



California Community Colleges

Introduction to Student Level Data from Student Success Metrics Dashboard

Provided to districts through Data on
Demand

February 14, 2023

Bitly link for PPT: <http://bit.ly/LBSSMStudentLevel-23-02-14>

Welcome

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Reminders

- Chat is disabled, but presenters will post links and other information in chat
- Link to the presentation slide deck will be available in chat
- Participants should use the Q&A feature to ask questions, which will be answered live or directly in the Q&A
- Closed Captioning is available by clicking the "CC" button on your screen

Objectives for this webinar

Provide

- Background and metrics included as part of the Student Level Data delivery from Student Success Metrics (SSM) through Data on Demand

Overview

- Student level data files, data table relationships and documentation provided

Highlight

- A few initial use cases for the data

Communicate

- Future releases and learning opportunities for using the data

Answer

- Your questions



Student Level Data from Student Success Metrics

Background and Metrics Included

Student Level Data from Student Success Metrics (SSM)

Student Success Metrics:

- A dashboard of aggregated student outcomes
- Represented as counts, mean, median, etc.
- De-identified
- Available to the public

Student Level Data:

- The individual student records which are aggregated within the SSM dashboard
- Each individual student's attainment of each metric outcome is included (with a few exceptions)
- "Re-identified" records returned to the system at the individual record level with identifying information that allows a user to link other contextual data to their students
- Available only to select users within the MIS system with a genuine need and ability to handle personally identifiable information

Student Level Data from Student Success Metrics (SSM)

In 2022:

- Confirmed list of metrics for which SSM student level data can be shared
- Creation of an Entity Relationship Diagram (ERD) and Interface Control Document (ICD) for interpretation and use of the student level data
- Provided preliminary SSM student level data and documentation to a group of colleges (Beta Testers) for their initial review and feedback
- Provided SSM student level data to the Chancellor's Office for their review and feedback
- Met with Beta Testers to discuss use cases for the data

thank you!

Coastline College

**Crafton Hills
College**

**Cypress College
College**

**Irvine Valley College
District**

**Norco College
Saddleback**

Santa Monica

State Center

Student Level Data from Student Success Metrics (SSM)

In 2023:

Distribute college specific student level data to all districts through the MIS Data on Demand tool along with documentation at the following intervals:

- January: SSM current release (21/22 release cycle) - DONE
 - Includes data up to the end of 20/21 academic year
 - **IMPORTANT NOTE:** If you downloaded your SSM student level data files from Data on Demand prior to **02/03/23**, please redownload as an additional CTEOS file has been included
- April*: SSM 5.0 upcoming release (22/23 release cycle)
 - Includes data up to the end of 21/22 academic year
- June*: Strong Workforce Program (SWP) 5.0 upcoming release (22/23 release cycle)
 - Includes data up to the end of 21/22 academic year
 - A subset of the SSM students, with an expanded view on their program enrollments which make up the SWP dashboard

*SSM 5.0 and SWP 5.0 release dates not final

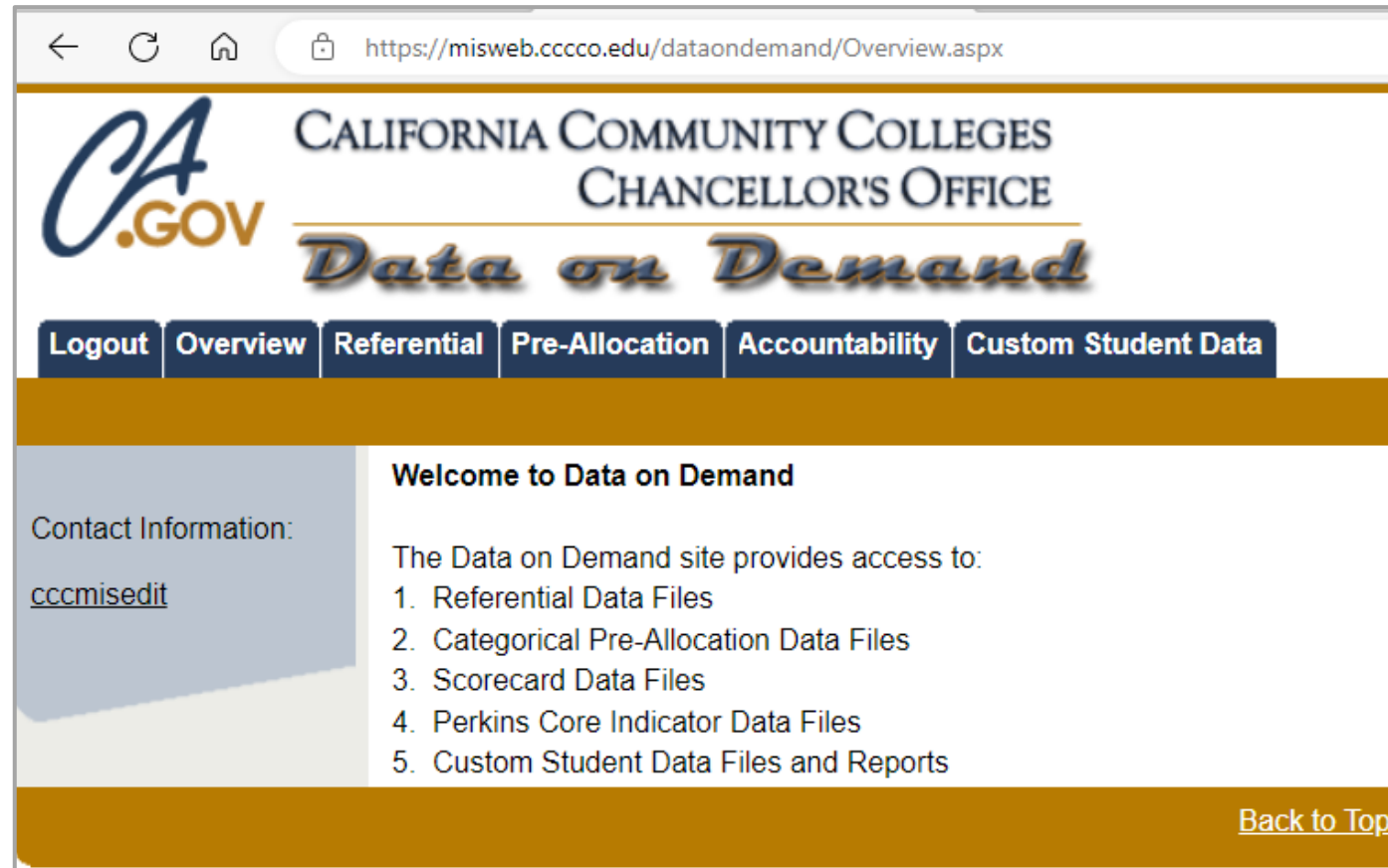
Student Level is now available through Data on Demand



A screenshot of a web browser showing the login page for the California Community Colleges Chancellor's Office Data on Demand system. The browser's address bar displays the URL `misweb.cccco.edu/dataondemand/`. The page header features the **CA.GOV** logo on the left and the text **CALIFORNIA COMMUNITY COLLEGES CHANCELLOR'S OFFICE** and *Data on Demand* on the right. Below the header is a thick gold horizontal bar. The main content area is divided into two sections. On the left, a light blue box contains the text "Contact Information:" followed by the link [cccmisedit](#). On the right, there are two input fields: "User Name:" and "Password:". Below these fields is a button labeled "LOGIN". At the bottom right of the page, there is a link labeled [Back to Top](#).

