Putting Data to Work to Close Student Achievement Gaps

August 2023

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Idaho Digital Learning Background

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Idaho Digital Learning & Quality Matters

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The Problem

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What we want from teachers when we provide Data

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What teachers often feel when we provide Data

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Began with a partnership and a question

Given data from the first two weeks of classes who is going to fail?

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Results

84%

accuracy in predicting failures.

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The Questions

What good does that do?

How do we get useful data to teachers?

Why were these students selected?

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Lesson Learned 1

Know the actionability of the results.

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Lesson Learned 2

Machine learning must focus on actionable results. The move from informational to actionable data.

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Lesson Learned 3

We must store data in a way that makes data connections simple, accurate, and secure

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A New Purpose

We must focus on actionable results. The move from informational to actionable data.

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Categories of Data

Academic

Behavior

Perception

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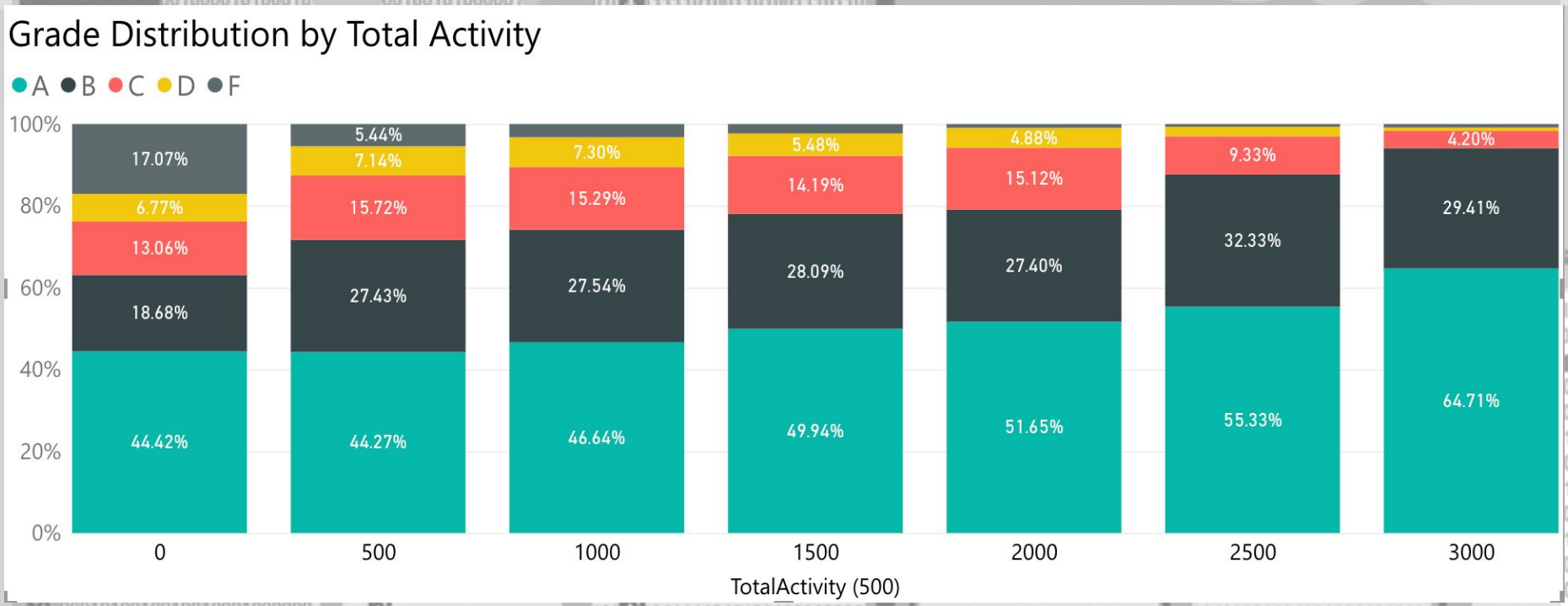
Activity - Impact on final grade

NSQ Connection: Standard A2



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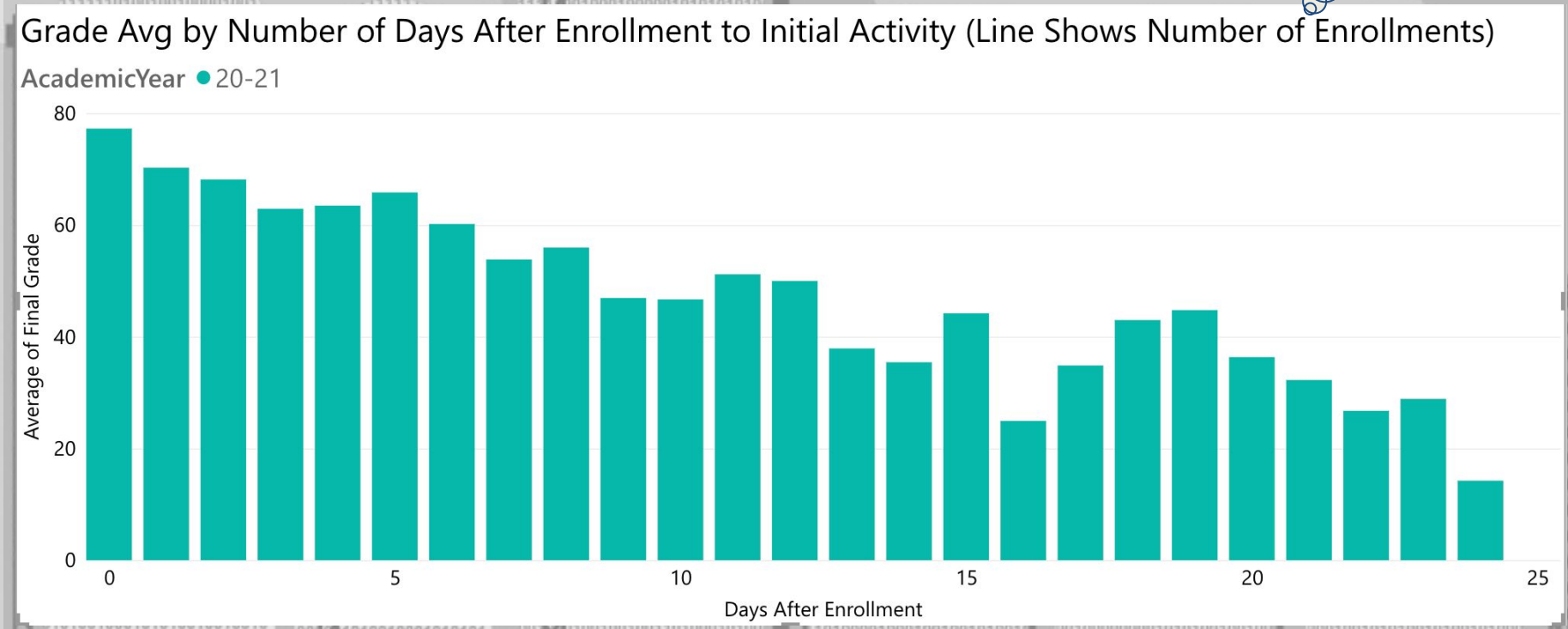
Activity - Impact of Time

