SLO Performance: A Deep Dive

WEBINAR · Thursday, October 1, 2026 · 12:00 PM ET



Today's plan

1. **Quick recap**
   Where this dashboard fits and what it’s designed to show
2. **Questions it answers**
   Four real questions, answered live in the dashboard
3. **Under the hood**
   How each number is calculated, and the one key rule to keep in mind
4. **Make it yours**
   Simple customizations you can make without a developer
5. **Known gaps & what's next**
   What's available now and the gap we are working to close

HOUSEKEEPING

Recorded
We'll share the recording afterward.

Questions in chat
Drop them in anytime; we'll address them in Q&A at the end.

Mostly live demo
Slides carry annotated screenshots so you can use the deck as a reference later.

Sample data throughout. Names & numbers are fictitious.

Quick recap

Where SLO Performance Fits in the Workflow

Three dashboards, three questions

Faculty Participation

"Who is participating?"

Has assessment data been submitted?

Institutional Statistics

"What are we assessing and where?"

How much coverage do we have?

SLO Performance

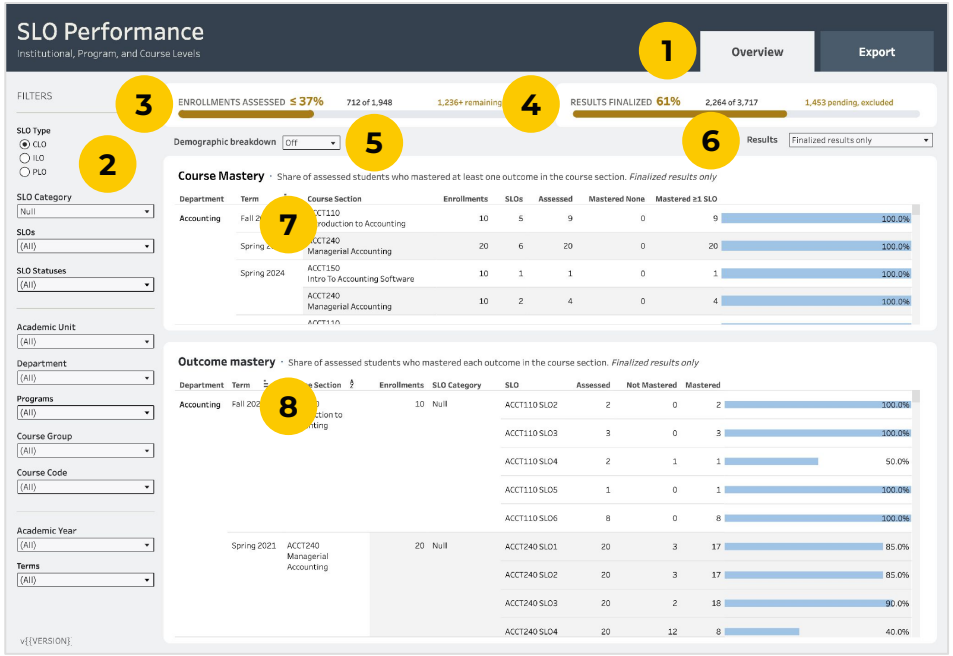
"How are we & our students doing?"

What are the results telling us?

TODAY'S DEEP DIVE

SLO Performance is the results step. The first two dashboards ask whether the data is in and how far it reaches. This one reads the data: of the students who were assessed, how many met the outcome, by outcome, by section, by program, and by demographic group.

Anatomy of the Overview



1. **View tabs**
   Overview · Export
2. **Filters**
   SLO Type radio first, then outcome, unit, course, term
3. **Enrollments Assessed**
   Assessed of enrolled; watch for ≤ and +
4. **Results Finalized**
   Finalized of all results; pending is excluded by default
5. **Demographic breakdown**
   Off, or split rows by a student attribute
6. **Results**
   Finalized only, or include non-finalized
7. **Course Mastery**
   Per section: mastered none · mastered ≥1 SLO
8. **Outcome mastery**
   Per outcome per section: not mastered · mastered

Two tabs, one question, different rows

Overview · Course Mastery

One row per section, per term

COLUMNS

- Enrollments, Assessed students
- SLOs assessed
- Mastered None · Mastered ≥1 SLO (count & %)