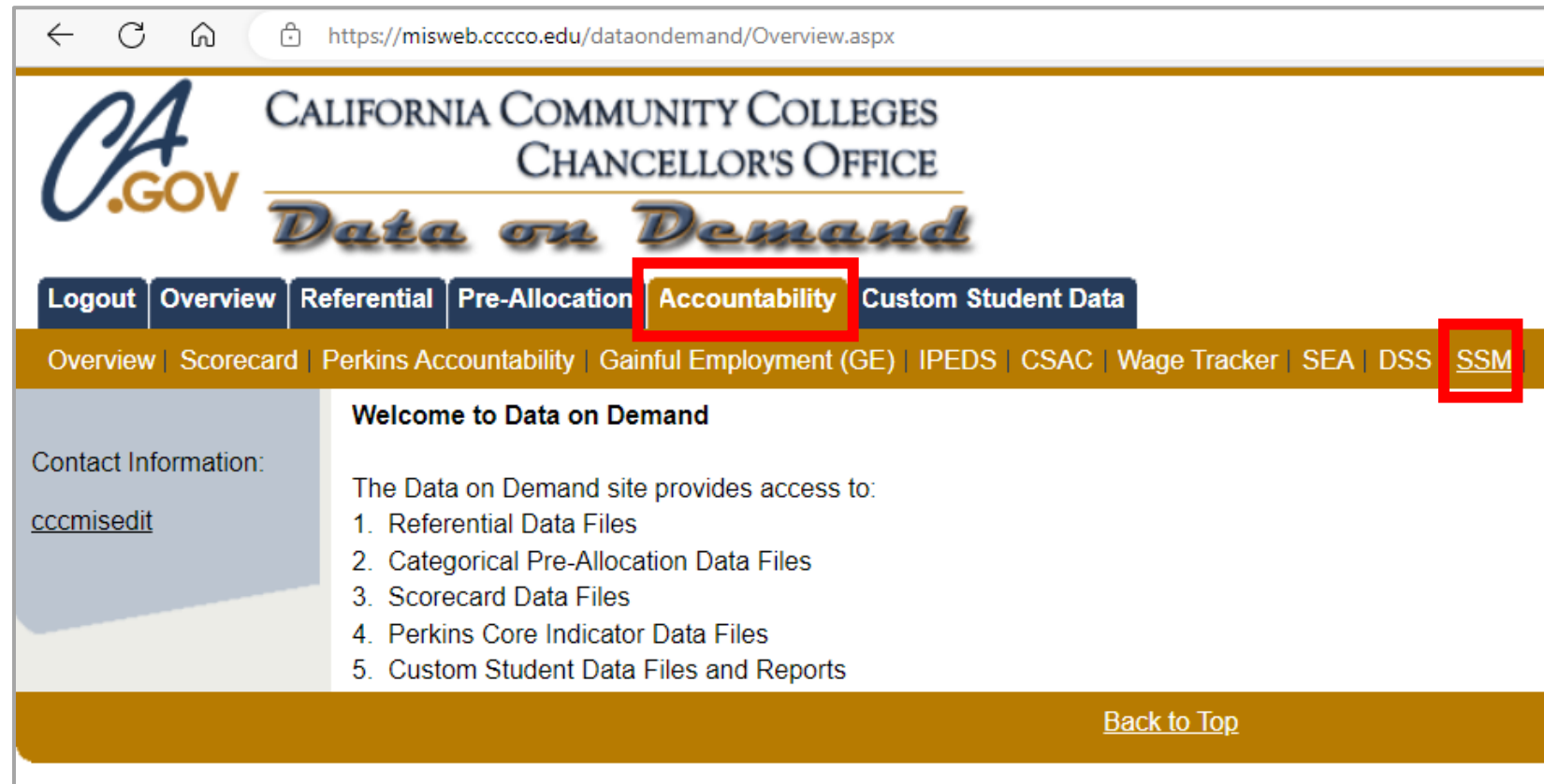
Login screen for Data on Demand

Student Level is now available through Data on Demand



Home screen after logging in

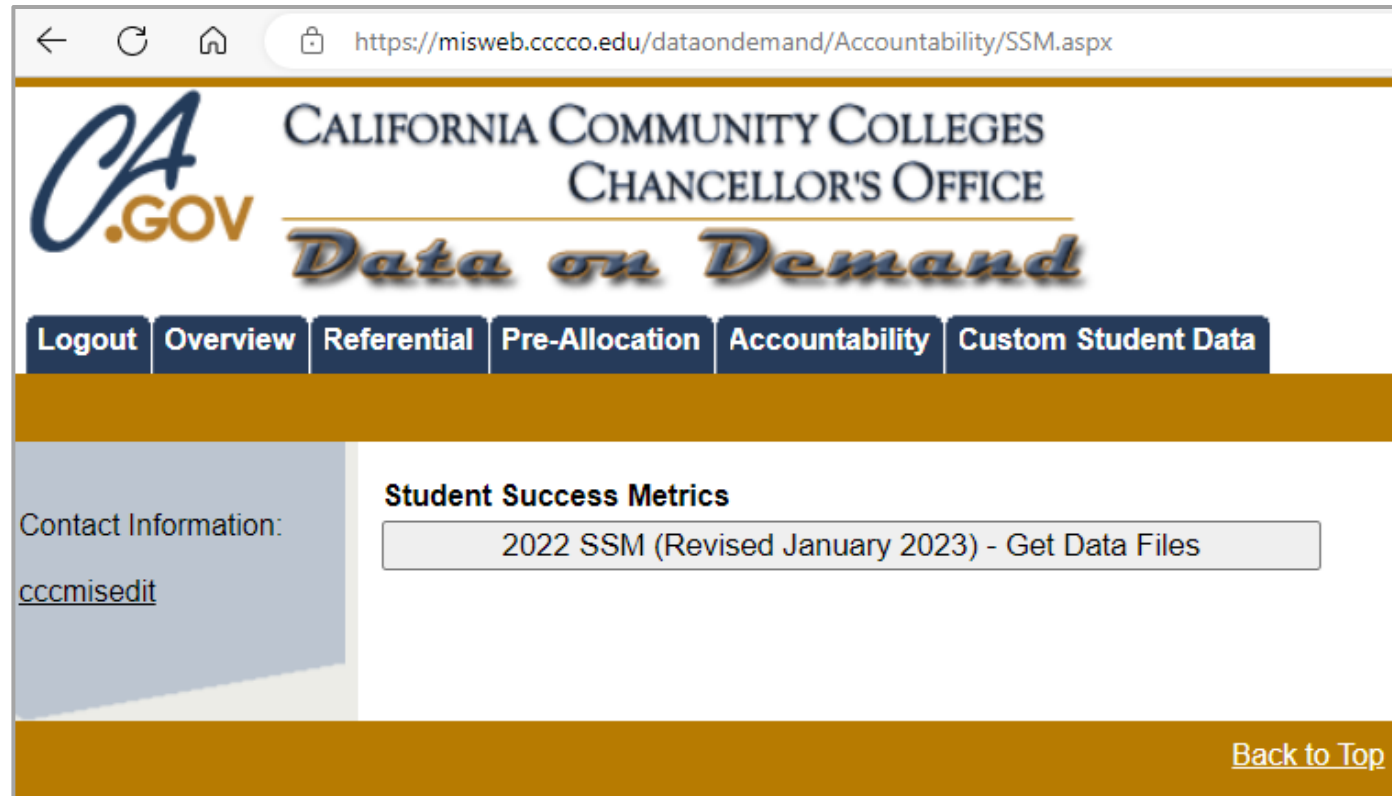
Student Level is now available through Data on Demand