NSQ Connection: Standard A2



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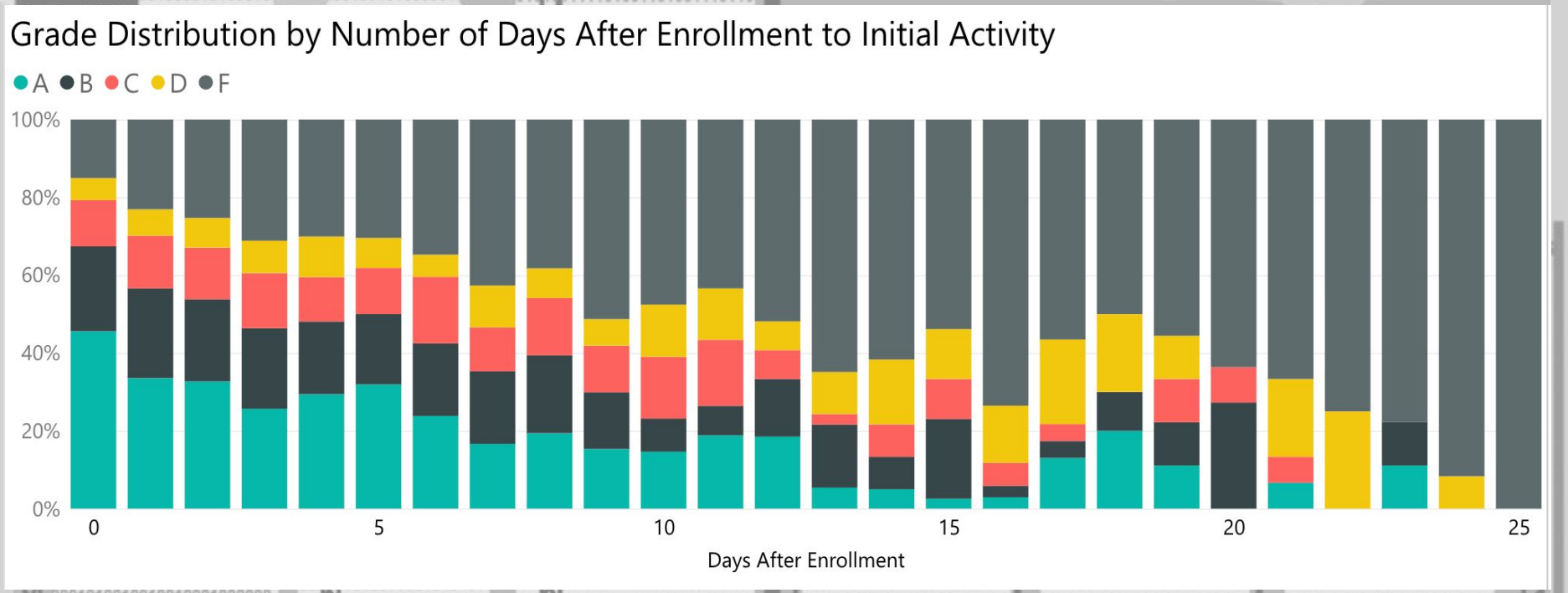
Activity - Impact of Time

NSQ Connection: Standard A2



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The Questions

What good does that do?

How do we get useful data to teachers?

How do we use this data to help student?

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The Answer

clarity

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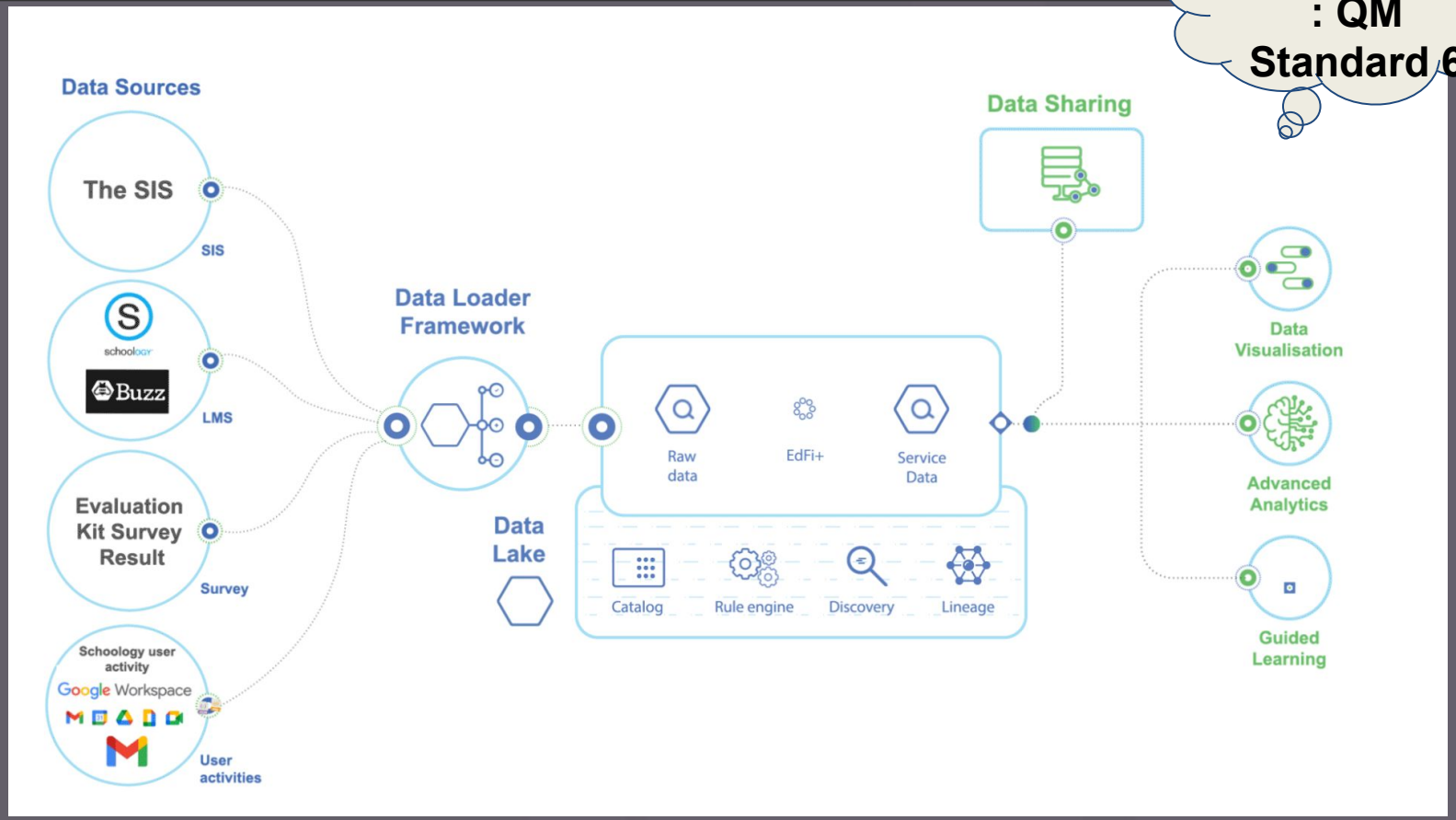
Clarity - GCS Platform

