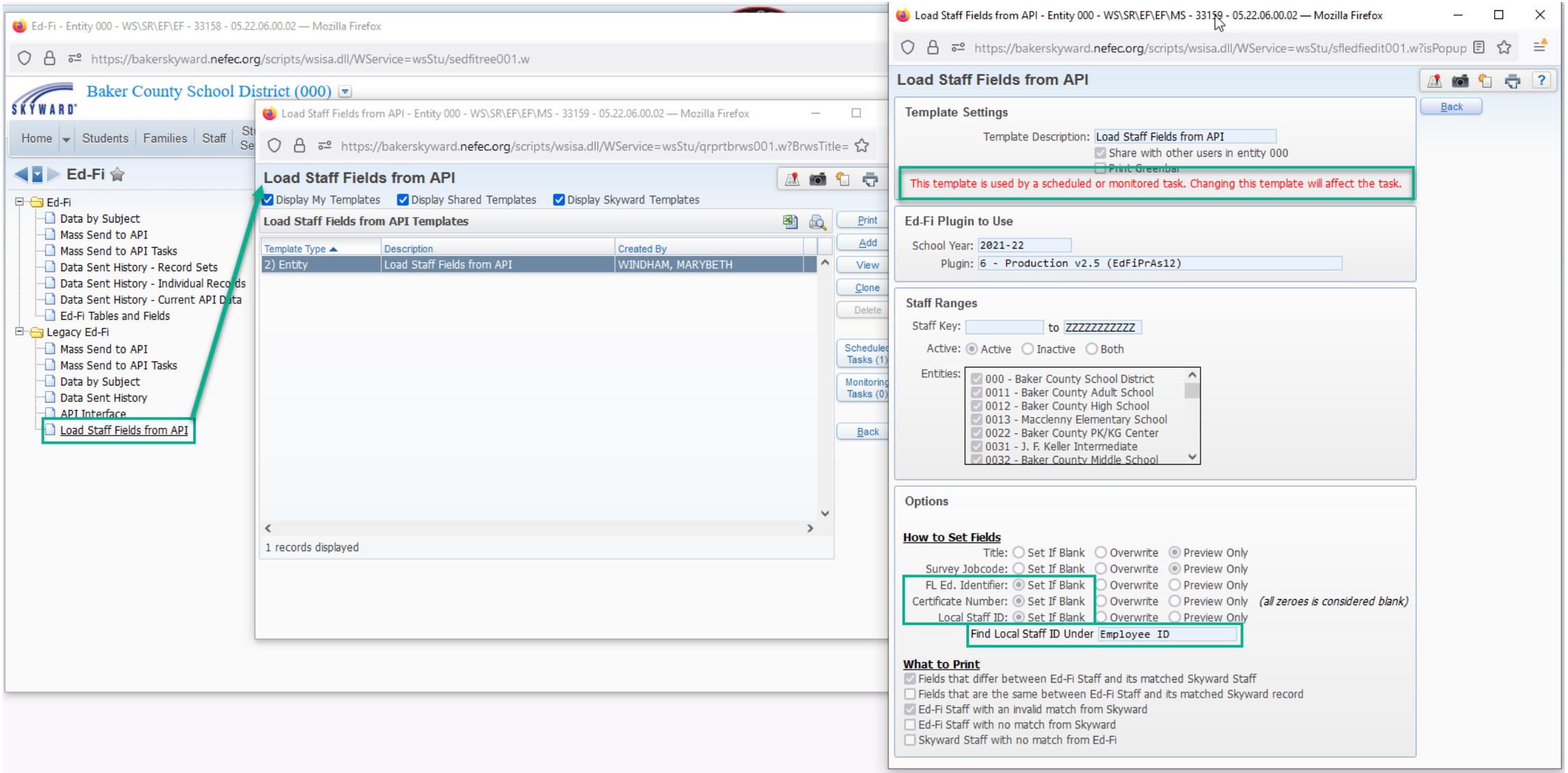
Incidents and Offenses by Day

Day	Incidents	Offenses	Students	Actions
Mon	31	31	31	31
Fri	11	11	9	12
Tue	11	11	10	11
Wed	10	10	10	10
Thu	6	6	5	6
Total	**69**	**69**	**53**	**70**