The screenshot shows a web browser window with the URL <https://misweb.cccco.edu/dataondemand/Overview.aspx>. The page header includes the "CA.GOV" logo and the text "CALIFORNIA COMMUNITY COLLEGES CHANCELLOR'S OFFICE". Below this is the "Data on Demand" title. A navigation bar contains several tabs: "Logout", "Overview", "Referential", "Pre-Allocation", "Accountability", and "Custom Student Data". The "Accountability" tab is highlighted with a red box. Below the navigation bar, a secondary menu lists various data categories: "Overview", "Scorecard", "Perkins Accountability", "Gainful Employment (GE)", "IPEDS", "CSAC", "Wage Tracker", "SEA", "DSS", and "SSM". The "SSM" link is also highlighted with a red box. The main content area is titled "Welcome to Data on Demand" and lists the types of data available: "1. Referential Data Files", "2. Categorical Pre-Allocation Data Files", "3. Scorecard Data Files", "4. Perkins Core Indicator Data Files", and "5. Custom Student Data Files and Reports". A "Contact Information:" section on the left includes a link to "cccmedit". A "Back to Top" link is located at the bottom right of the page.

Go to the Accountability tab for SSM

Student Level is now available through Data on Demand



Access Student Success Metrics or SSM student level data from the current release

Availability of Files Through Data on Demand

 Student Level Data from the current SSM Dashboard is available **NOW** on Data on Demand through **2020-21**

If downloaded prior to 02/03/23, please redownload to get the CTEOS file

 That data will be **REPLACED** in March/April 2023 with data through **2021-22** from the next release of the SSM Dashboard and from every subsequent release

 So, you have **two** choices:

1. Download the data now understanding that the data will be replaced with updated data in 2 months
2. Wait to download the data until announced by the CO that the data through 2021-22 is available from the next SSM release in March/April

What Metrics Are Included in the Student Level Data from Student Success Metrics?

- All metrics and disaggregations from the SSM Cohort View are included
- All metrics and disaggregations from the SSM Snapshot View are included except for the following metrics*:
 - Became Employed is not included
 - Median Annual Earnings is not included
 - Median Change in Earnings is not included

* Metrics not included due to the current MOU between the CO and EDD that does not allow for student level data sharing back to colleges



Student Level Data Specifics

The nuts and bolts of what you have received

Student Level Data from Student Success Metrics (SSM)

Student Success Metrics:

- A nice meal prepared by a highly rated chef

Student Level Data:

- The prepared ingredients in your cabinet that can be used to produce your own delicious meal

Raw MIS Data:

- The raw ingredients (milled wheat, eggs, and water for noodles) you would use to make prepared ingredients to stock your cabinet



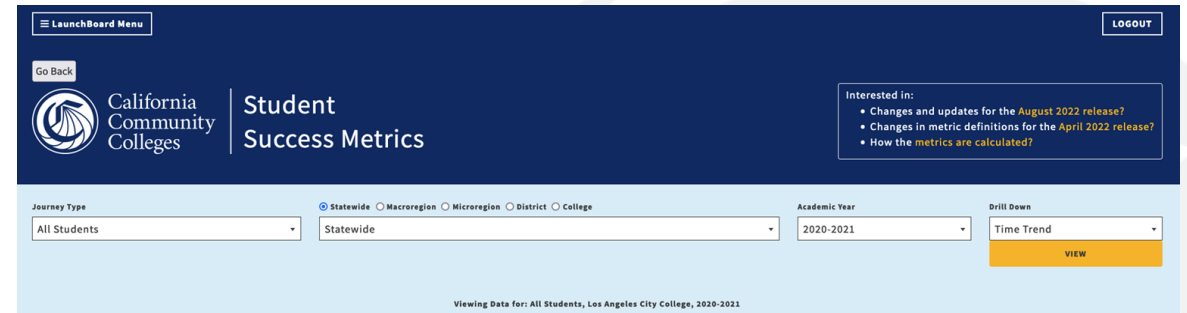
MIS File Workflow – Dashboard Creation

Source Files

- MIS Term/Annual Files
- CTE Outcomes Survey File
- DAS (Apprenticeship) File
- CSU/UC/NSC Transfer Bucket
- CCCApply Application File
- EDD UI Wage File

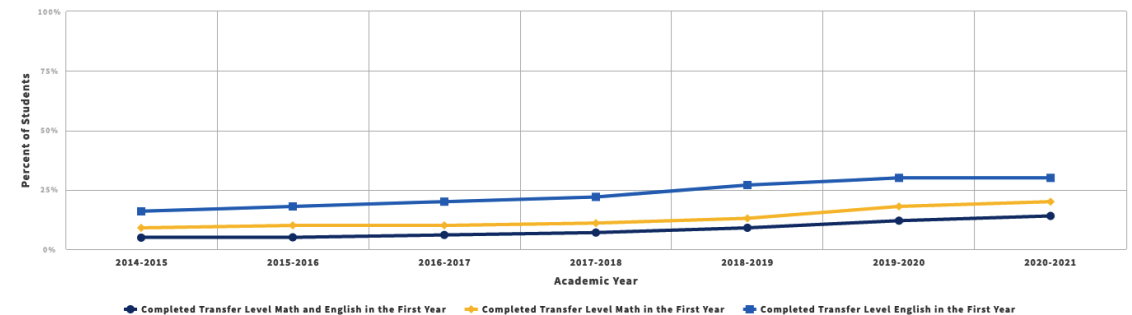
Long strange trip

SSM Dashboard Data



Completed Transfer-Level Math and English

Among students in selected student journey, the proportion who completed transfer-level math and English in their first academic year of credit enrollment within the district



Source: Chancellor's Office Management Information System

Technical Definition

Note: Explore an expanded definition of the Completed Transfer-Level Math and English metric in the Metrics Under Development section.

