

# Metric Definitions

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# 1. Listing of All Detail Fields and Definitions

## 1.1 lowest\_level\_\*

The lowest level unit in the hierarchies. This is the primary key upon which unit matches are made across the academic, HR, and finance hierarchies. Some units were combined for this analysis:

- Nutrition Science; Children, Youth and Families; Textiles; and general CEHS and IANR combined units were merged.
- Older CAS computer science was merged into the School of Computing.
- Global Studies, Anthropology, and Geography units were merged into Global and Integrative Studies.
- College of Architecture (general) was combined with College of Architecture Dean's Office.
- Omaha and Lincoln Engineering units were merged, including the Dean's offices.
- Actuarial Science was merged into Finance.
- Carson Center was merged with Theater.

### 1.1.1 lowest\_level\_key

Numeric key of lowest level unit.

### 1.1.2 lowest\_level\_short\_name

Short name of lowest level unit.

### 1.1.3 lowest\_level\_name

Full name of lowest level unit.

## 1.2 vcvp

Vice Chancellor that unit belongs to: EVC or IANR.

## 1.3 college

College for units that belong to a college.

## 1.4 department

Department for units that belong to an academic department.

## 1.5 has\_finance\_org

Indicator variable: 1 if the unit has a financial org, 0 otherwise.

## 1.6 has\_acad\_org

Indicator variable: 1 if the unit has a academic org, 0 otherwise.

## 1.7 has\_hr\_org

Indicator variable: 1 if the unit has a HR org, 0 otherwise.

## 1.8 acad\_end\_year

Academic ending year. E.g., 2024 for 2023-2024 AY.

## 1.9 appointment\_appportionment\_fte

Total apportioned FTE across all appointments.

## 1.10 appointment\_appportionment\_percent\_teaching\_fte

Sum of faculty teaching apportionment by appointment times FTE by unit.

## 1.11 appointment\_appportionment\_percent\_research\_fte

Sum of faculty research apportionment by appointment times FTE by unit.

## 1.12 appointment\_appportionment\_percent\_service\_fte

Sum of faculty service apportionment by appointment times FTE by unit.

## 1.13 appointment\_appportionment\_percent\_extension\_fte

Sum of faculty extension apportionment by appointment times FTE by unit.

## 1.14 appointment\_appportionment\_percent\_admin\_fte

Sum of faculty admin apportionment by appointment times FTE by unit.

## 1.15 total\_instructor\_fte

Sum of *appointment\_appportionment\_fte* by unit.

## 1.16 instructional\_sch\_to\_instructional\_fte

Sum of each instructor's section instruction percentage times section sch by home department of appointment divided by *total\_instructor\_fte*.

### 1.17 original\_sa\_budget

Original state-aided budget (total). Original budget includes all permanent funding as of July 1. Temporary funding and cash carryforwards are excluded. This also shows up at *Budget* in final metrics.

### 1.18 original\_sa\_budget\_gse

Original state-aided budget with General State-Aided fund subtype.

### 1.19 original\_sa\_budget\_dt

Original state-aided budget with Differential Tuition fund subtype.

### 1.20 original\_sa\_budget\_poe

Original state-aided budget with Programs of Excellence fund subtype.

### 1.21 original\_sa\_budget\_other

Original state-aided budget with other fund subtypes, including Distance Education, Facilities & Administrative, Tobacco and etc.

### 1.22 major\_completions\_bachelor\_degree

Count of all Bachelors completions within major (including non-primary majors).

### 1.23 degree\_n\_bachelor\_degree

Count of all Bachelors degrees with attached major (primary)

### 1.24 major\_completions\_two\_years\_college

Count of all graduate certificate completions within major (including non-primary majors).

### 1.25 degree\_n\_two\_years\_college

Count of all graduate certificates with attached major (primary).

### 1.26 major\_completions\_masters\_degree

Count of all Masters completions within major (including non-primary majors).

### 1.27 degree\_n\_masters\_degree

Count of all Masters degrees with attached major (primary).

### 1.28 major\_completions\_doctorate\_degree

Count of all Doctorate completions within major (including non-primary majors).

### 1.29 degree\_n\_doctorate\_degree

Count of all Doctorate degrees with attached major (primary).

### 1.30 major\_completions\_post\_masters

Count of all Post Masters completions within major (including non-primary majors).

### 1.31 degree\_n\_post\_masters

Count of all Post Masters degrees with attached major (primary).

### 1.32 teaching\_outlay

Appointment budgeted salary \* appointment teaching apportionment (%) summed for unit.

### 1.33 research\_outlay

Appointment budgeted salary \* appointment research apportionment (%) summed for unit.

### 1.34 service\_outlay

Appointment budgeted salary \* appointment service apportionment (%) summed for unit.