Student Discipline



HR to Student Sync Using Ed-Fi



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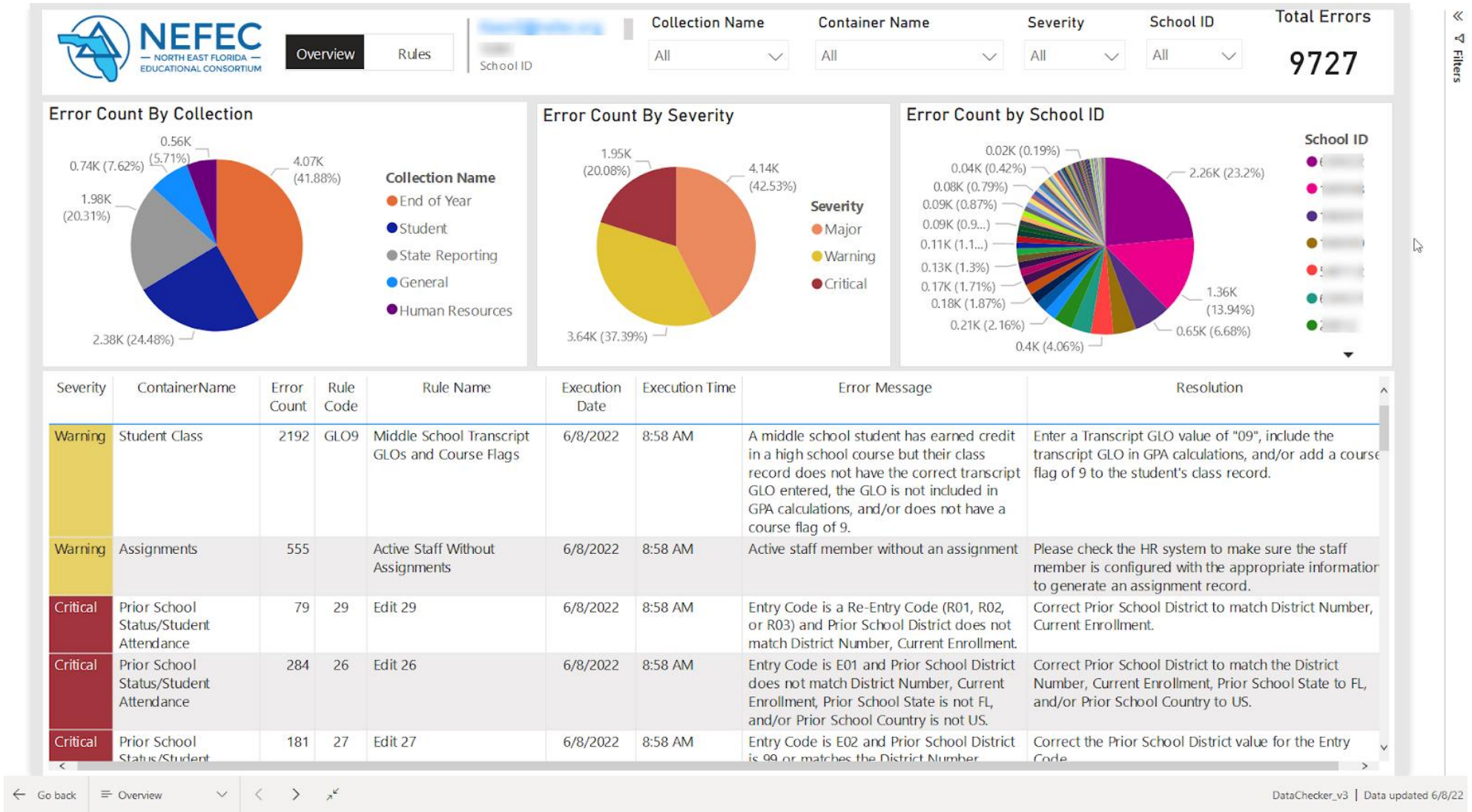
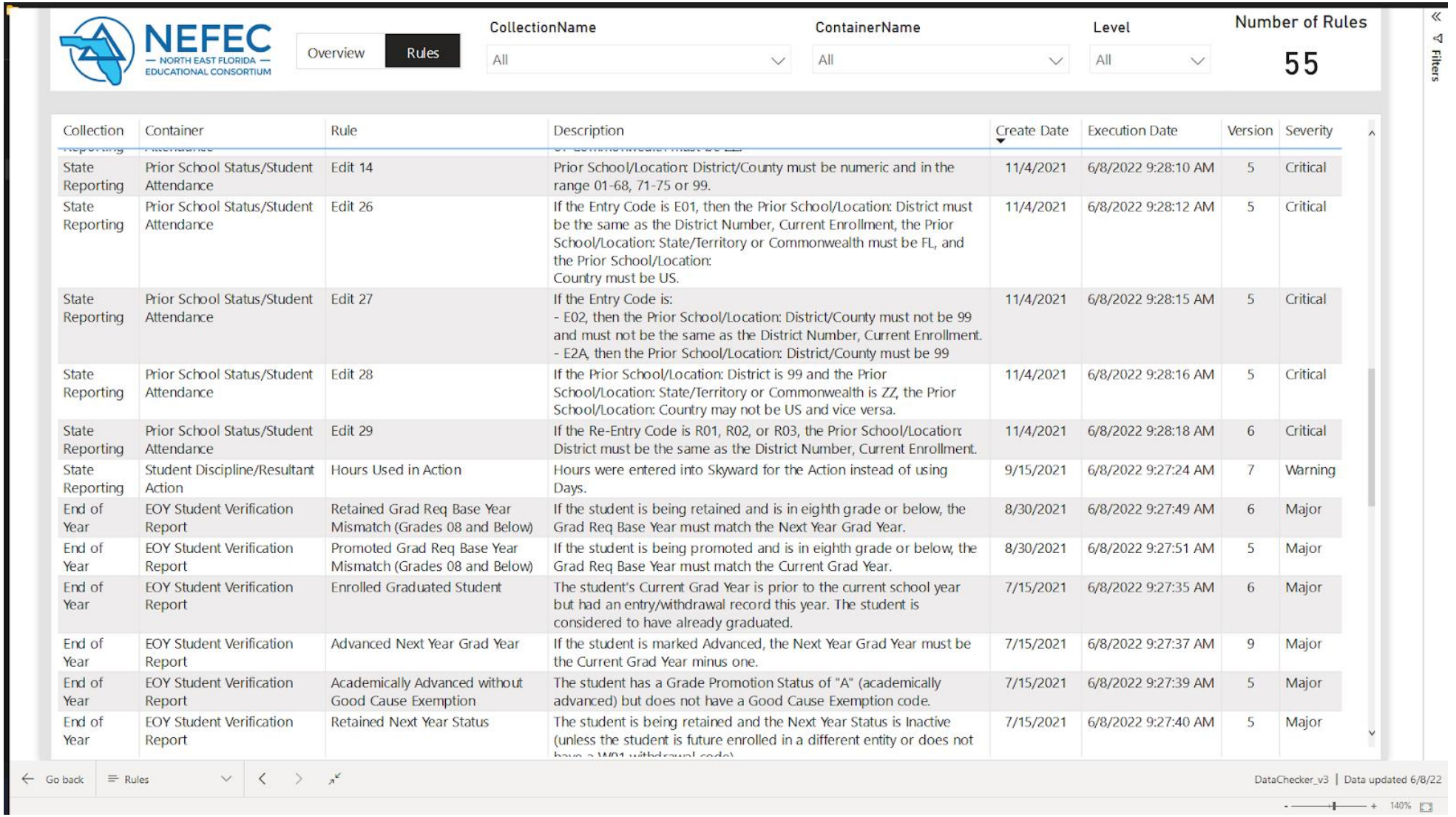
Data Quality