QM Connection : QM Standard 6



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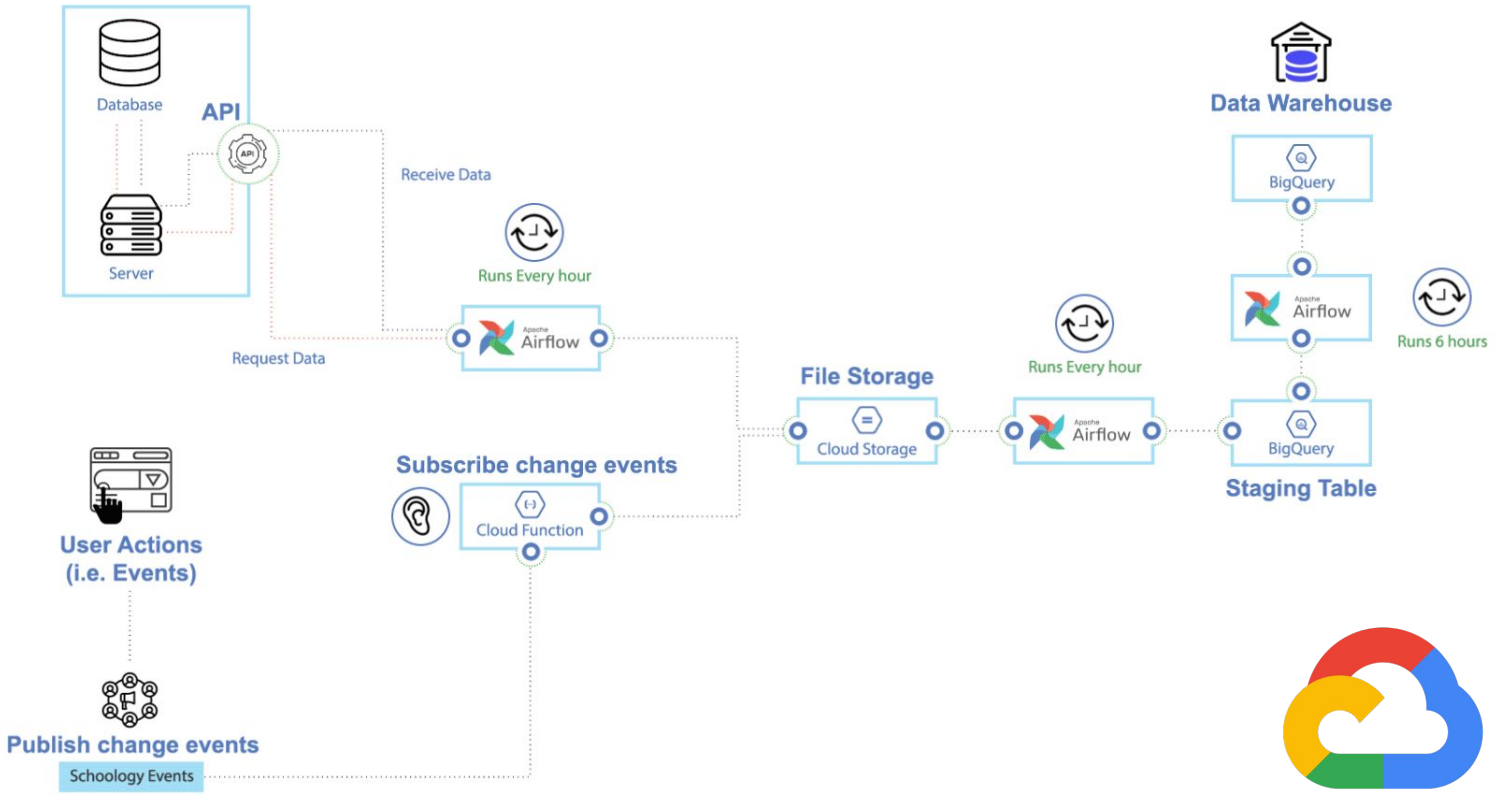
Clairity Architecture - ETL Process



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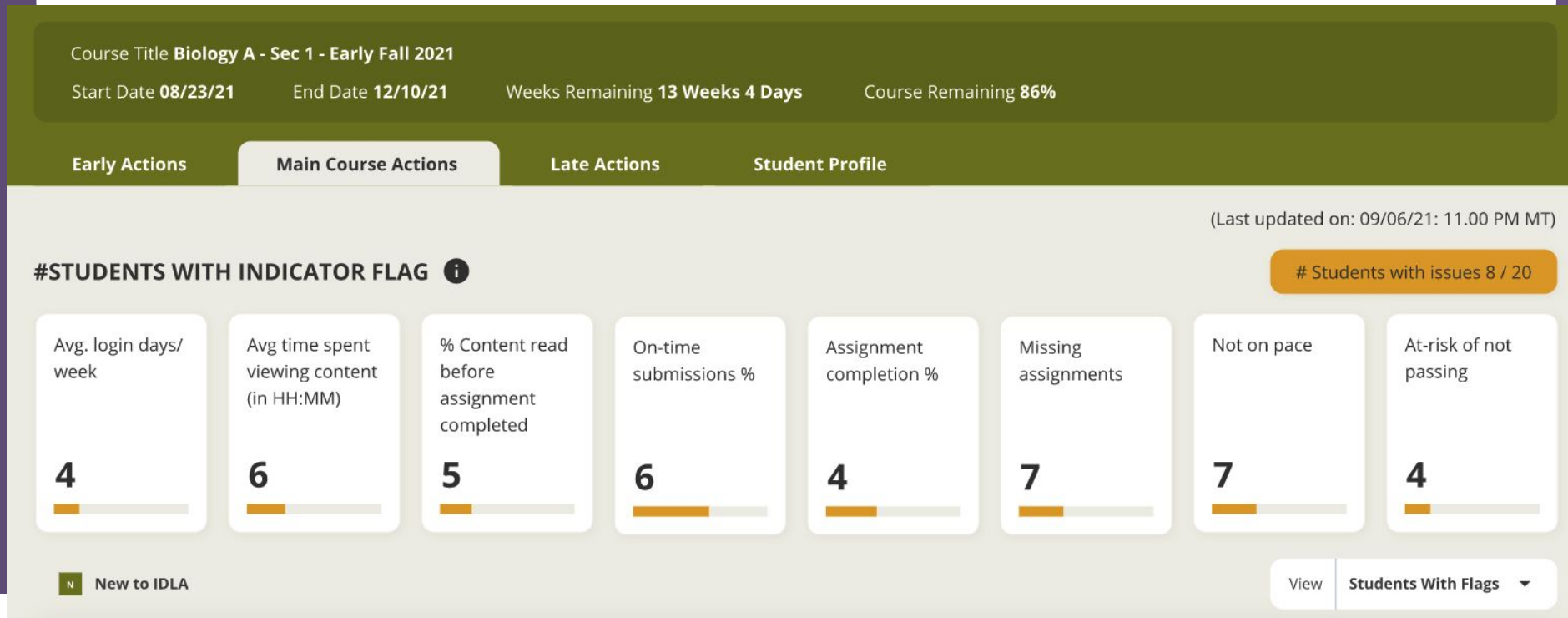
Teacher Dashboard