### 1.35 extension\_outlay

Appointment budgeted salary \* appointment extension apportionment (%) summed for unit.

### 1.36 admin\_outlay

Appointment budgeted salary \* appointment administration apportionment (%) summed for unit.

### 1.37 percent\_teaching

$$\frac{\text{sum}(\text{appointment\_apportionment\_percent\_teaching\_fte})}{\text{sum}(\text{appointment\_apportionment\_fte})}$$
 for unit. This is set to zero when there is no teaching apportionment.



### 1.38 percent\_research

$\text{sum}(\text{appointment\_apportionment\_percent\_research\_fte}) / \text{sum}(\text{appointment\_apportionment\_fte})$  for unit. This is set to zero when there is no research apportionment.

### 1.39 percent\_service

$\text{sum}(\text{appointment\_apportionment\_percent\_service\_fte}) / \text{sum}(\text{appointment\_apportionment\_fte})$  for unit. This is set to zero when there is no service apportionment.

### 1.40 percent\_extension

$\text{sum}(\text{appointment\_apportionment\_percent\_extension\_fte}) / \text{sum}(\text{appointment\_apportionment\_fte})$  for unit. This is set to zero when there is no extension apportionment.

### 1.41 percent\_admin

$\text{sum}(\text{appointment\_apportionment\_percent\_admin\_fte}) / \text{sum}(\text{appointment\_apportionment\_fte})$  for unit. This is set to zero when there is no admin apportionment.

### 1.42 U\_major\_n

Count of undergraduate majors, including non-primary majors.

### 1.43 U\_primary\_major\_n

Count of undergraduate primary majors.

### 1.44 G\_major\_n

Count of graduate majors, including non-primary majors.

### 1.45 G\_primary\_major\_n

Count of graduate primary majors.

### 1.46 P\_major\_n

Count of professional majors, including non-primary majors.

### 1.47 P\_primary\_major\_n

Count of professional primary majors.

## 1.48 sch

Sum of course SCH by owner of course subject code.

## 1.49 total\_realizable\_base\_tuition

*sch* by course career and student residency times base tuition rate. For AY2024, these rates were:

Career	Resident	Non-resident
UG	\$268	\$859
G/P	\$353	\$1,031

## 1.50 vsip\_eligible\_n

The count of VSIP-eligible tenure-track faculty as of summer, 2026. If this follows past methodology, this is the count of faculty who:

- are tenured
- are 62 years of age as of their eligibility date: June 30, 2026 (FY contract length) or August 27, 2026 (AY contract length)
- have 10 years of service as of their eligibility date

*This is an estimate. At present, it is impossible to determine how many would meet the final criterion: No accepted retirement contract/letter in place.*

## 1.51 vsip\_eligible\_pct

The proportion of the unit's tenure-track faculty who would be eligible for VSIP in summer, 2026.

## 1.52 instructor\_sch

The logic for Instructional SCH is:

- If a course prefix maps to a "unit" that is instructed by a faculty member with an appointment in that "unit" then the SCH will be assigned to that "unit".
- If a course prefix maps to a "unit" that is instructed by a faculty member WITHOUT an appointment in that "unit" then the SCH will be assigned to the "unit" where the faculty member has their largest percentage of appointment (primary appointment home).
- If a course maps to a "unit" that is instructed by a faculty member without an appointment e.g., no instructor of record recorded, then the SCH is assigned to the "unit" according to the course prefix.

*Sum(Section SCH x Instructor %)*

### 1.53 retention\_rate

First-year to second-year retention rate (cohort = AY - 1).

### 1.54 avg\_retention\_rate

Average of first-year to second-year retention rates of last 5 cohorts. Note that average retention rates for units with average starting cohorts less than 5 were nullified.

### 1.55 grad\_rate6

Six-year graduation rate (cohort = AY - 5). Graduation rate includes students that graduated from UNL.

### 1.56 avg\_grad6

Average of six-year graduation rates of last 5 cohorts. Note that average graduation rates for units with average starting cohorts less than 5 were nullified.

### 1.57 research\_average (Research Average z-score)

Average research z-score with non-departmental units (including Dean's offices) removed.

### 1.58 research\_avg\_z\_score\_equally\_weighted

Alternate calculation of research average with non-departmental units included in population with zero research productivity.

### 1.59 sri\_aau\_public\_peers\_z\_score

Z score of sri\_aau\_public\_peers

### 1.60 awards\_budget\_inc\_nuf\_z\_score

Z score of total\_sponsored\_awards\_inc\_nuf\_rschr\_pub\_serv\_teach\_avg\_awards\_budget

### 1.61 research\_awards\_growth\_inc\_nuf\_z\_score

Z score of research\_awards\_growth\_inc\_nuf\_fy20\_fy24

### 1.62 p1\_expenditures\_normalized\_z\_score

Z score of p1\_expenditures\_normalized

Normalized competitively funded federal research expenditures as defined by the [AAU membership policy](#) for the time period of FY2014 to FY2023. Data is normalized by the average T/TT faculty headcount over the same time period as reported to IPEDS.