Best for: which sections need attention

Overview · Outcome mastery

One row per term, per section, per outcome

COLUMNS

- Enrollments, Assessed students
- Not Mastered · Mastered (count & %)

Best for: which outcomes students struggle with

Export · Build your table

Any grain you choose, up to five breakdowns

COLUMNS

- SLO or SLO Category
- Unit / department
- Program / section
- Year / term
- Demographic

Best for: the table that goes in the report

Same filters everywhere, same Mastered ÷ Assessed math everywhere. Only the grain of the row changes, and that changes what a student counts as.

Questions it answers

Four Common Questions this Dashboard Can Answer

Four example questions

1. **“How are students doing in each section, and on which outcome?”**
   Check the two cards first; then Course Mastery against your threshold, and click a section for each outcome

2. **“How well are students mastering our outcomes?”**
   Export → SLO grouping, no breakdowns: one row per outcome, each student counted once

3. **“Are there equity gaps?”**
   Demographic breakdown → On → pick an attribute; every row splits by group

4. **“I need a table for the program review”**
   Export → Build your table → six cards → PDF / XLS; rename the generic columns

● LIVE

▸ SLO PERFORMANCE

Live walkthrough

The four questions, answered live in the dashboard

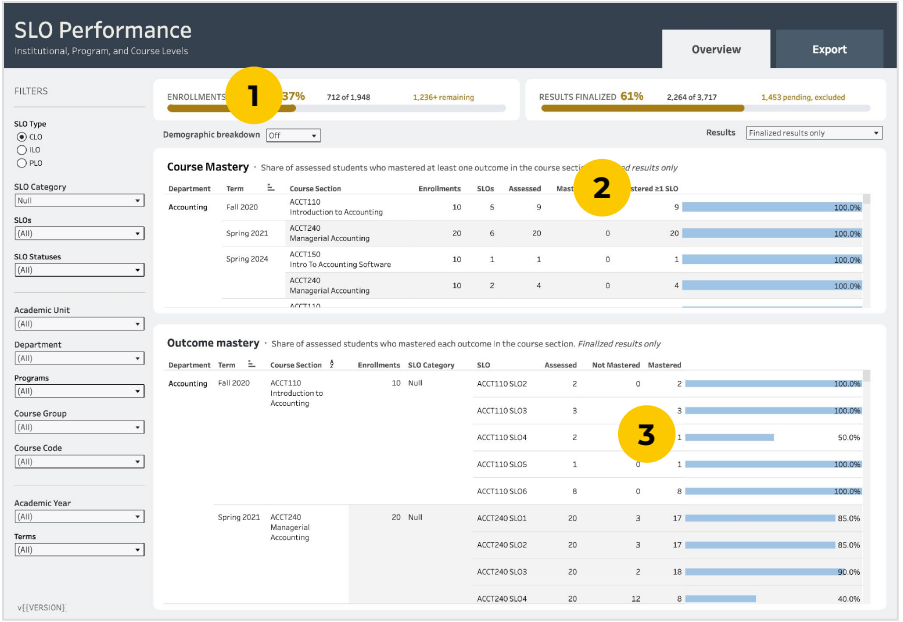
QUESTION 1 OF 4

“How are students doing in each section, and on which outcome?”

WHERE TO LOOK

Cards → Course Mastery → Outcome mastery

1. **Check the two cards first**
   Enrollments Assessed: how representative the results are. Results Finalized: finalization progress. Keep Results on finalized only.
2. **Start at the section**
   Course Mastery: compare Mastered ≥1 SLO % to your threshold. With several SLOs, a student counts if they mastered any one.
3. **Drop to the outcome**
   Click a section row: Outcome mastery filters to it, one row per SLO with its own rate. Download → Crosstab to share.



Mastered ≥1 SLO is never lower than the best single outcome in the section, so don't compare it with one outcome's rate.

QUESTION 2 OF 4

“How well are students mastering our outcomes?”