Data Flow Steps

1. Source file delivery
 - Snapshot relevant underlying data (see previous slide)
2. Data ingestion and ETL processes
 - Make sure data is cleaned and in its proper place
3. LaunchBoard building
 - Making "space" for our metrics to be calculated and student journeys to be represented properly
4. Metric calculation
 - Whether and how students met the outcomes measures by the dashboard
5. Results aggregation
 - Summarizing the data in the way represented in the dashboard
6. Data ready for UI and display

Underlying Student Level Data

Student	Year	Locale	Degree or Transfer Students Metric	First Generation Status Metric	Fall Enrollment Metric	Fall Units Successfully Completed Metric
Harry	2019	Hogwarts Academy	1	1	1	6
Harry	2020	Hogwarts Academy	1	1	1	7
Ron	2019	Hogwarts Academy	1	0	1	4
Ron	2020	Hogwarts Academy	1	0	1	8
Ginny	2020	Hogwarts Academy	1	0	1	8

- Metric outcomes flagged/calculated for each individual **golden record** (student, locale, year), stored in wide table format
- What information is represented here?

15 Source Tables

1. **locale_id**: comprises all locales reportable in LaunchBoard
2. **year_id**: range of tinyint values for years reportable in LaunchBoard
3. **disagg_id**: comprises all disaggregations present in LaunchBoard
4. **subgroup_id**: comprises all subgroups for each disaggregation present in LaunchBoard
5. **journey_id**: comprises all journeys present in SSM
6. **snapshot_view_metrics***: enrollment requirement for SSM is used
7. **cohort_view_metrics***: enrollment requirement for the first-time cohort view within SSM is used
8. **student_demographics**: used to summarize information gathered and resolved for a student's singular record at a given locale and year
Note: In the case that a student has conflicting information across terms for the locale and year, the value for the max term for which a student has enrollment is used
9. **apprenticeship_metrics***: separate from the snapshot_view_metrics table b/c the definition of apprenticeship does not require enrollment in the same way that snapshot_view_metrics does

15 Source Tables

10. **award_metrics***: award attainment requirement is used, which includes a different enrollment definition than the snapshot_view_metrics table as it requires enrollment in the district in the year for which they are counted
11. **award_unit_metrics***: requires no enrollment for the year in which a student is counted
12. **cccapply_metrics***: definition for applicants within SSM is used which requires no enrollment for the year in which a student is counted
13. **cteos_metrics***: exiter definition within SSM with an addendum to require a response to the CTEOS survey 2 years later is used
14. **student_locale_distinct**: enrollment requirement for SSM is used with the disaggregation subgroups resolved for conflicts
15. **student_locale_distinct_cv**: first-time cohort enrollment requirement for SSM is used with the disaggregation subgroups resolved for conflicts



Data Table Relationships

How the data provided connects to each other (and sometimes doesn't)

Resource Diagram Basics

snapshot_view_metrics	
year_id	tinyint
locale_id	tinyint
isk_id	int
student_id	varchar(9)
id_status	char(1)
CO_100	bit
CO_101	bit
CO_102	bit
CO_121	bit
CO_122	bit
CO_[0-9][0-9][0-9]	bit_or_tinyint
CO_[0-9][0-9][0-9]_Courses	int
CV_[0-9][0-9][0-9]_Courses	int
CO_[0-9][0-9][0-9]_Units	decimal(10, 3)

Level of detail:

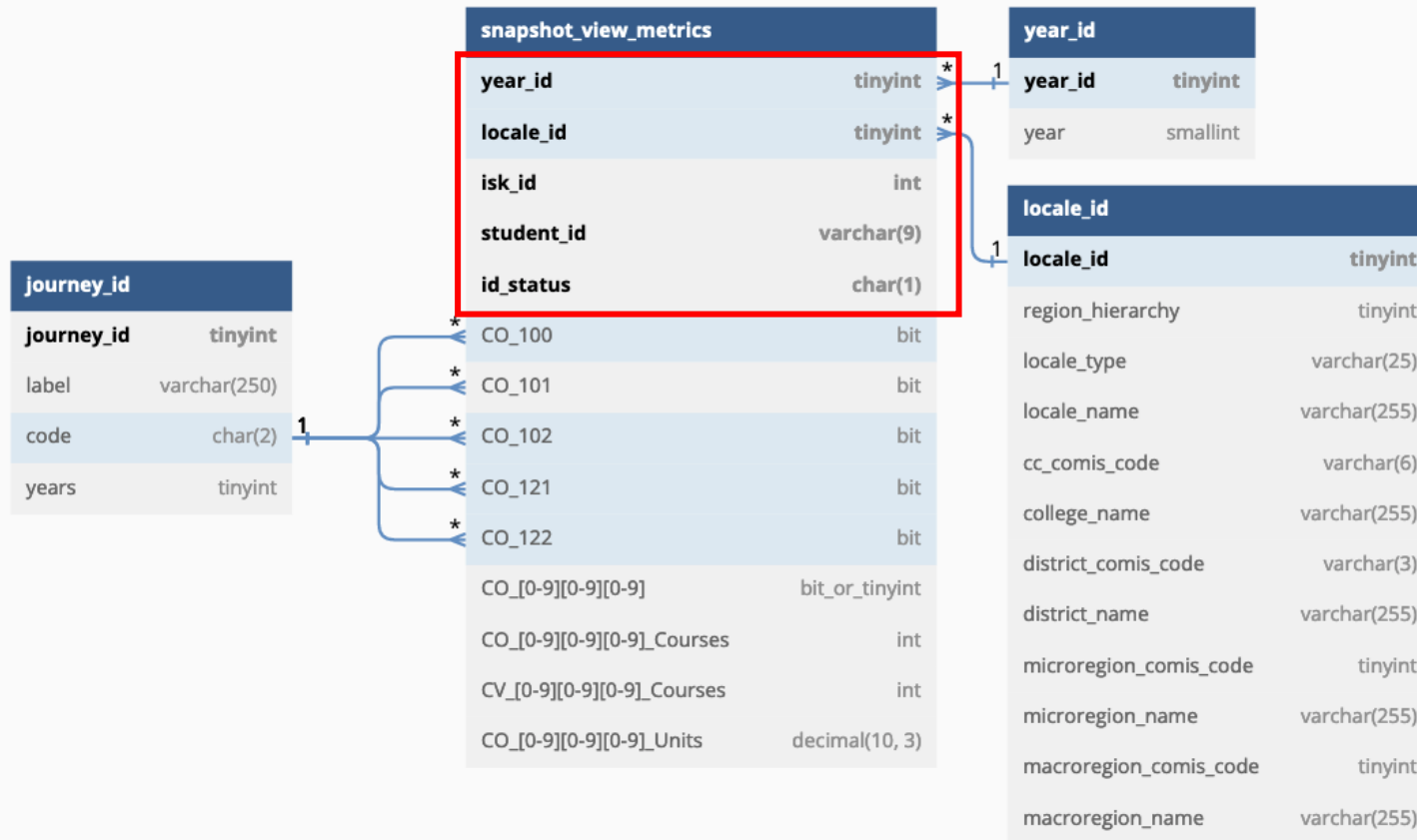
- Each individual student's **golden record** for that table's context (enrollment in this case, cohort students, award earners, apprenticeship students, CTEOS respondents, applicants in other cases)
- Metric outcomes (represented as CO_###) for each golden record, represented as:
 - Bit: TRUE bit (1) for achieving the metric outcome. Few allow for FALSE bit (0) to represent not achieving the metric outcome, but a rarity
 - Integers: course counts, as well as binary subgroups including a ternary "Unknown" status
 - Decimal: Units for unit threshold attainment
 - Metric definition links in ICD