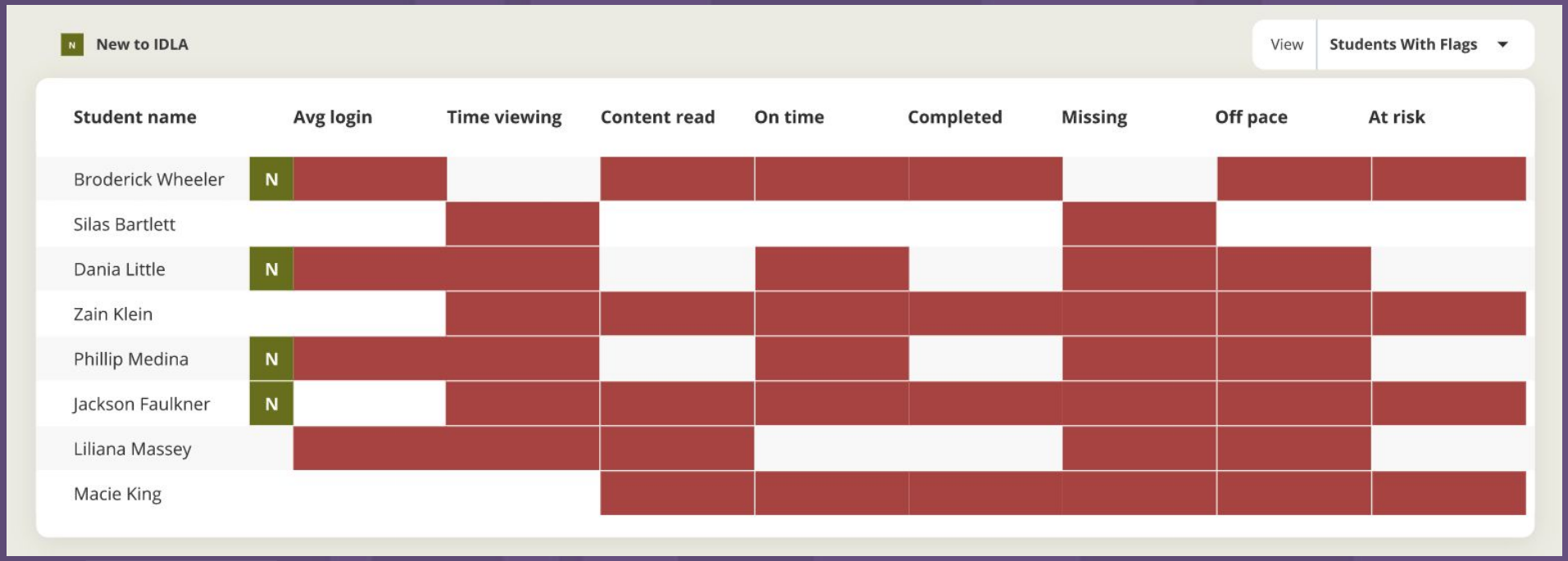
NSQ Connection: Standard A6

*"I also like the scorecards … Within a matter of moments, I can see **how many students are at risk of not passing** or how many students are falling behind. This kind of accessibility is very valuable when gauging classroom success and **instructional changes/interventions**."*



Teacher Dashboard

*"It was so nice having a **single place to locate information about students [at a course level]**. I like seeing their activity and a quick log of their work."*



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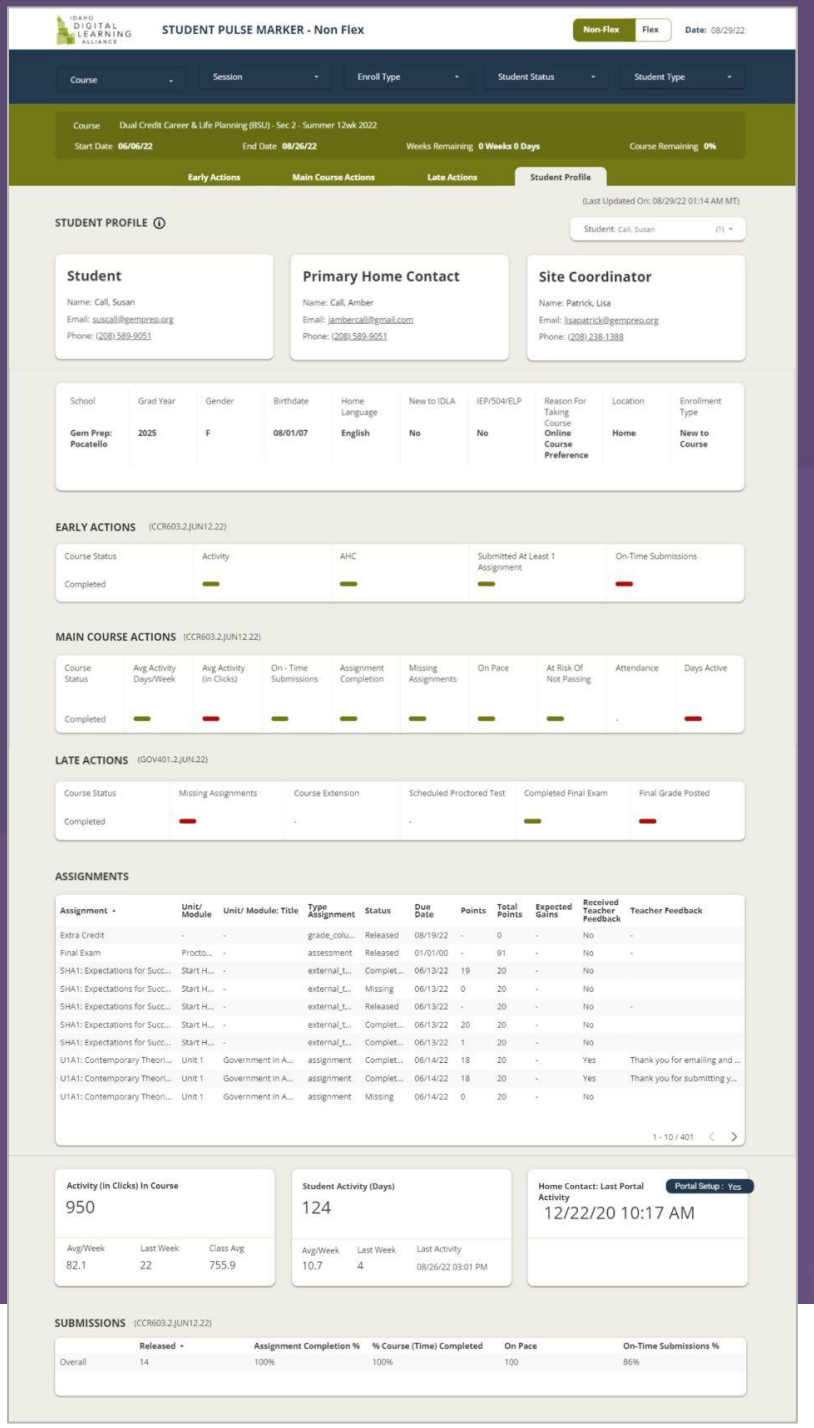
Teacher Dashboard

*"I spent most of my time in the Student Profile section. This page was very slick. I really liked having everything **clearly presented on one page**. When on this page, it is useful to quickly scan the Main Course Actions section and see green or red bars."*



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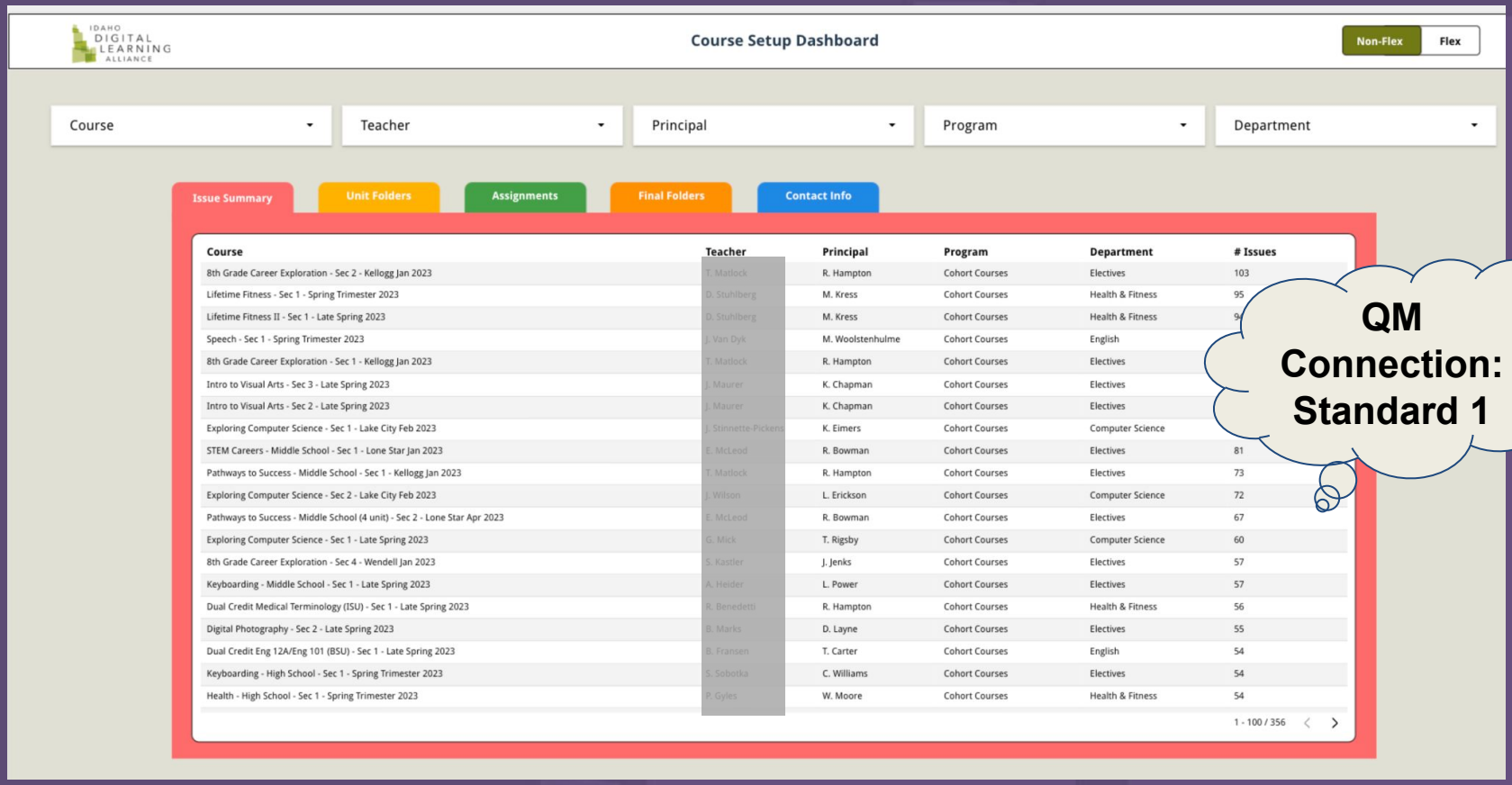
Course Setup Dashboard - Data Quality