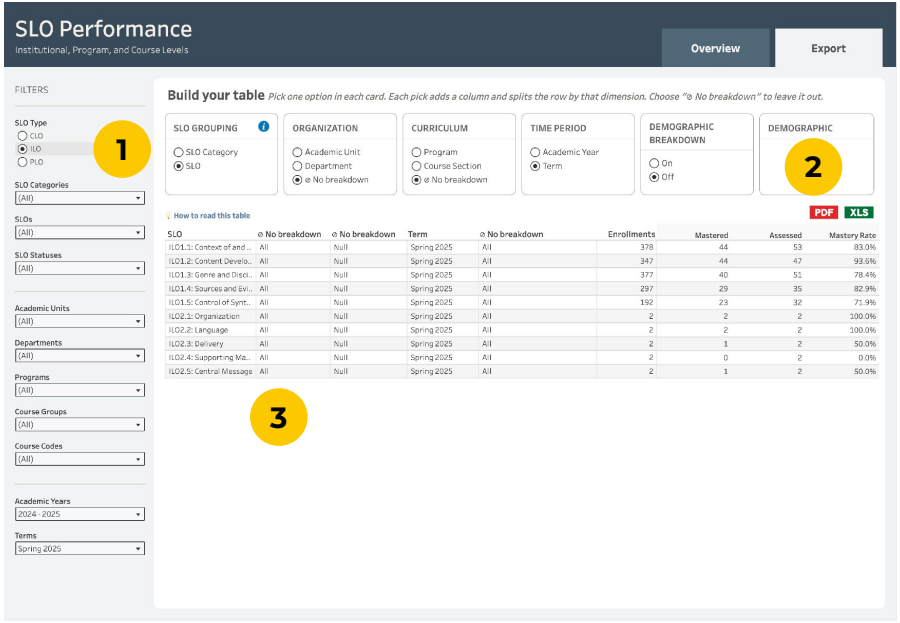
WHERE TO LOOK

Export tab → one row per outcome

1 **Set the scope**
Set the SLO Type radio to ILO, then clear all filters for the whole institution.

2 **Collapse to one row per outcome**
SLO Grouping = SLO. Organization and Curriculum = No breakdown. Time Period = Term. Demographic = Off.

3 **Read one row**
Each student counts once per outcome, across all sections. Mastery Rate = Mastered ÷ Assessed.



Mastery Rate is a share of assessed students, not of enrolled.

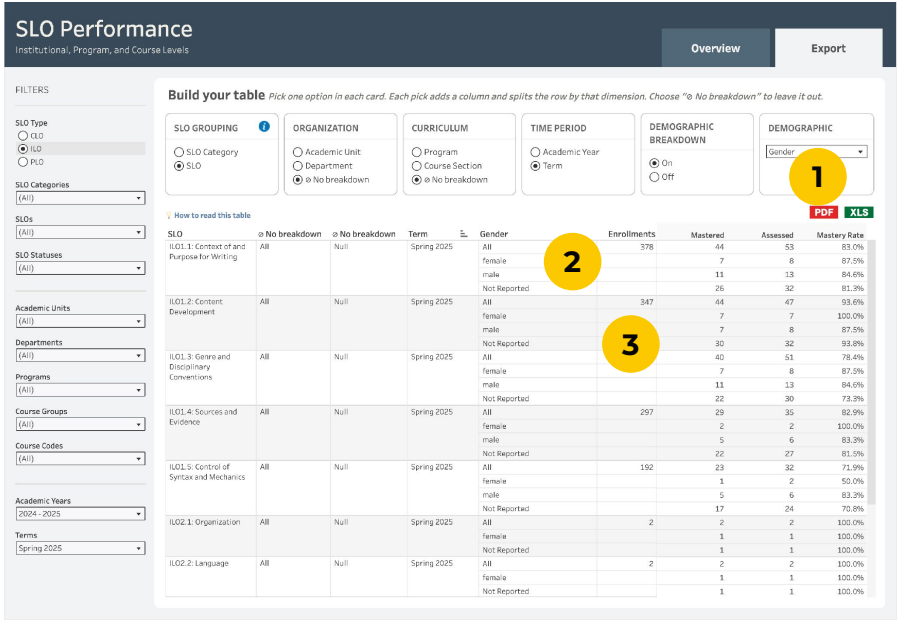
QUESTION 3 OF 4

“Are there equity gaps?”

