

Putting Data to Work to Close Student Achievement Gaps

August 2023



IDAHO
DIGITAL
LEARNING
ALLIANCE

Idaho Digital Learning Background



Idaho Digital Learning & Quality Matters



The Problem

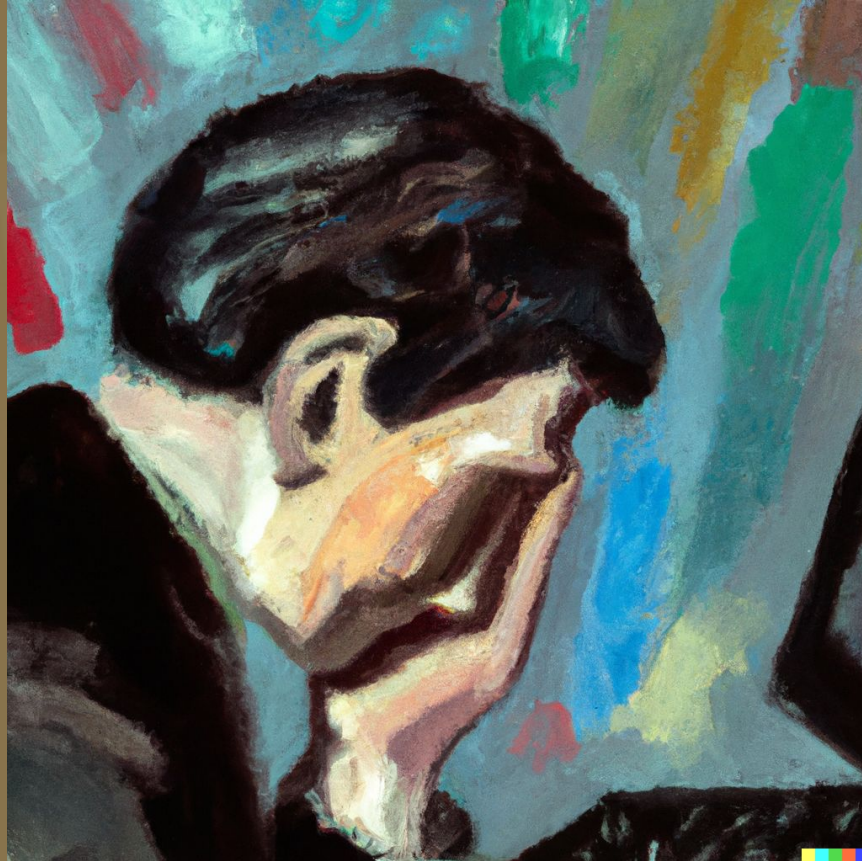


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What we want from teachers when we provide Data



What teachers often feel when we provide Data



Began with a partnership and a question

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



Results

84%

accuracy in
predicting
failures.

The Questions

What good does that do?

How do we get useful data to teachers?

Why were these students selected?