Data Quality Rules



Collection	Container	Rule	Description	Create Date	Execution Date	Version	Severity
State Reporting	Prior School Status/Student Attendance	Edit 14	Prior School/Location: District/County must be numeric and in the range 01-68, 71-75 or 99.	11/4/2021	6/8/2022 9:28:10 AM	5	Critical
State Reporting	Prior School Status/Student Attendance	Edit 26	If the Entry Code is E01, then the Prior School/Location: District must be the same as the District Number, Current Enrollment, the Prior School/Location: State/Territory or Commonwealth must be FL, and the Prior School/Location: Country must be US.	11/4/2021	6/8/2022 9:28:12 AM	5	Critical
State Reporting	Prior School Status/Student Attendance	Edit 27	If the Entry Code is: - E02, then the Prior School/Location: District/County must not be 99 and must not be the same as the District Number, Current Enrollment. - E2A, then the Prior School/Location: District/County must be 99	11/4/2021	6/8/2022 9:28:15 AM	5	Critical
State Reporting	Prior School Status/Student Attendance	Edit 28	If the Prior School/Location: District is 99 and the Prior School/Location: State/Territory or Commonwealth is ZZ, the Prior School/Location: Country may not be US and vice versa.	11/4/2021	6/8/2022 9:28:16 AM	5	Critical
State Reporting	Prior School Status/Student Attendance	Edit 29	If the Re-Entry Code is R01, R02, or R03, the Prior School/Location: District must be the same as the District Number, Current Enrollment.	11/4/2021	6/8/2022 9:28:18 AM	6	Critical
State Reporting	Student Discipline/Resultant Action	Hours Used in Action	Hours were entered into Skyward for the Action instead of using Days.	9/15/2021	6/8/2022 9:27:24 AM	7	Warning
End of Year	EOY Student Verification Report	Retained Grad Req Base Year Mismatch (Grades 08 and Below)	If the student is being retained and is in eighth grade or below, the Grad Req Base Year must match the Next Year Grad Year.	8/30/2021	6/8/2022 9:27:49 AM	6	Major
End of Year	EOY Student Verification Report	Promoted Grad Req Base Year Mismatch (Grades 08 and Below)	If the student is being promoted and is in eighth grade or below, the Grad Req Base Year must match the Current Grad Year.	8/30/2021	6/8/2022 9:27:51 AM	5	Major
End of Year	EOY Student Verification Report	Enrolled Graduated Student	The student's Current Grad Year is prior to the current school year but had an entry/withdrawal record this year. The student is considered to have already graduated.	7/15/2021	6/8/2022 9:27:35 AM	6	Major
End of Year	EOY Student Verification Report	Advanced Next Year Grad Year	If the student is marked Advanced, the Next Year Grad Year must be the Current Grad Year minus one.	7/15/2021	6/8/2022 9:27:37 AM	9	Major
End of Year	EOY Student Verification Report	Academically Advanced without Good Cause Exemption	The student has a Grade Promotion Status of "A" (academically advanced) but does not have a Good Cause Exemption code.	7/15/2021	6/8/2022 9:27:39 AM	5	Major
End of Year	EOY Student Verification Report	Retained Next Year Status	The student is being retained and the Next Year Status is Inactive (unless the student is future enrolled in a different entity or does not	7/15/2021	6/8/2022 9:27:40 AM	5	Major