Translated To Reference

Isk_id	Comis_ssn_id	Id_status	Year_id	Locale_id	CO_102	CO_110	CO_325	CO_404_units
1	C999999999	C	29	99	1	1	1	6
1	C999999999	C	30	99	1	1	1	7
2	8888888888	S	29	99	1	0	1	4
2	8888888888	S	30	99	1	0	1	8
3	7777777777	S	30	99	1	0	1	8

- Reminder: Metric outcomes flagged/calculated for each individual **golden record** (student, locale, year), stored in wide table format
- Harry is ISK_ID = 1, but you'll know him as SB00 = C99999999 in your local system
- It's actually possible for a given ISK to have multiple SB00/SB01 values, and vice versa

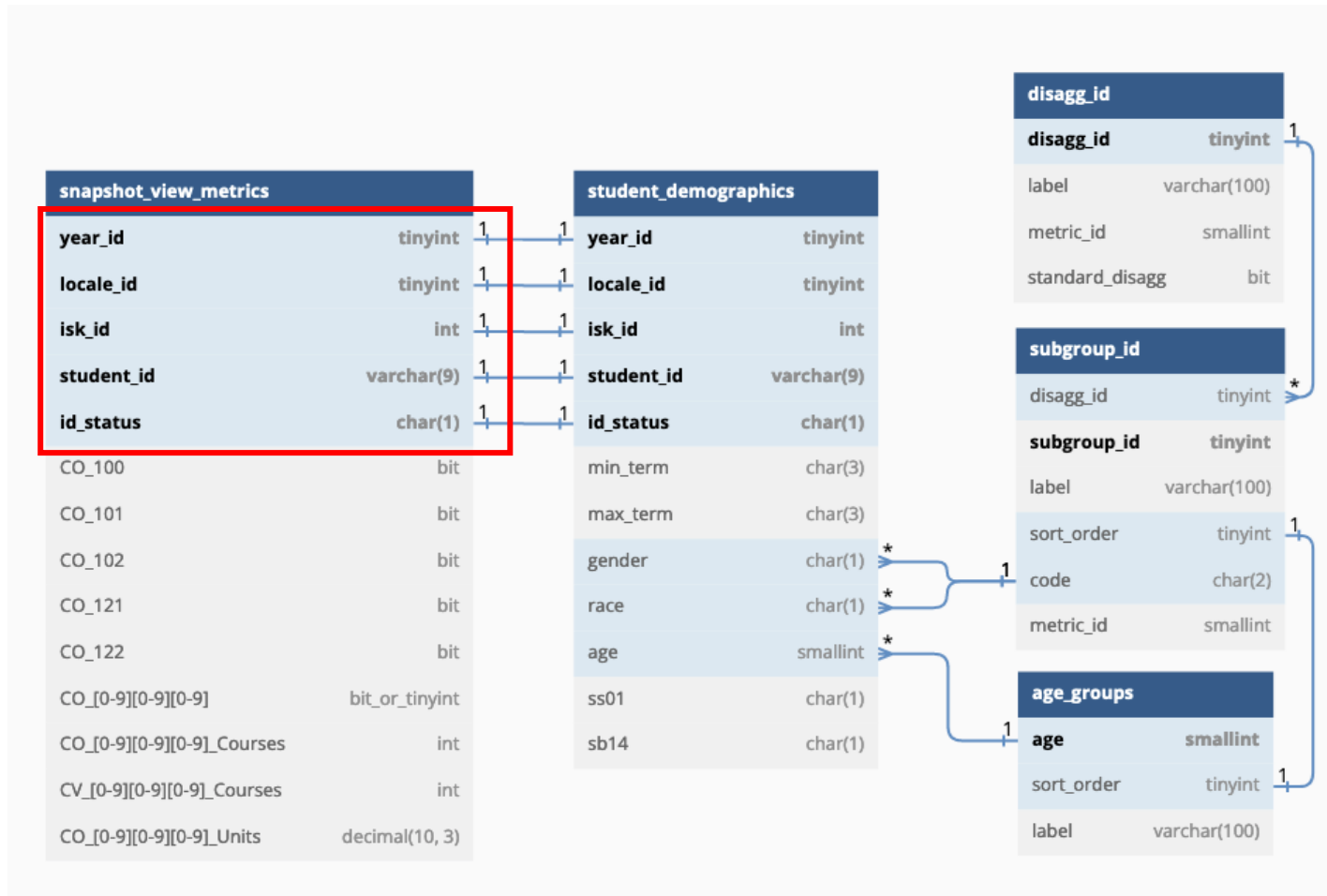
Resource Diagram Relationships



Type 1: Reference

- Reference files to provide further information (e.g., locale_id provides district and region information)
- Data integrity
 - primary keys
 - foreign keys
- Relationship diagram (one-to-one, one-to-many, etc.)