Lesson Learned 1

**Know the
actionability of
the results.**

Lesson Learned 2

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

Lesson Learned 3

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

A New Purpose

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

Categories of Data

Academic

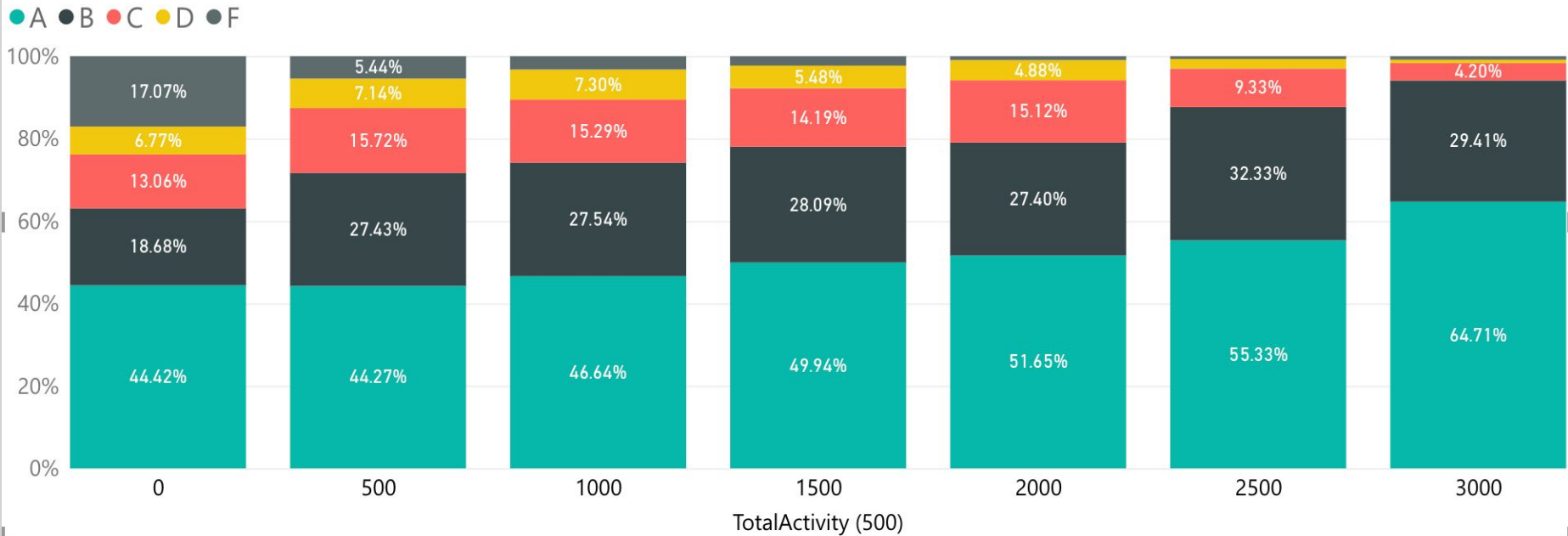
Behavior

Perception

Activity - Impact on final grade

NSQ
Connection:
Standard A2

Grade Distribution by Total Activity

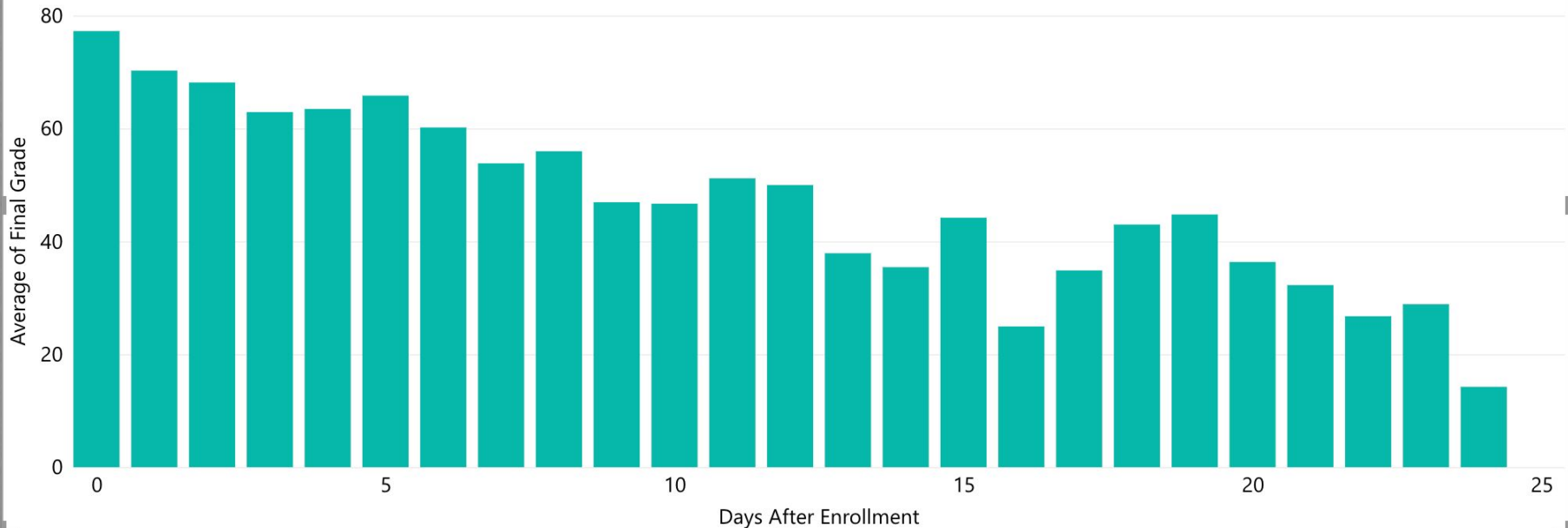


Activity - Impact of Time

NSQ
Connection:
Standard A2

Grade Avg by Number of Days After Enrollment to Initial Activity (Line Shows Number of Enrollments)