### 1.63 awards\_normalized\_z\_score

Z score of awards\_normalized

Normalized highly prestigious awards, fellowships and memberships as defined by the [AAU membership policy](#) for awards received LTD up to 2023. Data is normalized by the average T/TT faculty headcount over the same time period as reported to IPEDS.

### 1.64 books\_normalized\_z\_score

Z score of books\_normalized

Normalized book publications as defined by the [AAU membership policy](#) for the time period of FY2014 to FY2023. Data is normalized by the average T/TT faculty headcount over the same time period as reported to IPEDS.

### 1.65 citations\_normalized\_z\_score

Z score of citations\_normalized

Normalized citations as defined by the [AAU membership policy](#) (using Academic Analytics as a proxy for InCites) for the time period of FY2014 to FY2023. Data is normalized by the average T/TT faculty headcount over the same time period as reported to IPEDS.

### 1.66 t\_tt\_headcount\_2014\_2023\_avg

The average of the full-time employees with faculty status who are on the tenure track or tenured as reported to the National Center for Education Statistics IPEDS Data Center.

Headcounts were assigned to departments using the HR tenure org unit.

### 1.67 p1\_expenditures\_2014\_2023\_avg

The average competitively funded federal research support as defined by the AAU membership policy, federal research expenditures less USDA research expenditures adding in awards from USDA Agriculture Food and Research Initiative (AFRI).

Expenditures and AFRI awards are credited to departments using NuRamp routing forms. For PI/co-PIs who routed their credit through a unit outside a department, efforts were made to credit a department using the individual's HR tenure org unit, primary org unit and any secondary appointments.

From the AAU Membership Policy:

**Competitively funded federal research support: federal R&D expenditures**

A ten-year average of federal research expenditures (including S&E and non-S&E) adjusted to exclude USDA formula-allocated research expenditures. This indicator includes obligations for the AFRI program funded by USDA.

- National Science Foundation (NSF) Survey of Research and Development Expenditures at Universities and Colleges/Higher Education Research and Development Survey (HERD), data for the most recently available ten-year average. [Table Builder | NCSES | NSF](#) .
- AFRI Obligations, data for the ten years that match the years from HERD. USASpending.gov - [Federal Awards | Advanced Search | USAspending](#).

## 1.68 awards\_ltd\_2023\_total

[NCR highly prestigious awards](#), including national academy memberships in engineering, medicine and science.

The data source AAU uses for highly prestigious awards is Academic Analytics (AcA) and only awards for T/TT faculty in benchmarked AcA units is reported to the AAU.

Highly prestigious awards are tracked over the life of the faculty member's career and are credited to the institution where they are currently employed. Once a faculty member retires or leaves an institution, their highly prestigious awards are no longer included in the data reported to AAU. Put another way, the highly prestigious awards follow the faculty member.

From the AAU Membership Policy:

AAU collects the number of faculty members by institution receiving awards, fellowships, and memberships in the National Research Council (NRC) list of highly prestigious awards that included: research/scholarship awards, teaching awards, prestigious fellowships or memberships in honorary societies. Each data year represents the faculty's lifetime honors and awards, not new honors and awards. University of Maryland, College Park data includes University of Maryland, Baltimore beginning in 2019.

- The Faculty Scholarly Productivity (FSP) Database. These data are reproduced under a license agreement with Academic Analytics. <http://academicanalytics.com/> .
- The list of the NRC highly prestigious awards can be found at: [National Research Council List of Highly Prestigious Awards | Association of American Universities \(AAU\)](#) .
- Memberships in the National Academies (NAS, NAE, NAM) compiled from the membership lists of each academy; lists can be found at:
- National Academy of Sciences: <http://www.nasonline.org/member-directory/>

- National Academy of Engineering: <http://www.nae.edu/default.aspx?id=20412>
- National Academy of Medicine: <https://nam.edu/directory-search-form/>

## 1.69 books\_2014\_2023\_total

The total number of books published over the time period 2014-2023. The data source AAU uses for highly prestigious awards is Academic Analytics (AcA) and only books published for T/TT faculty in benchmarked AcA units are reported to the AAU.

Book publications reported to AAU by AcA include books, casebooks, edited volumes, encyclopedias, and textbooks. AcA book types not reported include journals, proceedings, study guides and book chapters.

Book publications are credited to departments based on the author's HR tenure org unit.