WHERE TO LOOK

Demographic breakdown → On

1. **Turn it on**
   Demographic breakdown → On, then pick the attribute: Ethnicity, Gender, Citizenship, … whatever your SIS feed carries.
2. **Read the split rows**
   Every section and outcome row splits into one row per group. Not Reported is students with no value for that attribute.
3. **Compare within a row group**
   Mastery Rate across groups for the same outcome and section is the equity question. Small groups: read the counts, not just the %.



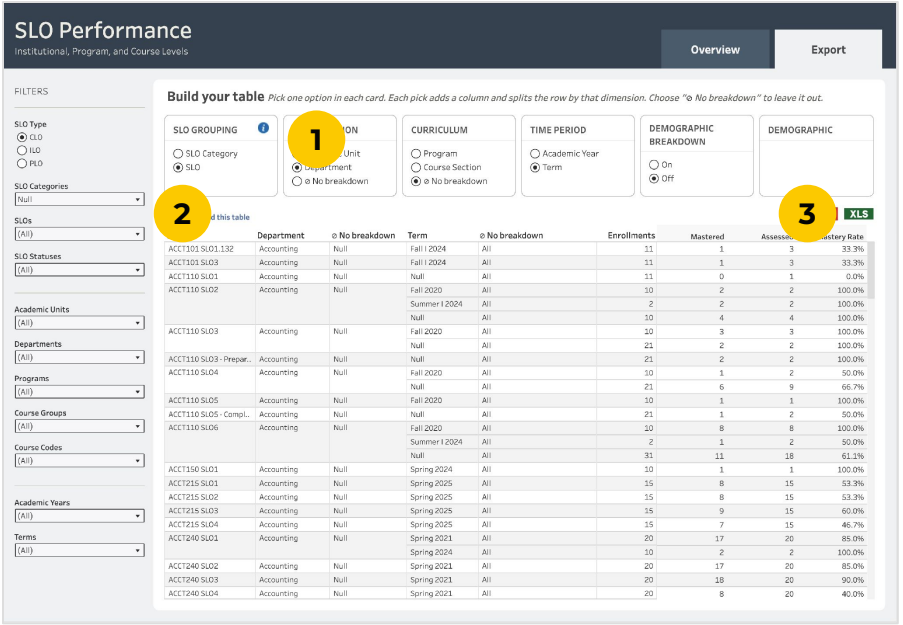
Attributes with more than 10 distinct values are hidden by design (IDs, emails).

“I need a table for the program review”

WHERE TO LOOK

Export tab → Build your table

1. **Pick one option per card**
   SLO or category · academic unit / department · program / section · year / term · demographic on/off. ⊘ No breakdown leaves a card out.
2. **Read the help line**
   “How to read this table” restates your choices in a sentence and warns you when rows won't add up.
3. **Download**
   PDF or XLS, top right. Subtotals show/hide has its own dropdown. Column headers come out generic, so rename them in the file.



Each pick adds a column and splits the row. Broader tables merge students, so totals will not match a narrower table.

Filter cheat sheet

SLO Type (radio)
One at a time: CLO, ILO, PLO. If the page looks empty, this is the first thing to change; the default may not match your setup.

SLO Category · SLOs · SLO Statuses
Category is only meaningful for ILOs and PLOs. Statuses = Active / Archived.

Academic Unit · Department · Programs
The organization hierarchy. Programs reach results through course groups → courses. A section in two programs counts for both.

Course Group · Course Code
Narrow to one course. Course Code is what the tables show; Course Group is the catalog grouping.

Academic Year · Terms
Terms are ordered by their start date. Academic Year merges the terms inside it.

Results
Finalized results only is the default, and what we recommend: it's the stable number. Include non-finalized is a preview for institutions without Course Central or auto-finalization.

Demographic breakdown
On / Off plus the attribute. Only attributes with ≤ 10 distinct values are offered.

Institution-level results
Not a filter. Outcomes assessed outside a course have no section, department or term, and don't appear on the Overview tables. They do appear on Export.

Filters are shared between Overview and Export. Most only list values that have results: a program with no assessment results won't appear, so you never pick something that shows a blank page.