AcademicYear ● 20-21

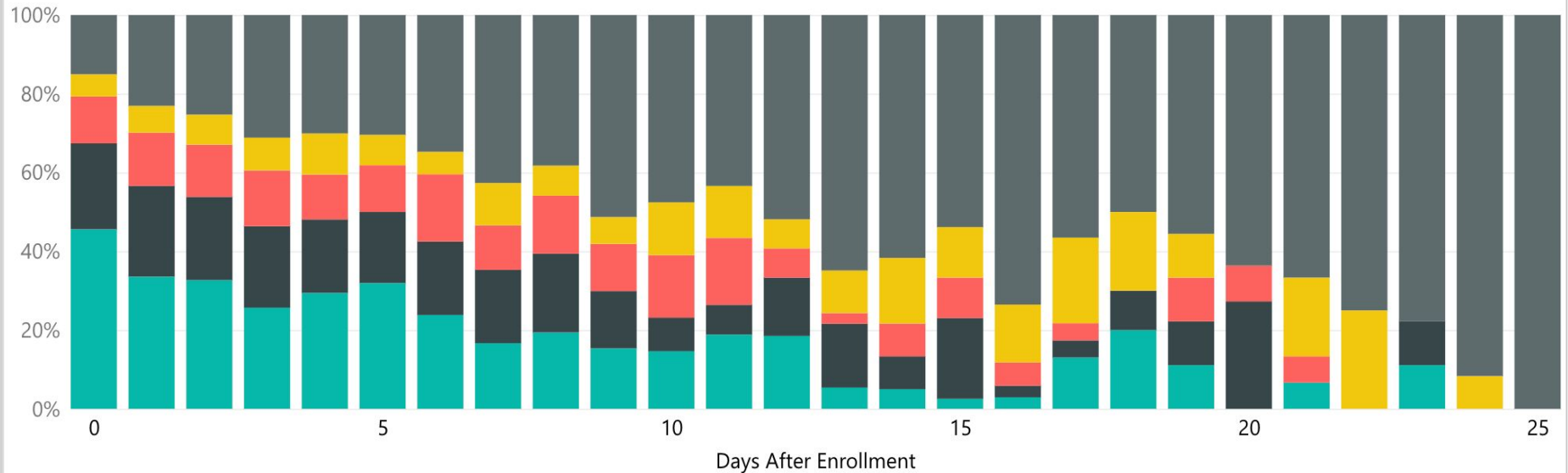


Activity - Impact of Time

NSQ
Connection:
Standard A2

Grade Distribution by Number of Days After Enrollment to Initial Activity

● A ● B ● C ● D ● F



The Questions

What good does that do?

How do we get useful data to teachers?

How do we use this data to help student?

The Answer

clarity



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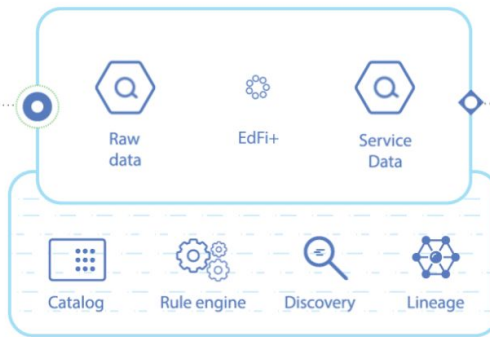
Clarity - GCS Platform