QM Connection: Standard 1

				Default value:	Coursework	10	1		1		
Issue Area	course_name	section_r	session_name	Assignment	grading_category_	max_score	weight	category_weight	is_published	program_type_nar	Section
assessment_max_score	Astronomy	1	Late Spring 2023	SHA2: Academic Honesty Contract	Coursework	100	1	80	1	Cohort	
assessment_max_score	Astronomy	2	Late Spring 2023	SHA2: Academic Honesty Contract	Coursework	100	1	80	1	Cohort	
assessment_weight	Intro to Culinary Arts	2	Early Spring 2023	SHA2: Academic Honesty Contract	Coursework	10	0.1	80	1	Cohort	
grading_category_name	Career Math B	1	Late Spring 2023	SHA1: Expectations for Successful	Course Completion	20	1		1	Cohort	
grading_category_name	Dual Credit Psychology (CSI)	1	Early Spring 2023	SHA1: Expectations for Successful	Course Completion	20	1		1	Cohort	
grading_category_name	Dual Credit Psychology (CSI)	2	Early Spring 2023	SHA1: Expectations for Successful	Course Completion	20	1		1	Cohort	
grading_category_name	Dual Credit Psychology (CWI)	2	Late Spring 2023	SHA1: Expectations for Successful	Course Completion	20	1		1	Cohort	
grading_category_name	Integrated Math 1B	1	Early Spring 2023	SHA1: Expectations for Successful	Course Completion	20	1		1	Cohort	
grading_category_name	Integrated Math 1B	1	Early Spring 2023	SHA2: Academic Honesty Contract		10	1		1	Cohort	

QM Connection to Clarity

Course Name: Math 7A
Standards: Idaho Content Standards

Unit 3: Measurement

Idaho Standards	Unit Objectives
7.RP.1: Compute unit rates associated with ratios of fractions, including ratios of lengths, areas, and other quantities measured in like or different units 7.RP.2: Recognize and represent proportional relations between quantities	• use a given measurement to find an unknown measurement. • identify the special cases when converting in units of measure.
Lesson 1: US Units of Measure	
Lesson Objectives 1. identify the US customary units of measure ○ correlation: 7.RP.2 2. convert within the US customary units of measure ○ correlation: 7.RP.1, 7.RP.2	Assessments • Objective 1: U3A1, U3L1 activity • Objective 2: U3A1, U3L1 activity

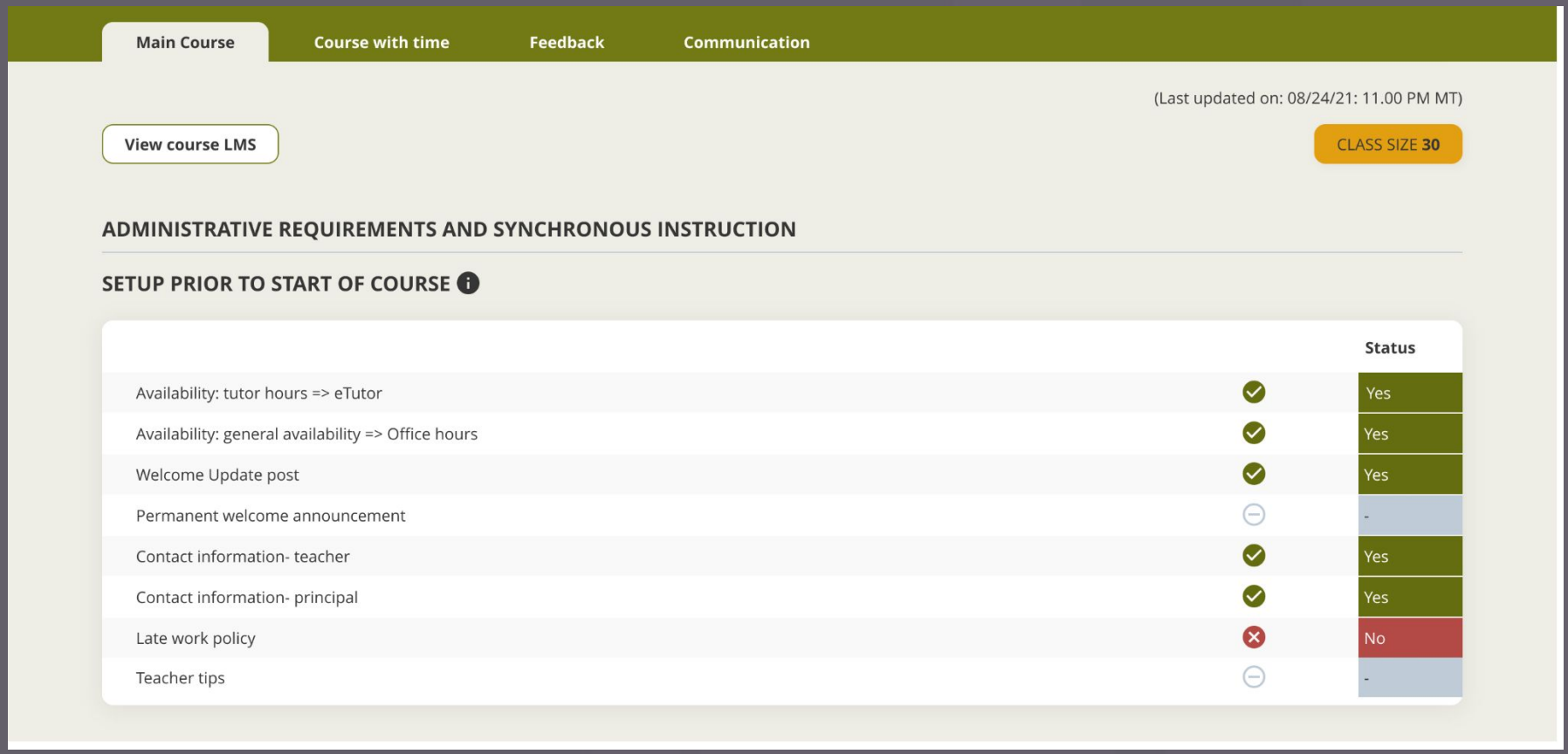
QM

- **Style Guide**
- **Standardized Course Design Structure**
- **Standardized Naming Convention**