Under the hood

How the key numbers are calculated

Mastery Rate = students who mastered ÷ students assessed

Mastery Rate = x ÷ y

x · Mastered

- Distinct students whose result on this outcome shows mastery
- Assessed twice in the row? Mastered if mastered at least once
- Finalized results only, unless you switch Results

```
COUNTD(IF [Mastery Achieved]
  THEN [Student Id] END)
```

y · Assessed

- Distinct students with at least one result on this outcome, in this row
- Counts assessed students, not enrolled students; anyone never assessed is left out

```
COUNTD([Student Id])
```

Private outcomes are excluded before anything is counted. Versions and variants of an outcome roll up to the parent outcome, so revising an outcome doesn't split its results.

The one rule to know: each student counts once per row

⚠️ Whatever a row is, a section on the Overview or whatever you build on Export, **each student counts once on that row, and their mastery counts once**. The same student can show up again on another row, so row counts don't add up to unique students.

What it means for you

- Within a row, rates are clean: every student counts once
- Across rows, counts are not unique headcounts; don't add them up and call them “students”
- Lecture + lab sections: the same student is on both section rows

Where you'll notice it

- On Export, broader rows merge students, so totals get smaller
- Programs overlap: a student in two programs is in both rows

How to read around it

- Build the row your question is about; don't add rows up to get there
- Want a different rule, like counting mastered outcomes instead of students? Talk to us

The two cards, and what ≤ and + are telling you

ENROLLMENTS ASSESSED **≤ 37%**
712 of 1,948 · 1,236+ remaining

Assessed enrollments with ≥1 result, finalized or not, summed per section `SUM({FIXED section, student : MIN(1)})`

Enrollments sum of each section's enrollment count
`SUM([total_students])`

+ some sections have no enrollment count, so the true total is higher

≤ so the denominator is too small and the rate is an upper bound; also capped at 100%

RESULTS FINALIZED **61%**
2,264 of 3,717 · 1,453 pending, excluded

Results assessment result records, not students; one student on five outcomes is five records `SUM([n_results])`

Finalized records with finalized = true
`SUM([n_finalized_results])`

pending, excluded everything else; left out of every mastery number unless you switch Results to include non-finalized

Why it's here a reminder to finalize. Faculty Participation always counts pending results; here they're left out by default.

Both cards respect the filters and count finalized and unfinalized results alike; the Results dropdown doesn't change them. By default, the tables below only show sections with at least one finalized result.

Course Mastery vs. Outcome mastery: two different questions

Outcome mastery

Did the student meet this outcome?

- One row per outcome per section
- Mastered = mastery on this outcome
- Not Mastered = assessed on it, no mastery
- Rates are comparable across outcomes

```
Mastery Rate = [Mastered] / [Assessed]
```

Course Mastery

Did the student meet anything in this section?

- One row per section
- Mastered ≥1 SLO = mastery on at least one in-scope outcome
- Mastered None = met none of them, a stronger statement than “not mastered”
- Never lower than the best single outcome when a section assesses several

```
COUNTD(IF {FIXED section, [SLO Type], student :
    MAX([Mastery Achieved])} THEN student END)
```

Export: why the rows don't add up

The rule

Whatever a row represents (a section, a program and term, an outcome for the whole institution), each student is counted once on it, and is mastered if they mastered at least once inside it.

So: a broader row merges more assessments. A student who appeared on three section rows is one student on the department row. Broader tables have smaller totals; that's correct, not a bug.

Same math, different row. Never average the percentages across rows; recompute from the counts.

Program
Students can belong to more than one program; they're counted under each.

Academic Year
Terms inside the year merge: assessed in Fall and Spring counts once.

SLO Category
Mastered means at least one outcome in the category, not all. Categories only mean something for ILOs and PLOs.

⊘ No breakdown everywhere
One row per outcome for the whole institution: the broadest view, noticeably smaller counts.

“How to read this table” on the Export tab prints these warnings for the combination you picked.

Demographic breakdown: where it comes from

1. **Source: students_v2**
   One row per student per attribute per value, built from data you uploaded.

2. **Attributes with ≤ 10 distinct values**
   Anything wider (IDs, emails, birth dates) is dropped so the menu stays meaningful. The threshold is one number in the custom SQL.