QM
Connection
: QM
Standard 6

Data Sources



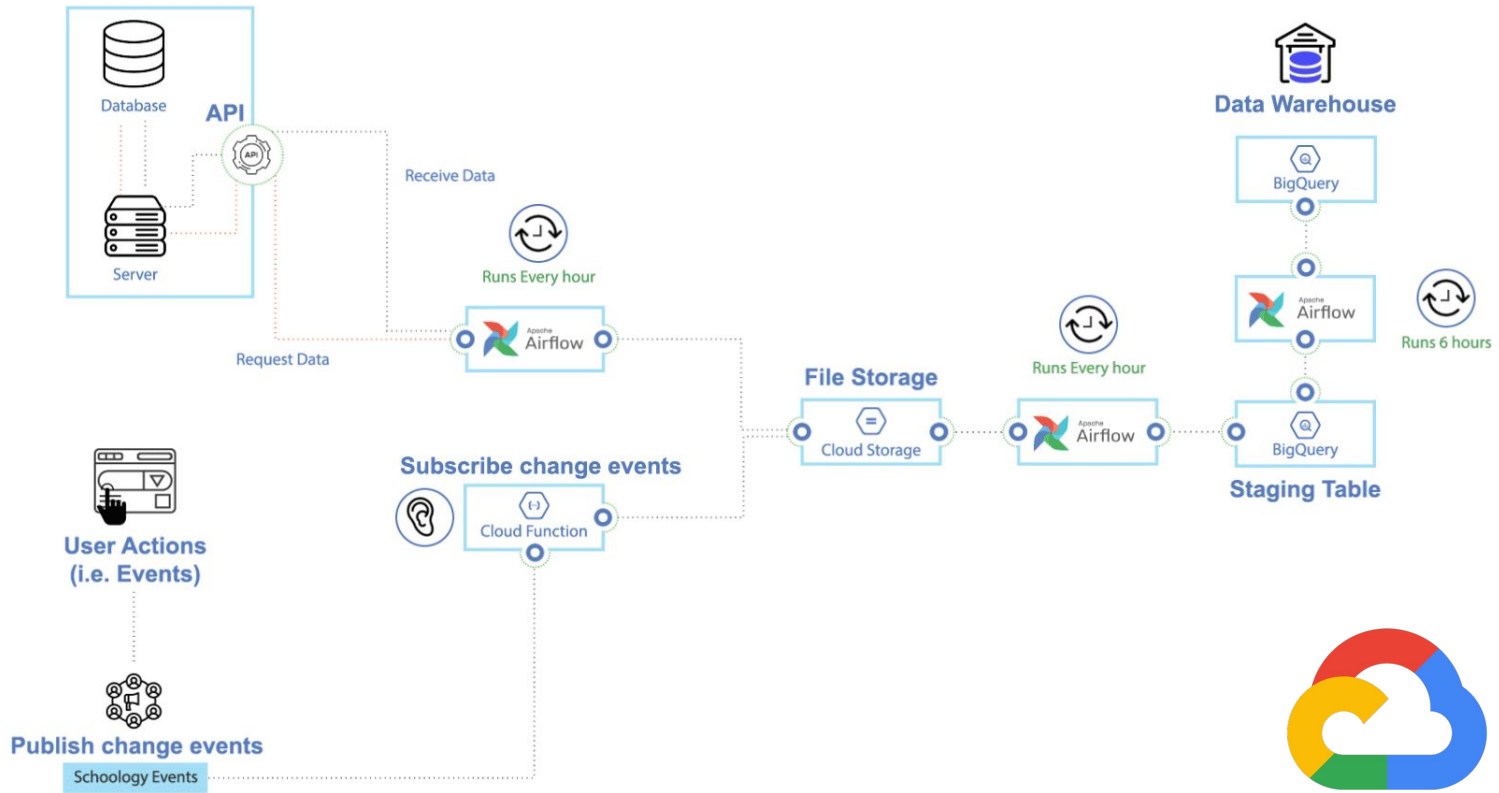
Data Loader Framework



Data Sharing



Clairity Architecture - ETL Process



Google Cloud

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.**"*

Course Title **Biology A - Sec 1 - Early Fall 2021**

Start Date **08/23/21**

End Date **12/10/21**

Weeks Remaining **13 Weeks 4 Days**

Course Remaining **86%**

Early Actions

Main Course Actions

Late Actions

Student Profile

(Last updated on: 09/06/21: 11.00 PM MT)

#STUDENTS WITH INDICATOR FLAG 

Students with issues 8 / 20

Avg. login days/
week

4

Avg time spent
viewing content
(in HH:MM)

6

% Content read
before
assignment
completed

5

On-time
submissions %

6

Assignment
completion %

4

Missing
assignments

7

Not on pace

7

At-risk of not
passing

4


 New to IDLA

View






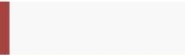






















































Students With Flags 

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.”*

 New to IDLA

View **Students With Flags** ▼

Student name	Avg login	Time viewing	Content read	On time	Completed	Missing	Off pace	At risk
Broderick Wheeler								
Silas Bartlett								
Dania Little								
Zain Klein								
Phillip Medina								
Jackson Faulkner								
Liliana Massey								
Macie King								

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."



STUDENT PULSE MARKER - Non Flex Non Flex Flex Date: 08/29/22

Course: Dual Credit Career & Life Planning (BSU) - Sec 2 - Summer 12wk 2022
 Start Date: 06/06/22 End Date: 08/26/22 Weeks Remaining: 0 Weeks 0 Days Course Remaining: 0%

Early Actions Main Course Actions Late Actions Student Profile

(Last Updated On: 08/29/22 01:14 AM MT)

STUDENT PROFILE ⓘ Student: Cali, Susan (1)

Student

Name: Cali, Susan
 Email: susacali@gemprep.org
 Phone: (208) 589-9051

Primary Home Contact

Name: Cali, Amber
 Email: jambercali@gmail.com
 Phone: (208) 589-9051

Site Coordinator

Name: Patrick, Lisa
 Email: lisapatricks@gemprep.org
 Phone: (208) 238-1388

School	Grad Year	Gender	Birthdate	Home Language	New to IDLA	IER/SDA/ELP	Reason For Taking Course	Location	Enrollment Type
Gem Prep: Pocatello	2025	F	08/01/07	English	No	No	Online Course Preference	Home	New to Course

EARLY ACTIONS (CCR603.2,JUN12.22)

Course Status	Activity	AHC	Submitted At Least 1 Assignment	On-Time Submissions
Completed	█	█	█	█

MAIN COURSE ACTIONS (CCR603.2,JUN12.22)

Course Status	Avg Activity Days/Week	Avg Activity (in Clicks)	On-Time Submissions	Assignment Completion	Missing Assignments	On Pace	At Risk Of Not Passing	Attendance	Days Active
Completed	█	█	█	█	█	█	█	█	█

LATE ACTIONS (GOV401.2,JUN.22)

Course Status	Missing Assignments	Course Extension	Scheduled Proctored Test	Completed Final Exam	Final Grade Posted
Completed	█	█	█	█	█