Clarity

- **Common data point**
- **Business rules that allowed for data thresholds & triggers**
- **Standardization paves the way for machine Learning**

Supervision Dashboards



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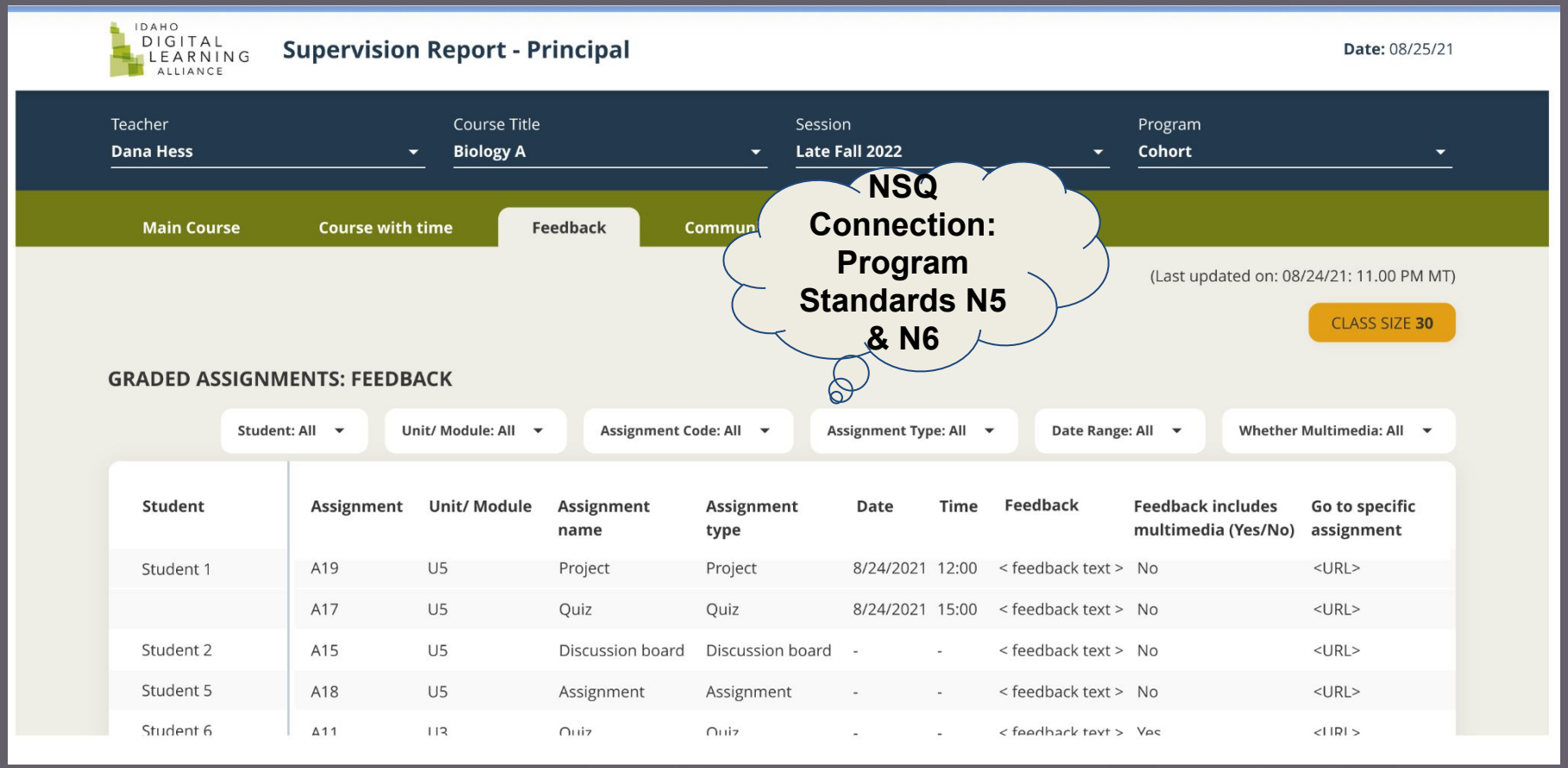
Supervision Dashboards - Data for coaching



Student	Assignment	Unit/ Module	Assignment name	Assignment type	Date	Time	Feedback	Feedback includes multimedia (Yes/No)	Go to specific assignment
Student 1	A19	U5	Project	Project	8/24/2021	12:00	< feedback text >	No	<URL>
	A17	U5	Quiz	Quiz	8/24/2021	15:00	< feedback text >	No	<URL>
Student 2	A15	U5	Discussion board	Discussion board	-	-	< feedback text >	No	<URL>
Student 5	A18	U5	Assignment	Assignment	-	-	< feedback text >	No	<URL>
Student 6	A11	U3	Quiz	Quiz	-	-	< feedback text >	Yes	<URL>

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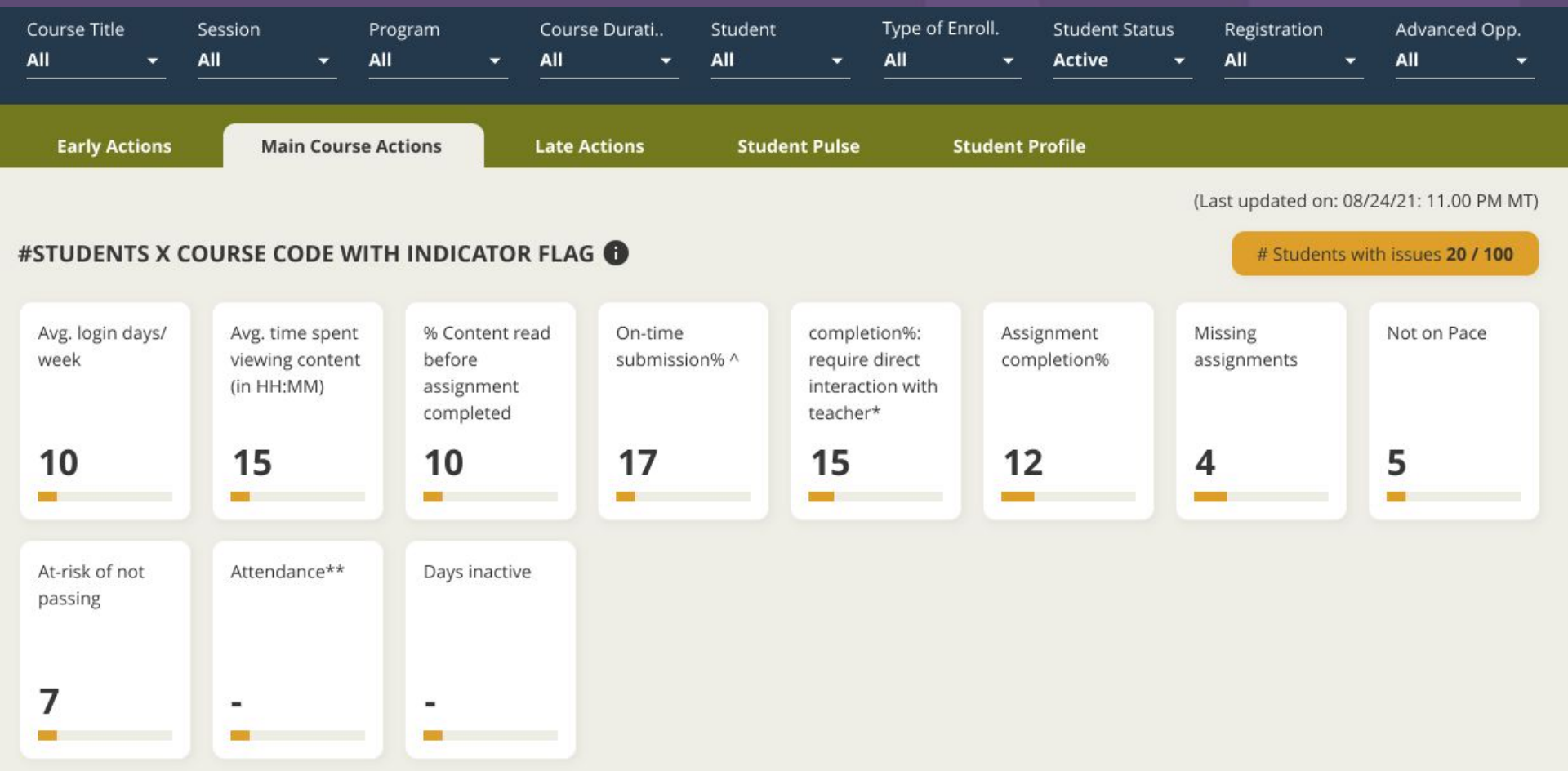
Site Coordinator Dashboard - Data for support