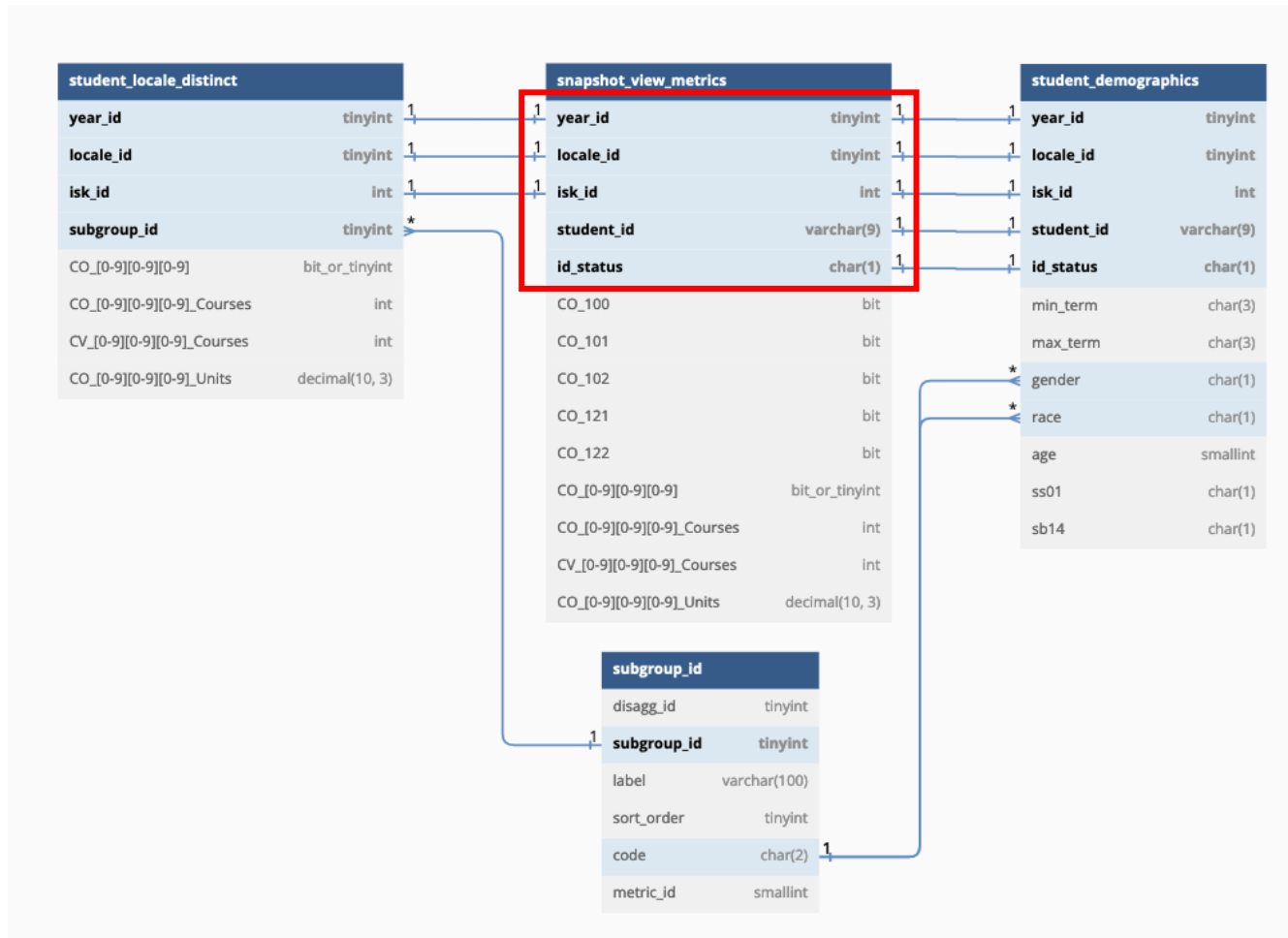
Resource Diagram Relationships



Type 2: Extension

- A one-to-one relationship
- `student_demographics` contains demographic information such as gender, race/ethnicity, and age groups for each **golden record**
- Reference files to provide further information (e.g., subgroup_id provides labels for gender, race/ethnicity, and age groups)

Resource Diagram Relationships



Type 3: Resolution

- A many-to-one relationship
- `student_demographics` contains demographic information such as gender, race/ethnicity, and age groups for each **golden record**
- Reference files to provide further information (e.g., subgroup_id provides labels for gender, race/ethnicity, and age groups)

Resource Diagram Relationships

snapshot_view_metrics	
year_id	tinyint
locale_id	tinyint
isk_id	int
student_id	varchar(9)
id_status	char(1)
CO_100	bit
CO_101	bit
CO_102	bit
CO_121	bit
CO_122	bit
CO_[0-9][0-9][0-9]	bit_or_tinyint
CO_[0-9][0-9][0-9]_Courses	int
CV_[0-9][0-9][0-9]_Courses	int
CO_[0-9][0-9][0-9]_Units	decimal(10, 3)



apprenticeship_metrics	
year_id	tinyint
locale_id	tinyint
SSN	char(9)
max_term	char(3)
race	char(1)
age	smallint
gender	char(1)
CO_610	bit

Type 4: Separate

- Non-relationship
- Different students and contexts

A Prepared Meal With a Personal Touch


SSM Dashboard



SSM Student Level Data



Documentation Provided with File Through DoD



California Community Colleges

Launchboard Development

Interface Control Document (ICD) for Student Success Metrics

Launchboard Development Team to California Community Colleges

Interface Control Document – Launchboard Development Team to California Community Colleges

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Use Cases and Other Learning Opportunities

- What are some initial use cases for the data
- How can I learn more about how to use the data

Student Level Data from Student Success Metrics (SSM)

Suggested Use Cases (so far):

1. Add local context to SSM reporting:

- Remove certain first-time students from the cohort that are only flagged at the college level and not submitted to MIS who may be skewing SEP Outcomes
 - Example: JPA students in the Public Safety sector from first-time cohort