ASSIGNMENTS

Assignment	Unit/Module	Unit/Module Title	Type Assignment	Status	Due Date	Points	Total Points	Expected Gains	Received Teacher Feedback	Teacher Feedback
Extra Credit	-	-	grade_colu...	Released	08/19/22	-	0	-	No	-
Final Exam	Procto...	-	assessment	Released	01/01/00	-	91	-	No	-
SHA1: Expectations for Succ...	Start H...	-	external_L...	Comple...	06/13/22	19	20	-	No	-
SHA1: Expectations for Succ...	Start H...	-	external_L...	Missing	06/13/22	0	20	-	No	-
SHA1: Expectations for Succ...	Start H...	-	external_L...	Released	06/13/22	-	20	-	No	-
SHA1: Expectations for Succ...	Start H...	-	external_L...	Comple...	06/13/22	20	20	-	No	-
SHA1: Expectations for Succ...	Start H...	-	external_L...	Comple...	06/13/22	1	20	-	No	-
UTA1: Contemporary Theori...	Unit 1	Government in A...	assignment	Comple...	06/14/22	18	20	-	Yes	Thank you for emailing and ...
UTA1: Contemporary Theori...	Unit 1	Government in A...	assignment	Comple...	06/14/22	18	20	-	Yes	Thank you for submitting y...
UTA1: Contemporary Theori...	Unit 1	Government in A...	assignment	Missing	06/14/22	0	20	-	No	-

1 - 10 / 401 < >

Activity (in Clicks) in Course

950

Avg/Week	Last Week	Class Avg
82.1	22	755.9

Student Activity (Days)

124

Avg/Week	Last Week	Last Activity
10.7	4	08/26/22 03:01 PM


Home Contact: Last Portal Activity Portal Setup: Yes

12/22/20 10:17 AM

SUBMISSIONS (CCR603.2,JUN12.22)

Released	Assignment Completion %	% Course (Time) Completed	On Pace	On-Time Submissions %
Overall 14	100%	100%	100	86%

Course Setup Dashboard - Data Quality



Course Setup Dashboard

Non-Flex
Flex

Course ▾
Teacher ▾
Principal ▾
Program ▾
Department ▾

Issue Summary
Unit Folders
Assignments
Final Folders
Contact Info

Course	Teacher	Principal	Program	Department	# Issues
8th Grade Career Exploration - Sec 2 - Kellogg Jan 2023	T. Matlock	R. Hampton	Cohort Courses	Electives	103
Lifetime Fitness - Sec 1 - Spring Trimester 2023	D. Stuhberg	M. Kress	Cohort Courses	Health & Fitness	95
Lifetime Fitness II - Sec 1 - Late Spring 2023	D. Stuhberg	M. Kress	Cohort Courses	Health & Fitness	9
Speech - Sec 1 - Spring Trimester 2023	J. Van Dyk	M. Woolstenhulme	Cohort Courses	English	
8th Grade Career Exploration - Sec 1 - Kellogg Jan 2023	T. Matlock	R. Hampton	Cohort Courses	Electives	
Intro to Visual Arts - Sec 3 - Late Spring 2023	J. Maurer	K. Chapman	Cohort Courses	Electives	
Intro to Visual Arts - Sec 2 - Late Spring 2023	J. Maurer	K. Chapman	Cohort Courses	Electives	
Exploring Computer Science - Sec 1 - Lake City Feb 2023	J. Stinnette-Pickens	K. Eimers	Cohort Courses	Computer Science	
STEM Careers - Middle School - Sec 1 - Lone Star Jan 2023	E. McLeod	R. Bowman	Cohort Courses	Electives	81
Pathways to Success - Middle School - Sec 1 - Kellogg Jan 2023	T. Matlock	R. Hampton	Cohort Courses	Electives	73
Exploring Computer Science - Sec 2 - Lake City Feb 2023	J. Wilson	L. Erickson	Cohort Courses	Computer Science	72
Pathways to Success - Middle School (4 unit) - Sec 2 - Lone Star Apr 2023	E. McLeod	R. Bowman	Cohort Courses	Electives	67
Exploring Computer Science - Sec 1 - Late Spring 2023	G. Mick	T. Rigby	Cohort Courses	Computer Science	60
8th Grade Career Exploration - Sec 4 - Wendell Jan 2023	S. Kaszler	J. Jenks	Cohort Courses	Electives	57
Keyboarding - Middle School - Sec 1 - Late Spring 2023	A. Heider	L. Power	Cohort Courses	Electives	57
Dual Credit Medical Terminology (ISU) - Sec 1 - Late Spring 2023	R. Benedetti	R. Hampton	Cohort Courses	Health & Fitness	56
Digital Photography - Sec 2 - Late Spring 2023	B. Marks	D. Layne	Cohort Courses	Electives	55
Dual Credit Eng 12A/Eng 101 (BSU) - Sec 1 - Late Spring 2023	B. Fransen	T. Carter	Cohort Courses	English	54
Keyboarding - High School - Sec 1 - Spring Trimester 2023	S. Sobotka	C. Williams	Cohort Courses	Electives	54
Health - High School - Sec 1 - Spring Trimester 2023	P. Gyles	W. Moore	Cohort Courses	Health & Fitness	54