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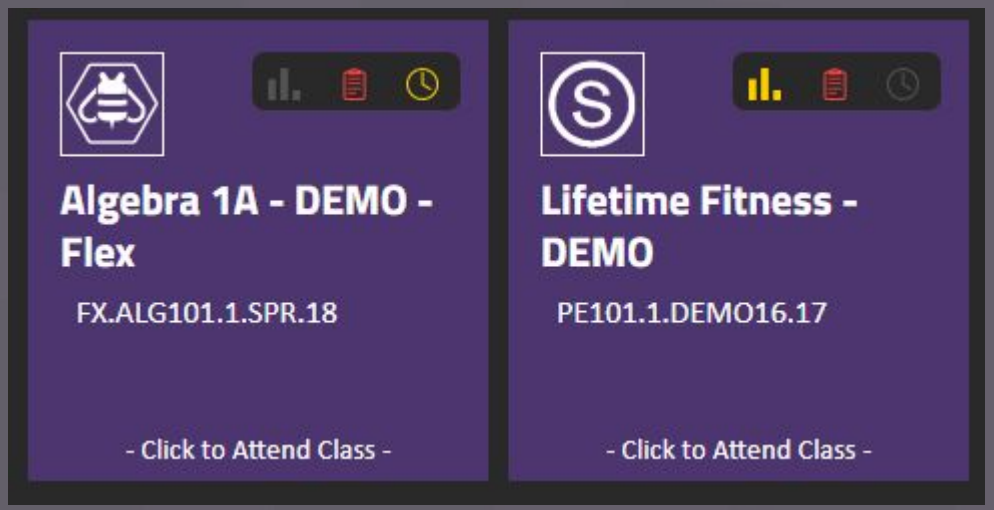
Student - Data for Nudges



QM Connection: Standard 6

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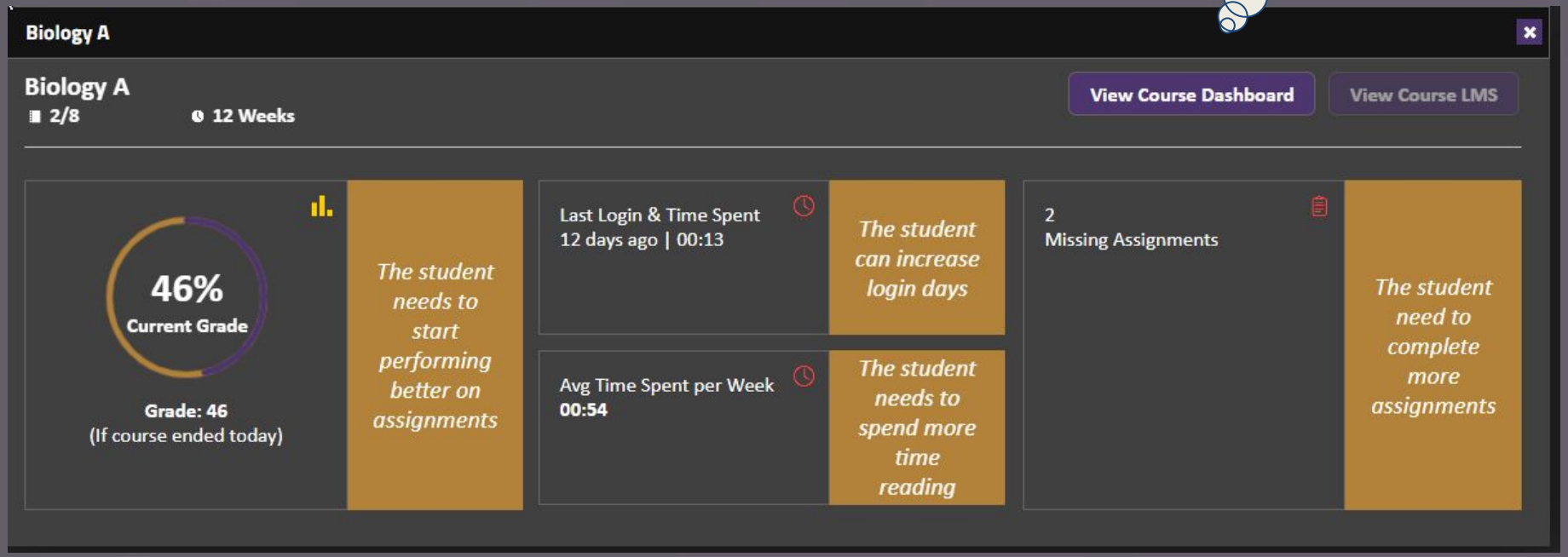
Student Nudges