3. **Off = one row; On = one row per group**
   Every section and outcome row splits by the chosen attribute. Not Reported = the student has no value for it.

4. **Students are joined by student ID**
   A student with no row in students_v2 lands in Not Reported. If the table is empty, the breakdown control hides itself.

```
-- students_v2 custom SQL
SELECT
    attribute
    , COUNT(DISTINCT value) AS n
FROM students_v2
GROUP BY attribute
HAVING n <= 10
```

Reading a demographic table

- Compare Mastery Rate across groups for the same outcome and section; that's the gap question.
- Small groups swing wildly. Read the counts next to the %.
- Per-section counting still applies: a student is in each group once per section.

Attribute names come straight from your SIS feed, so what's in the menu is what your data office sends.

Make it yours

Simple customizations, no developer required

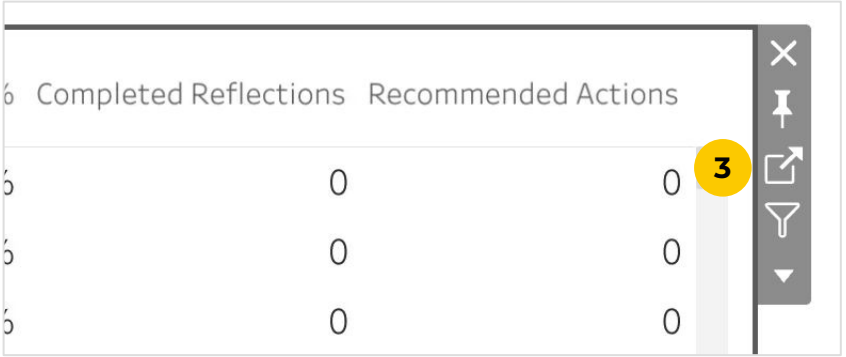
Before you customize

1. **You need a license that lets you edit**
   Editing, in Tableau Cloud or Tableau Desktop, needs a Creator or Explorer license. Not sure which you have? Ask your Tableau admin first.

2. **Work on a copy**
   Download → Tableau Workbook. Tableau Desktop: open the file and edit it. Tableau Cloud: upload it as a new workbook, then edit that one.

3. **Edit the sheet**
   Each chart or table is a worksheet. Hover it on the dashboard → click the ‘Go to Sheet’ icon.

4. **Undo is your friend**
   Ctrl/Cmd-Z undoes anything, including deletes. Ctrl/Cmd-S often.



Hover any table or chart on the dashboard → click the ‘Go to Sheet’ icon

Three customizations, easiest first

1. **Change a number format**
   Right-click the Mastered % pill → Format → Numbers. Percentages with one decimal, or none.

2. **Show more demographic attributes**
   One number in the students_v2 query: HAVING n <= 10. The only customization that touches SQL.

3. **Color the bars that miss your target**
   One calculated field: IF [Mastered %] < 0.7 THEN "Below target"… → drag to Color.

● LIVE

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Live walkthrough

The three customizations, in a copy of the workbook

Change a number format

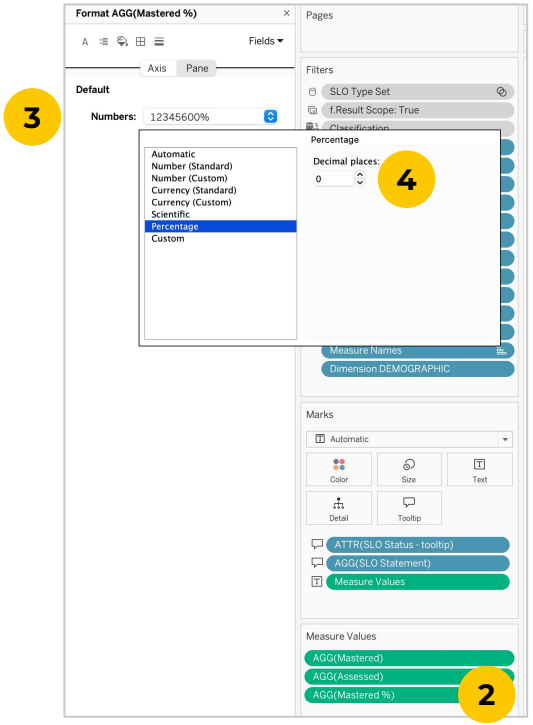
WHY The mastery tables show one decimal; your program review rounds to whole percent.