QM
Connection:
Standard 1

Issue Area	course_name	section_r	session_name	Assignment	grading_category	max_score	weight	category_weight	is_published	program_type	na	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	Coursework	20	1		1	Cohort		
grading_category_name	Dual Credit Psychology (CSI)	1	Early Spring 2023	SHA1: Expectations for Successful Course Completion	Coursework	20	1		1	Cohort		
grading_category_name	Dual Credit Psychology (CSI)	2	Early Spring 2023	SHA1: Expectations for Successful Course Completion	Coursework	20	1		1	Cohort		
grading_category_name	Dual Credit Psychology (CWI)	2	Late Spring 2023	SHA1: Expectations for Successful Course Completion	Coursework	20	1		1	Cohort		
grading_category_name	Integrated Math 1B	1	Early Spring 2023	SHA1: Expectations for Successful Course Completion	Coursework	20	1		1	Cohort		
grading_category_name	Integrated Math 1B	1	Early Spring 2023	SHA2: Academic Honesty Contract	Coursework	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	<ul style="list-style-type: none">• 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 <ol style="list-style-type: none">1. identify the US customary units of measure<ul style="list-style-type: none">○ correlation: 7.RP.22. convert within the US customary units of measure<ul style="list-style-type: none">○ correlation: 7.RP.1, 7.RP.2	Assessments <ul style="list-style-type: none">• 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

Main Course

Course with time

Feedback

Communication

(Last updated on: 08/24/21: 11.00 PM MT)

View course LMS

CLASS SIZE 30

ADMINISTRATIVE REQUIREMENTS AND SYNCHRONOUS INSTRUCTION

SETUP PRIOR TO START OF COURSE ⓘ

		Status
Availability: tutor hours => eTutor	✓	Yes
Availability: general availability => Office hours	✓	Yes
Welcome Update post	✓	Yes
Permanent welcome announcement	⊖	-
Contact information- teacher	✓	Yes
Contact information- principal	✓	Yes
Late work policy	✗	No
Teacher tips	⊖	-

Supervision Dashboards - Data for coaching



Supervision Report - Principal

Date: 08/25/21

Teacher
Dana Hess

Course Title
Biology A

Session
Late Fall 2022

Program
Cohort

Main Course

Course with time

Feedback

Commun

**NSQ
Connection:
Program
Standards N5
& N6**

(Last updated on: 08/24/21: 11.00 PM MT)

CLASS SIZE 30

GRADED ASSIGNMENTS: FEEDBACK

Student: All

Unit/ Module: All

Assignment Code: All

Assignment Type: All

Date Range: All

Whether Multimedia: All

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>

Site Coordinator Dashboard - Data for support

Course Title **All** Session **All** Program **All** Course Durati.. **All** Student **All** Type of Enroll. **All** Student Status **Active** Registration **All** Advanced Opp. **All**

Early Actions

Main Course Actions

Late Actions

Student Pulse

Student Profile

(Last updated on: 08/24/21: 11.00 PM MT)

#STUDENTS X COURSE CODE WITH INDICATOR FLAG ⓘ

Students with issues **20 / 100**

Avg. login days/
week

10

Avg. time spent
viewing content
(in HH:MM)