QM Connection: Standard 6



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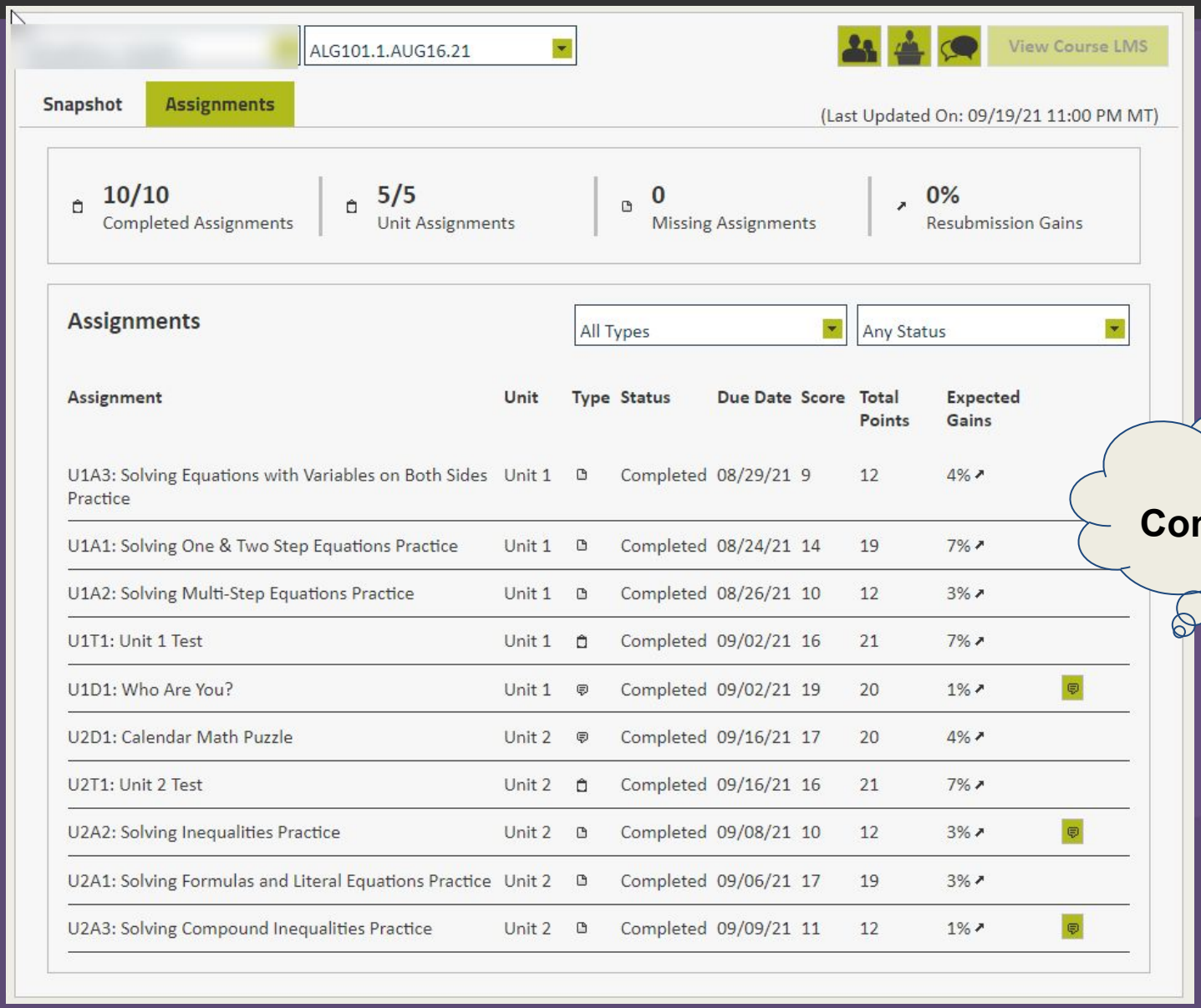
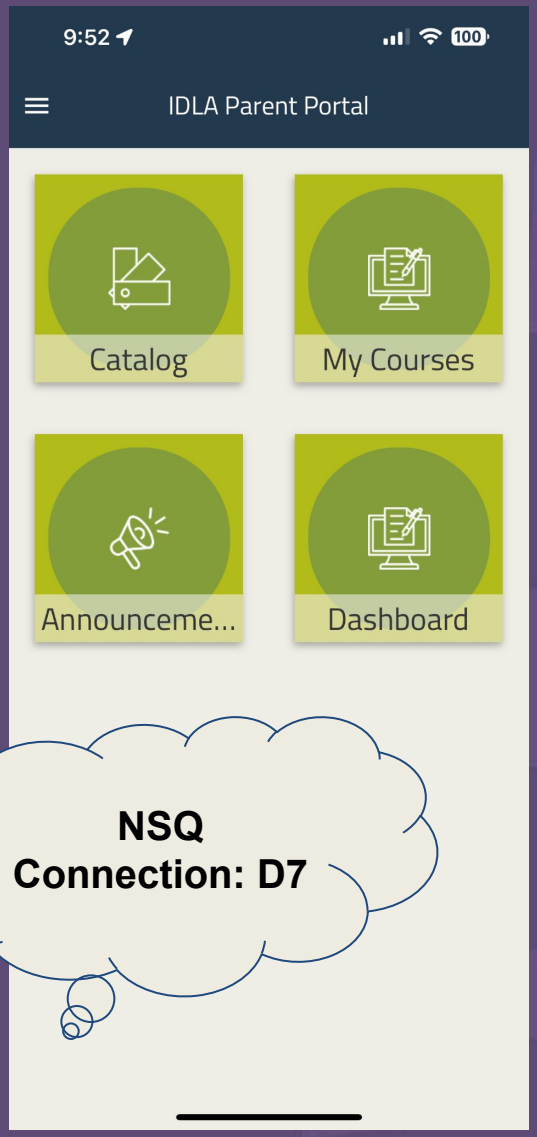
Student Dashboard

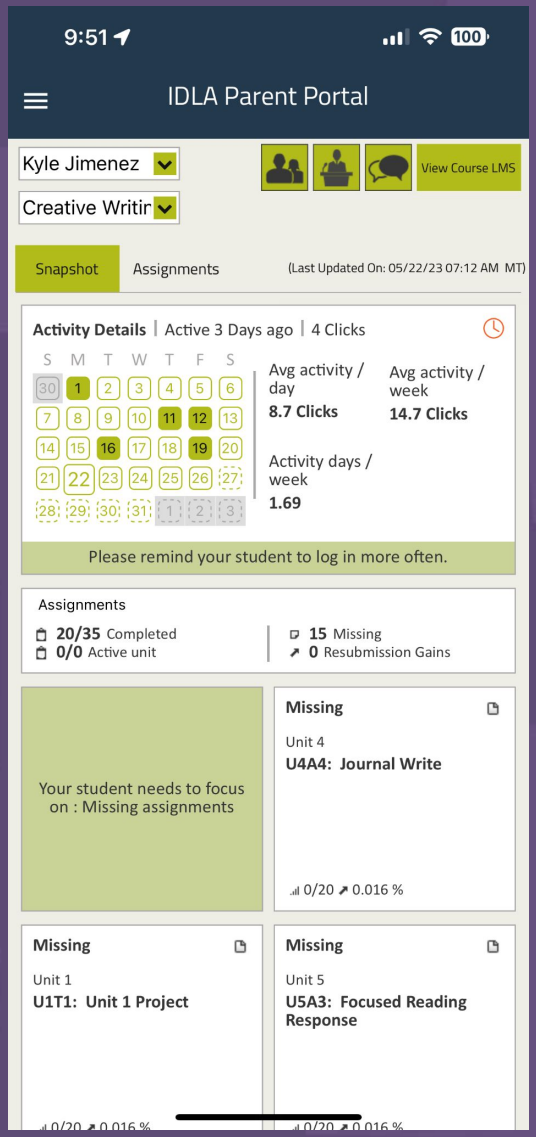


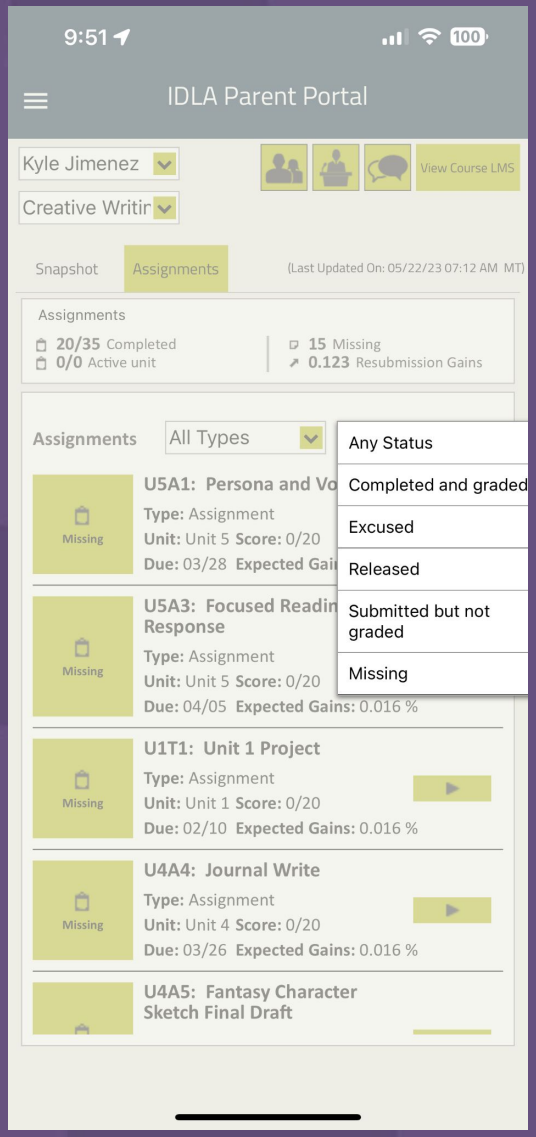
QM Connection

Parent App for iOS and Android



NSQ Connection: D7





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THANK YOU

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