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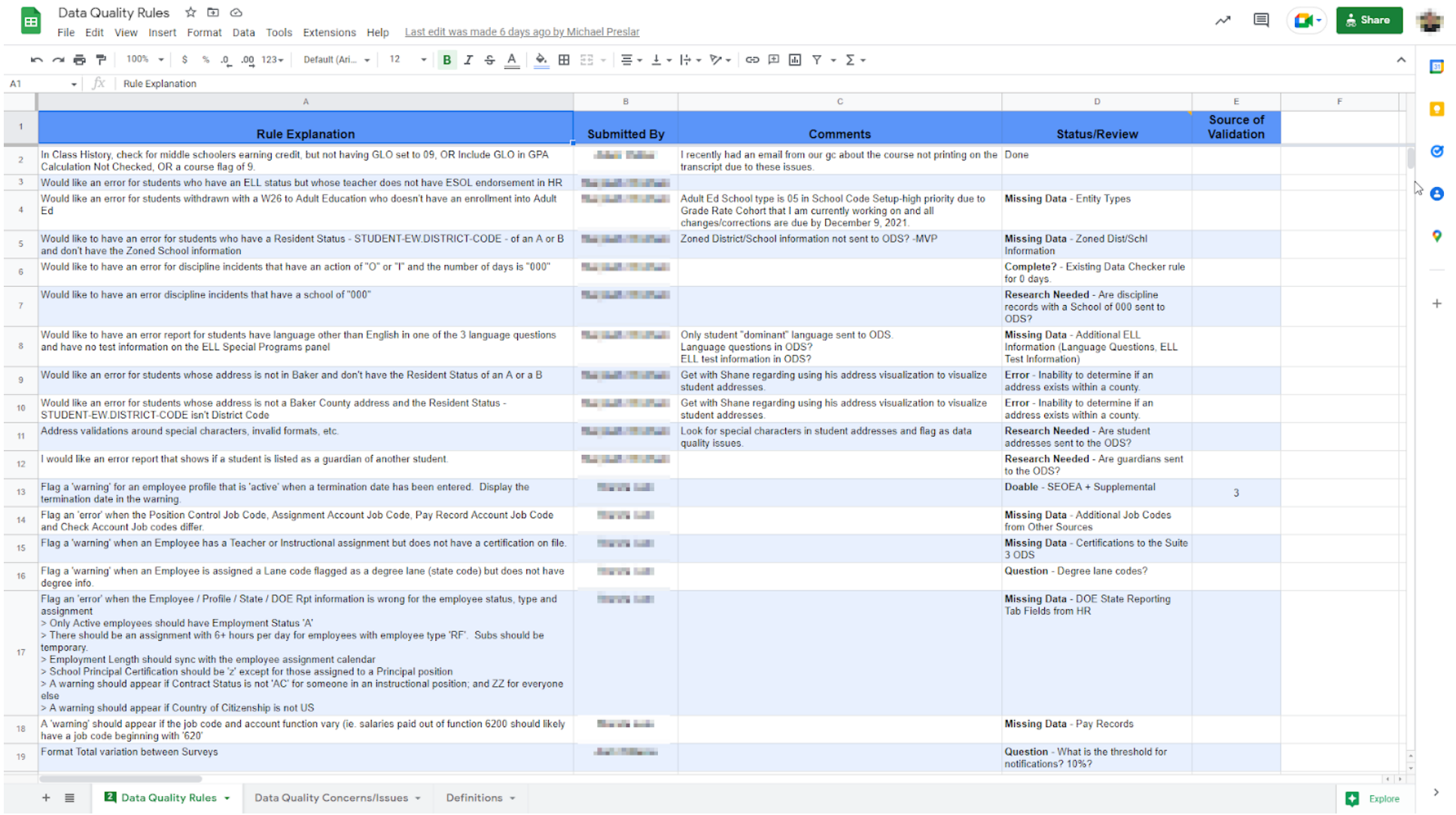
Data Quality Rule Ideas



Data Quality Rules

File Edit View Insert Format Data Tools Extensions Help Last edit was made 6 days ago by Michael Preslar