15

% Content read
before
assignment
completed

10

On-time
submission% ^

17

completion%:
require direct
interaction with
teacher*

15

Assignment
completion%

12

Missing
assignments

4

Not on Pace

5

At-risk of not
passing

7

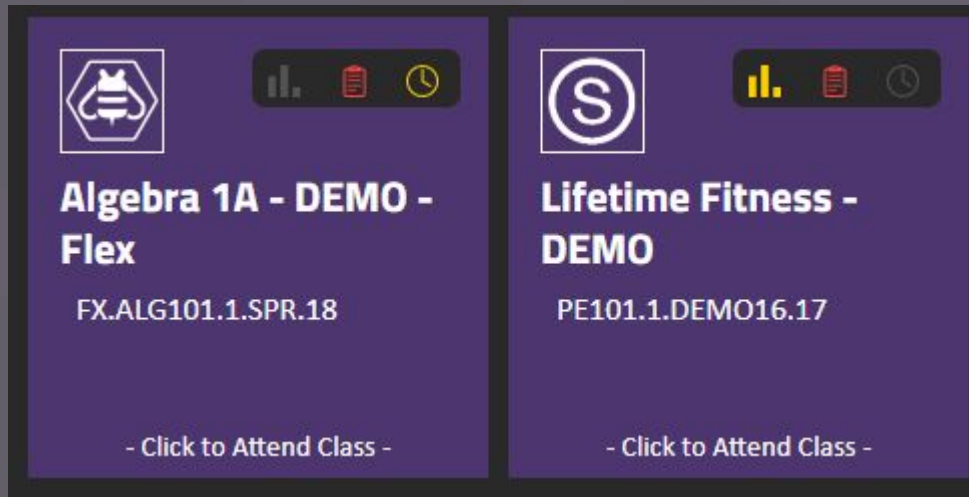
Attendance**

-

Days inactive

-

Student - Data for Nudges



The screenshot displays two course cards on a purple background. Each card has a header with an icon and three small icons (bar chart, document, clock). The first card is for 'Algebra 1A - DEMO - Flex' with course ID 'FX.ALG101.1.SPR.18'. The second card is for 'Lifetime Fitness - DEMO' with course ID 'PE101.1.DEMO16.17'. Both cards have a '- Click to Attend Class -' button at the bottom.

Course Title	Course ID
Algebra 1A - DEMO - Flex	FX.ALG101.1.SPR.18
Lifetime Fitness - DEMO	PE101.1.DEMO16.17

**QM
Connection:
Standard 6**


Student Nudges

QM
Connection:
Standard 6

Biology A ✕

Biology A [View Course Dashboard](#) [View Course LMS](#)

■ 2/8 ⌚ 12 Weeks

 <p>46% Current Grade</p> <p>Grade: 46 (If course ended today)</p>	<p><i>The student needs to start performing better on assignments</i></p>	<p>Last Login & Time Spent 12 days ago 00:13</p>	<p><i>The student can increase login days</i></p>	<p>2 Missing Assignments</p>	<p><i>The student need to complete more assignments</i></p>
		<p>Avg Time Spent per Week 00:54</p>	<p><i>The student needs to spend more time reading</i></p>		

Student Dashboard

ALG101.1.AUG16.21



View Course LMS

Snapshot

Assignments

(Last Updated On: 09/19/21 11:00 PM MT)