1. **Open the table sheet**
   'Go to Sheet' from Outcome mastery or Course Mastery.

2. **Find the measure pill**
   On the Marks card or Measure Values: the pill is still named AGG(Mastered %). It shows as Mastery Rate in the table.

3. **Right-click → Format…**
   The Format pane opens on the left. Go to Pane → Default → Numbers.

4. **Choose Percentage**
   Set the decimal places. The table updates; repeat on the other tables if you want them to match.



Show more demographic attributes

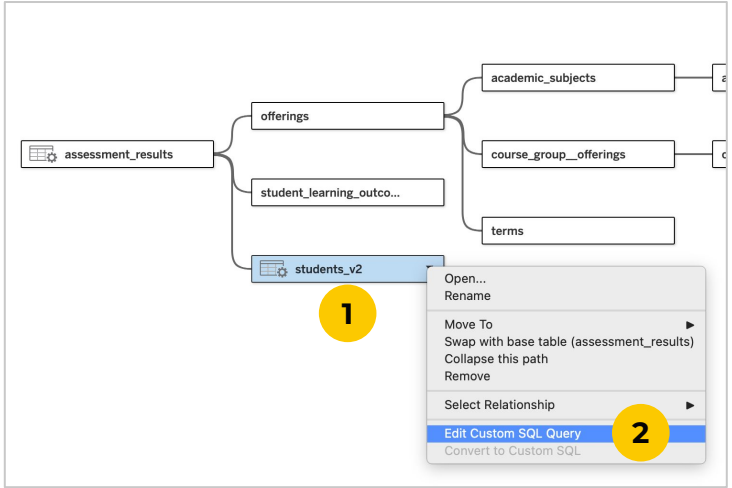
WHY Your SIS sends a 14-value attribute you want to break down by, and the menu hides anything over 10.

1. **Open the data source**
   Data → Edit Data Source (Desktop), or the Data Source tab. Find students_v2 in the model.

2. **Edit the custom SQL**
   Click the triangle next to students_v2 → Edit Custom SQL Query...

3. **Change one number**
   In the query, change the 10 in HAVING n <= 10 to a higher number, like 15. Click OK and the extract refreshes.

4. **Check the menu**
   Back on the dashboard, the Demographic dropdown now lists the attribute.



Color the bars that miss your target

WHY Your institution has a mastery target, say 70%, and you want the rows below it to stand out.

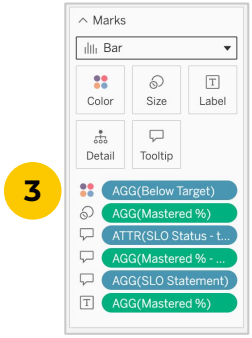
1. **Open the table sheet**
   'Go to Sheet' from Outcome mastery.

2. **Write one calculated field**
   Analysis → Create Calculated Field, named Below Target:
   IF [Mastered %] < 0.7 THEN "Below target" ELSE "On target" END

3. **Put it on Color**
   Drag Below Target onto Color on the Marks card. Click Color → Edit Colors to pick the two colors.

4. **Set your own target**
   Edit the field and change 0.7 to your target, e.g. 0.6 for 60%. The bars update right away.





Known gaps & what's next

What's coming

Available now

- Course Mastery and Outcome mastery for CLO, ILO, PLO
- Assessed-rate and finalized-rate cards with honest ≤ / + marks
- Finalized-only (recommended) or include-pending, one dropdown
- Demographic breakdown from your SIS feed
- Export: build any table, PDF / XLS

The gap we're closing

Your own mastery levels
Insights lets institutions define their own mastery levels, beyond mastered or not mastered. This dashboard still reads only the mastered / not mastered result. Using your own levels is coming.

Questions?

Q&A · ~15 minutes

Contact
Dr. Erin Bentrim
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Thank you!

For more information:

www.elumenconnect.com/insights