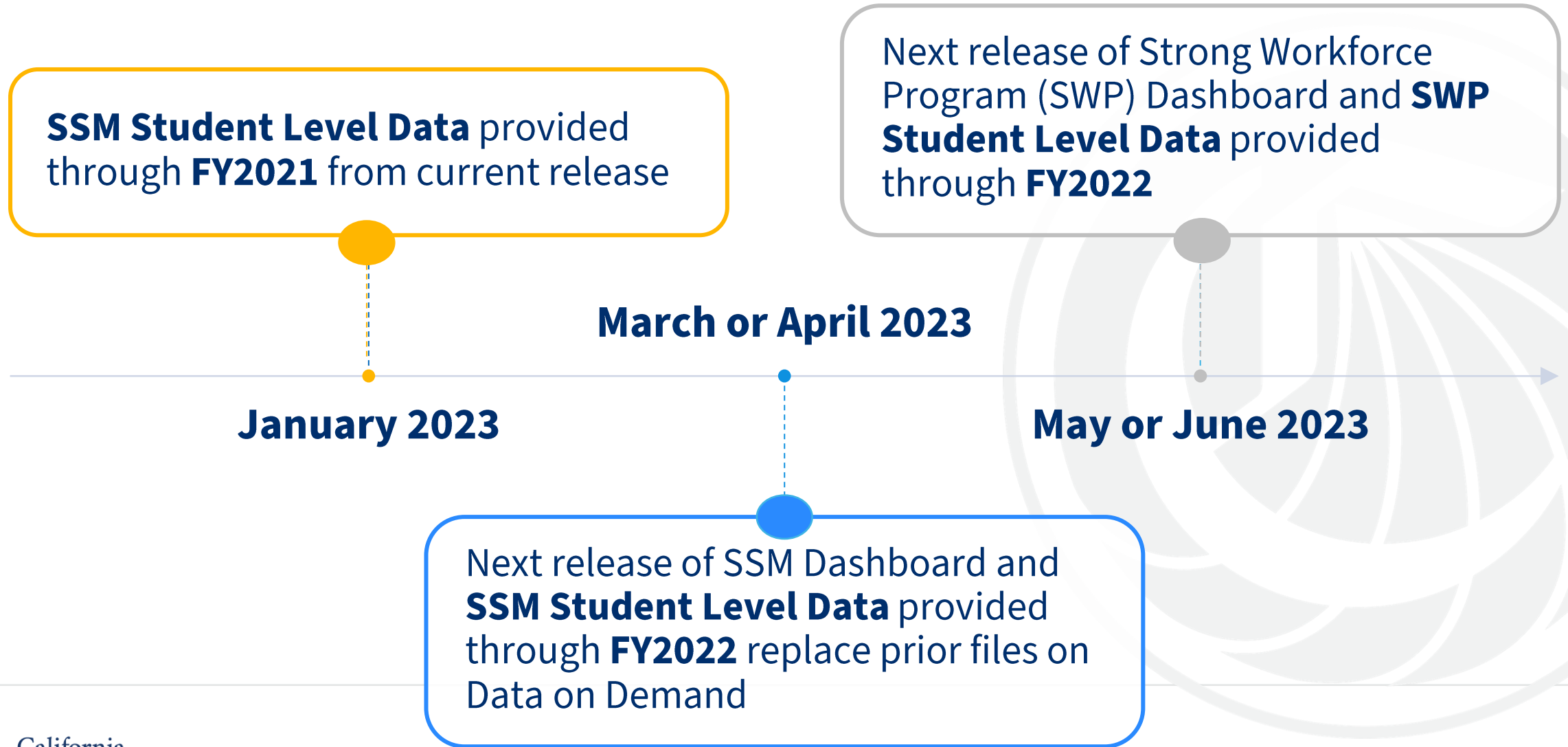
2. Qualitative research:

- Evaluate interventions for first-time cohort students by matching students who were impacted with college records

3. Accuracy check:

- Troubleshoot data submitted to MIS for Student Centered Funding Formula or Student Equity Plans

Reminder of Timeline for Delivery Student Level Data



Other Learning Opportunities for Student Level Data



Thursday, March 23, 2023: RP Group's Pier To Pier Group Chat - Event to showcase how IRPE offices are using student level data and share ideas with your peers. Registration is open at:
https://cccconfer.zoom.us/meeting/register/tZAvdOuqrzouHty16uFMYrj_jnAqLM1zsAwo



Tuesday, April 25, 2023: CO Office Hours to answer questions and support use of data



Wednesday, May 10, 2023: CO Office Hours to answer questions and support use of data



Who Are You Going to Email?

For help accessing Data on Demand:
cccmisedit@cccoco.edu

For help or questions on the data or
the documentation received:
launchboard@cccoco.edu

Give us your feedback!



Feedback survey link:

<https://www.surveymonkey.com/r/23StudentSuccessMetrics>

For any comments or questions: please email launchboard@cccco.edu





Q&A



California Community Colleges

Thank you!

www.cccco.edu



Appendix









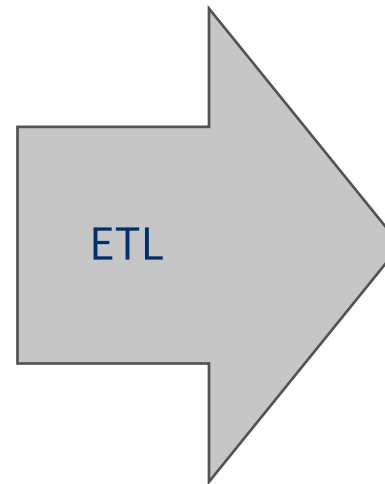
Data Flow from MIS to SSM

Flow from MIS to SSM student level data

Initial Data Ingestion

Source Files

-  MIS Term/Annual Files
-  CTE Outcomes Survey File
-  DAS (Apprenticeship) File
-  CSU/UC/NSC Transfer Bucket
-  CCCApply Application File
-  EDDUI Wage File



Entity resolution
Cleaning
Ingestion

Development Database



LaunchBoard Building



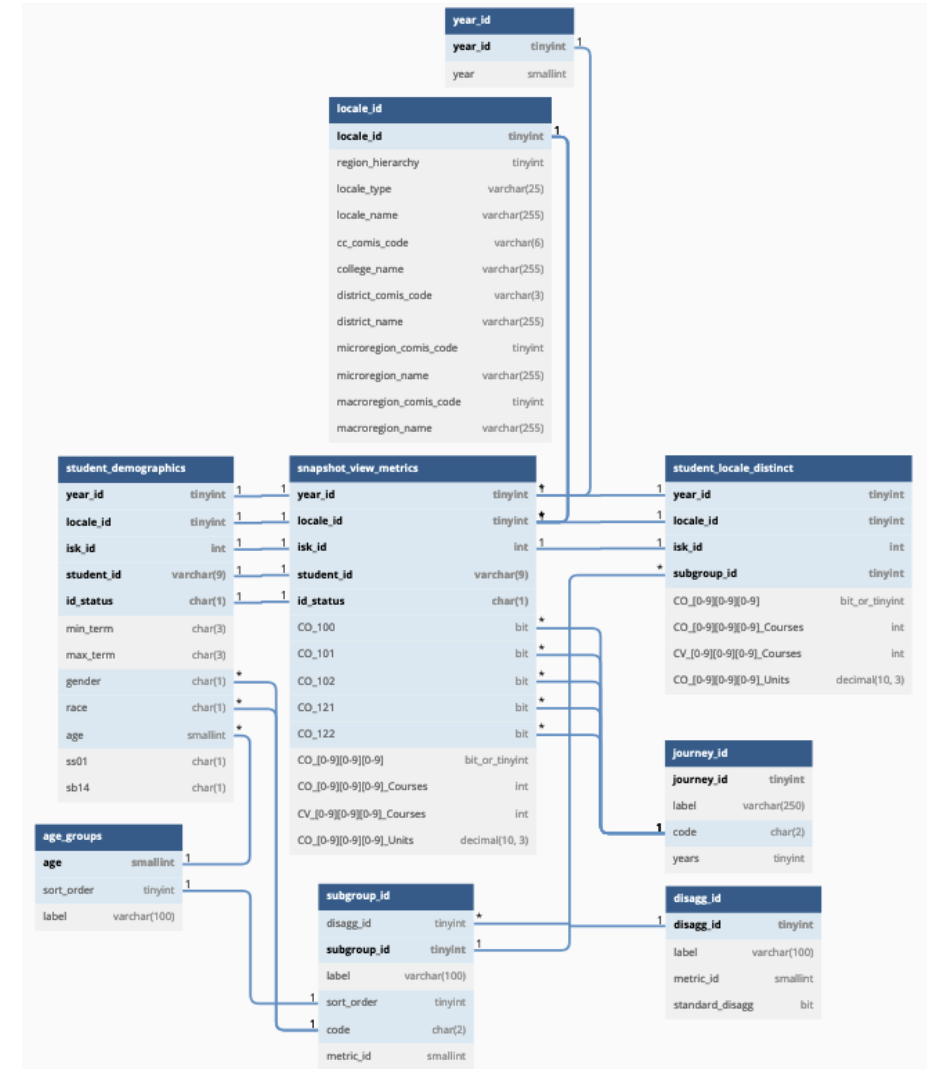
- Data snapshot at time of load
- Indexing for efficient calculation
 - Our largest dashboard CCP requires creating over 2 billion (and counting!) records, so efficiency is key
- Dashboard “cohort” isolation
 - ``sp_populate_cohort.sql``
 - ``sp_populate_cohort_metrics.sql``
- Metric calculation scripts maintained on an ongoing basis
 - ``sp_co_102.sql``
 - ``sp_co_325.sql``
 - ``sp_co_404_units.sql``
 - ``sp_perform_unit_calculation.sql``