Share

A1 Rule Explanation

	Rule Explanation	Submitted By	Comments	Status/Review	Source of Validation
2	In Class History, check for middle schoolers earning credit, but not having GLO set to 09, OR Include GLO in GPA Calculation Not Checked, OR a course flag of 9.	[redacted]	I recently had an email from our gc about the course not printing on the transcript due to these issues.	Done	
3	Would like an error for students who have an ELL status but whose teacher does not have ESOL endorsement in HR	[redacted]			
4	Would like an error for students withdrawn with a W26 to Adult Education who doesn't have an enrollment into Adult Ed	[redacted]	Adult Ed School type is 05 in School Code Setup-high priority due to Grade Rate Cohort that I am currently working on and all changes/corrections are due by December 9, 2021.	**Missing Data** - Entity Types	
5	Would like to have an error for students who have a Resident Status - STUDENT-EW.DISTRICT-CODE - of an A or B and don't have the Zoned School information	[redacted]	Zoned District/School information not sent to ODS? -MVP	**Missing Data** - Zoned Dist/Schl Information	
6	Would like to have an error for discipline incidents that have an action of "O" or "I" and the number of days is "000"	[redacted]		**Complete?** - Existing Data Checker rule for 0 days.	
7	Would like to have an error discipline incidents that have a school of "000"	[redacted]		**Research Needed** - Are discipline records with a School of 000 sent to ODS?	
8	Would like to have an error report for students have language other than English in one of the 3 language questions and have no test information on the ELL Special Programs panel	[redacted]	Only student "dominant" language sent to ODS. Language questions in ODS? ELL test information in ODS?	**Missing Data** - Additional ELL Information (Language Questions, ELL Test Information)	
9	Would like an error for students whose address is not in Baker and don't have the Resident Status of an A or a B	[redacted]	Get with Shane regarding using his address visualization to visualize student addresses.	**Error** - Inability to determine if an address exists within a county.	
10	Would like an error for students whose address is not a Baker County address and the Resident Status - STUDENT-EW.DISTRICT-CODE isn't District Code	[redacted]	Get with Shane regarding using his address visualization to visualize student addresses.	**Error** - Inability to determine if an address exists within a county.	
11	Address validations around special characters, invalid formats, etc.	[redacted]	Look for special characters in student addresses and flag as data quality issues.	**Research Needed** - Are student addresses sent to the ODS?	
12	I would like an error report that shows if a student is listed as a guardian of another student.	[redacted]		**Research Needed** - Are guardians sent to the ODS?	
13	Flag a 'warning' for an employee profile that is 'active' when a termination date has been entered. Display the termination date in the warning.	[redacted]		**Doable** - SEOEA + Supplemental	3
14	Flag an 'error' when the Position Control Job Code, Assignment Account Job Code, Pay Record Account Job Code and Check Account Job codes differ.	[redacted]		**Missing Data** - Additional Job Codes from Other Sources	
15	Flag a 'warning' when an Employee has a Teacher or Instructional assignment but does not have a certification on file.	[redacted]		**Missing Data** - Certifications to the Suite 3 ODS	
16	Flag a 'warning' when an Employee is assigned a Lane code flagged as a degree lane (state code) but does not have degree info.	[redacted]		**Question** - Degree lane codes?	
17	Flag an 'error' when the Employee / Profile / State / DOE Rpt information is wrong for the employee status, type and assignment > Only Active employees should have Employment Status 'A' > There should be an assignment with 6+ hours per day for employees with employee type 'RF'. Subs should be temporary. > Employment Length should sync with the employee assignment calendar > School Principal Certification should be 'z' except for those assigned to a Principal position > A warning should appear if Contract Status is not 'AC' for someone in an instructional position; and ZZ for everyone else > A warning should appear if Country of Citizenship is not US	[redacted]		**Missing Data** - DOE State Reporting Tab Fields from HR	
18	A 'warning' should appear if the job code and account function vary (ie. salaries paid out of function 6200 should likely have a job code beginning with '620'	[redacted]		**Missing Data** - Pay Records	
19	Format Total variation between Surveys	[redacted]		**Question** - What is the threshold for notifications? 10%?	

Data Quality Rules | Data Quality Concerns/Issues | Definitions | Explore

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Questions?