10/10

Completed Assignments

5/5

Unit Assignments

0

Missing Assignments




0%

Resubmission Gains

Assignments

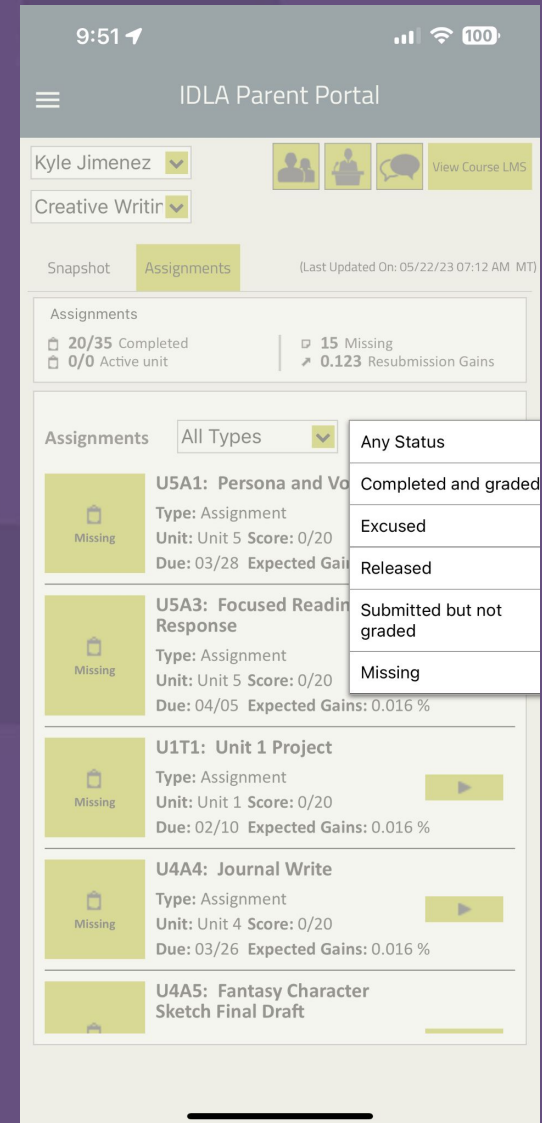
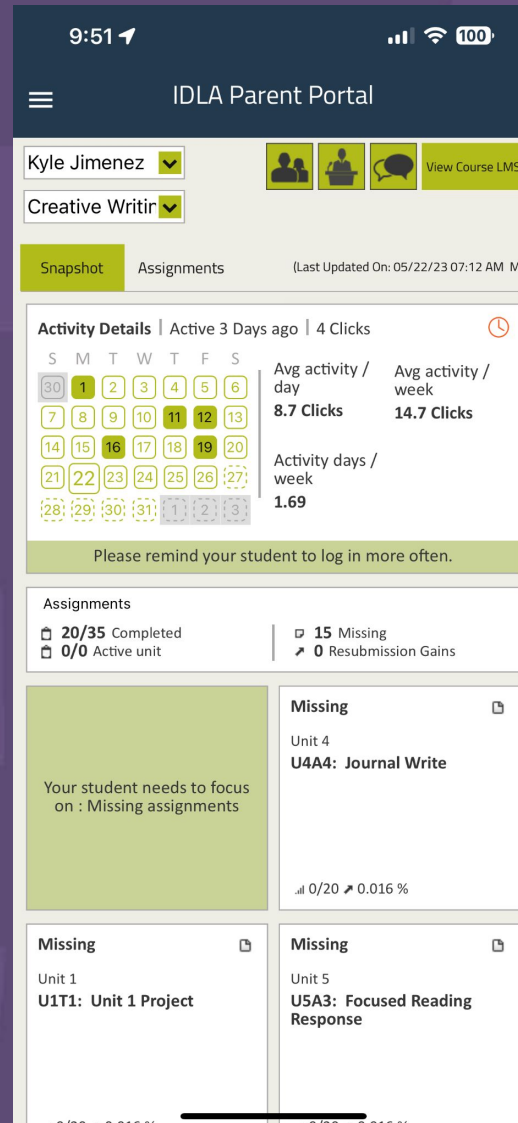
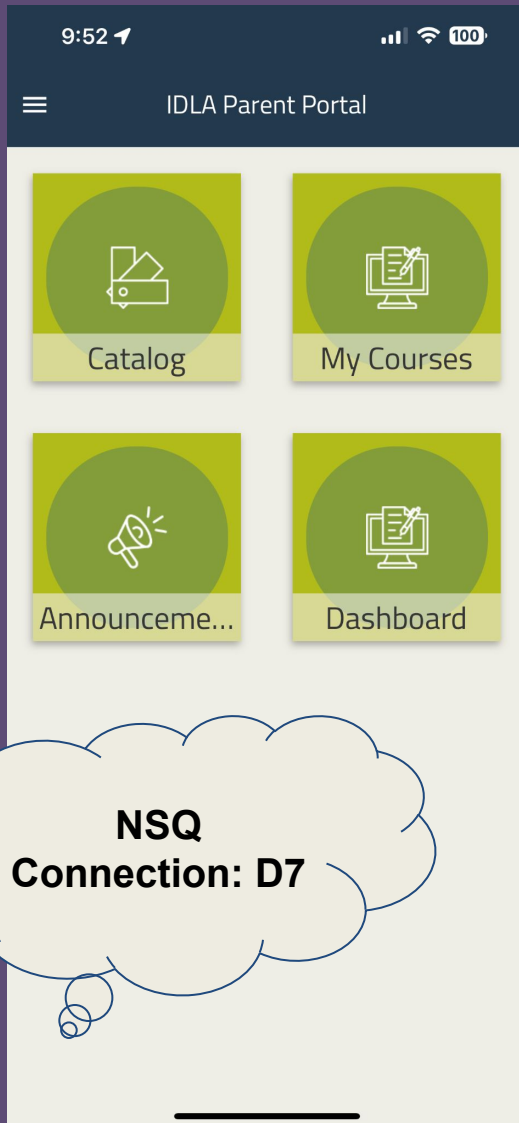
All Types

Any Status

Assignment	Unit	Type	Status	Due Date	Score	Total Points	Expected Gains
U1A3: Solving Equations with Variables on Both Sides Practice	Unit 1	▢	Completed	08/29/21	9	12	4% ↗
U1A1: Solving One & Two Step Equations Practice	Unit 1	▢	Completed	08/24/21	14	19	7% ↗
U1A2: Solving Multi-Step Equations Practice	Unit 1	▢	Completed	08/26/21	10	12	3% ↗
U1T1: Unit 1 Test	Unit 1	▢	Completed	09/02/21	16	21	7% ↗
U1D1: Who Are You?	Unit 1	Ⓜ	Completed	09/02/21	19	20	1% ↗ 
U2D1: Calendar Math Puzzle	Unit 2	Ⓜ	Completed	09/16/21	17	20	4% ↗
U2T1: Unit 2 Test	Unit 2	▢	Completed	09/16/21	16	21	7% ↗
U2A2: Solving Inequalities Practice	Unit 2	▢	Completed	09/08/21	10	12	3% ↗ 
U2A1: Solving Formulas and Literal Equations Practice	Unit 2	▢	Completed	09/06/21	17	19	3% ↗
U2A3: Solving Compound Inequalities Practice	Unit 2	▢	Completed	09/09/21	11	12	1% ↗ 

QM
Connection

Parent App for iOS and Android



Julie Best

Data and Analytics Manager

julie.best@idla.k12.id.us

Jeff Simmons

Superintendent

jeff.simmons@idla.k12.id.us

[\(208\) 994-4988](tel:(208)994-4988)

THANK YOU