Data Architecture

Development
Database



Indexing
Organization

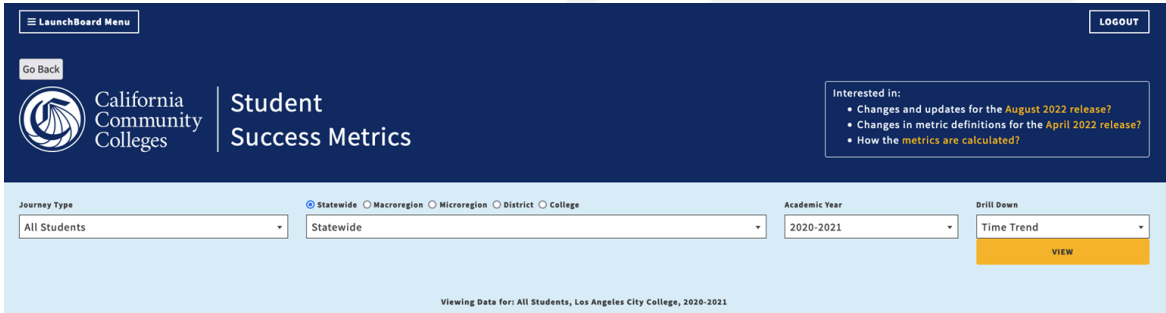
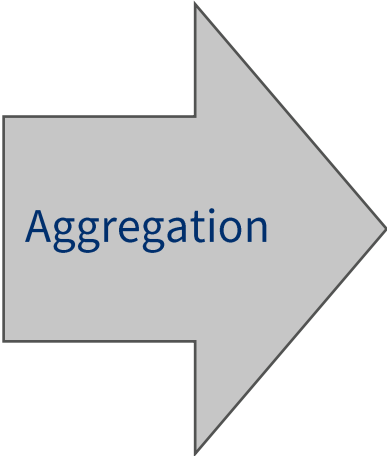
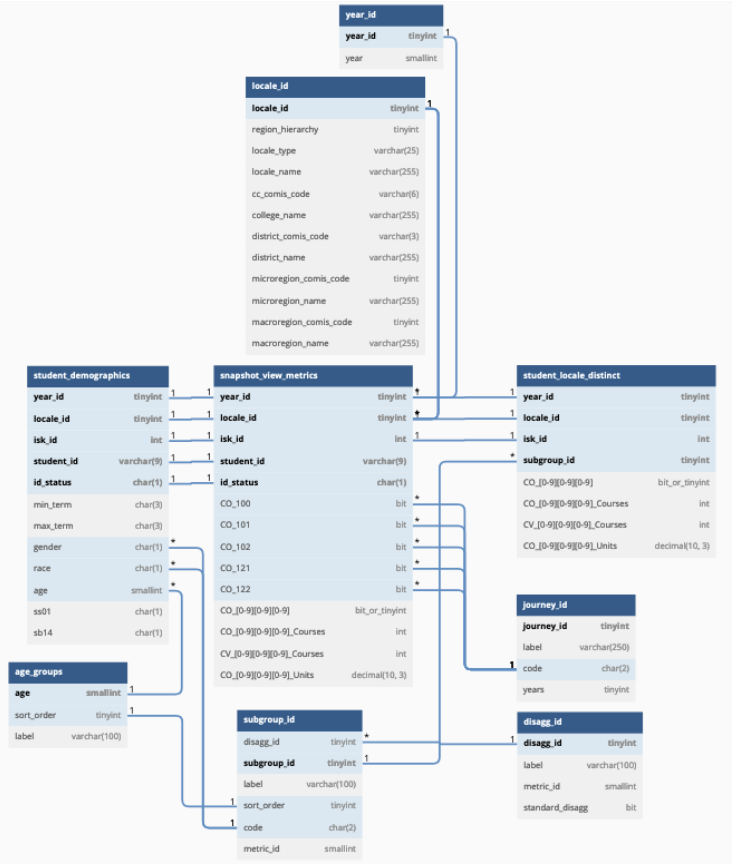


Metric Calculation – Wide Tables

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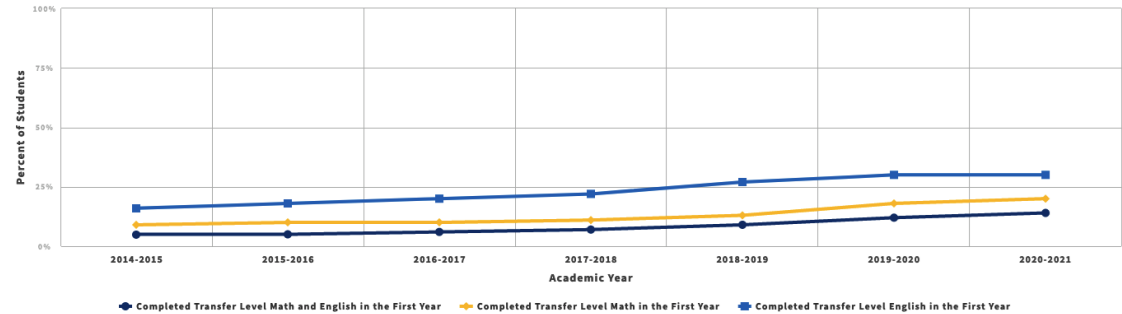
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Student Level Data from Student Success Metrics (SSM)



Completed Transfer-Level Math and English

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Source: Chancellor's Office Management Information System

Technical Definition

Note: Explore an expanded definition of the Completed Transfer-Level Math and English metric in the Metrics Under Development section.