From the AAU Membership Policy:

The total number of books published by the institution for the most recent ten-year period.

- The Faculty Scholarly Productivity (FSP) Database. These data are reproduced under a license agreement with Academic Analytics. <http://academicanalytics.com/>

## 1.70 citations\_2014\_2023\_avg

The average number of citations on peer-reviewed articles for the most recent ten-year period. AcA reports citations in the year of the publication. Citations for articles co-authored by more than one UNL faculty member have been split equally across authors.

AAU uses Web of Science InCites for the citations data. UNL does not currently subscribe to InCites and so is using Academic Analytics to track and report this data.

Citations are credited to departments based on the author's HR tenure org unit.

From the AAU Membership Policy:

Average number of times an institution's Web of Science Documents have collectively been cited for the most recent ten-year period.

- InCites™, Clarivate (2023). Web of Science. ® These data are reproduced under a license agreement from Clarivate. <http://incites.clarivate.com/>

## 1.71

### average\_total\_sponsored\_awards\_inc\_nuf\_rsch\_pub\_serv\_teach\_fy2020\_fy2024

Average annual sponsored awards received in FY20 to FY24. Included are all sponsor types: federal, industry, state agencies, associations/nonprofits and the NU Foundation.

Purpose codes reported include research, teaching and public service which are summed and divided by total state appropriated budget.

Awards are credited to departments using NuRamp routing forms. For PI/co-PIs who routed their credit through a unit outside a department, efforts were made to credit a department using the individual's HR tenure org unit, primary org unit and any secondary appointments.

## 1.72 budget\_from\_evc\_file\_state\_appropriated\_budget

State-aided budget.

## 1.73

## total\_sponsored\_awards\_inc\_nuf\_rsch\_pub\_serv\_teach\_avg\_awards\_budget

Average\_total\_sponsored\_awards\_inc\_nuf\_rsch\_pub\_serv\_teach\_fy2020\_fy2024 divided by budget\_from\_evc\_file\_state\_appropriated\_budget

Average sponsored awards for FY20-24. Included are all sponsor types: federal, industry, state agencies, associations/nonprofits and the NU Foundation, for purpose codes research, teaching and public service divided by total state appropriated budget.

## 1.74 research\_awards\_growth\_inc\_nuf\_fy2020\_total\_research\_awards

Total sponsored research awards received in FY2020. Included are all sponsor types: federal, industry, state agencies, associations/nonprofits and the NU Foundation. This includes purpose code research only.

Awards are credited to departments using NuRamp routing forms. For PI/co-PIs who routed their credit through a unit outside a department, efforts were made to credit a department using the individual's HR tenure org unit, primary org unit and any secondary appointments.

## 1.75 research\_awards\_growth\_inc\_nuf\_fy2024\_total\_research\_awards

Total sponsored research awards received in FY2024. Included are all sponsor types: federal, industry, state agencies, associations/nonprofits and the NU Foundation. This includes purpose code research only.

Awards are credited to departments using NuRamp routing forms. For PI/co-PIs who routed their credit through a unit outside a department, efforts were made to credit a department using the individual's HR tenure org unit, primary org unit and any secondary appointments.

### 1.76 research\_awards\_growth\_inc\_nuf\_fy20\_fy24

$$\frac{\text{research\_awards\_growth\_inc\_nuf\_fy2024\_total\_research\_awards} - \text{research\_awards\_growth\_inc\_nuf\_fy2020\_total\_research\_awards}}{\text{research\_awards\_growth\_inc\_nuf\_fy2020\_total\_research\_awards}}$$

Growth of sponsored research awards from FY20 to FY24. Included are all sponsor types: federal, industry, state agencies, associations/nonprofits and the NU Foundation. This was calculated by taking the dollar growth over the time period of FY24 – FY20 as a percentage of total growth for the institution resulting in that unit's share of the overall growth dollars for the institution over the reported time period.

### 1.77 research\_awards\_growth\_inc\_nuf\_percent\_of\_total

$$\frac{\text{research\_awards\_growth\_inc\_nuf\_fy20\_fy24 for the department/unit}}{\text{research\_awards\_growth\_inc\_nuf\_fy20\_fy24 for UNL as a whole}}$$

### 1.78 p1\_expenditures\_normalized

$$\frac{\text{p1\_expenditures\_2014\_2023\_avg}}{\text{t\_tt\_headcount\_2014\_2023\_avg}}$$

### 1.79 awards\_normalized

$$\frac{\text{awards\_ltd\_2023\_total}}{\text{t\_tt\_headcount\_2014\_2023\_avg}}$$

### 1.80 books\_normalized

$$\frac{\text{books\_2014\_2023\_total}}{\text{t\_tt\_headcount\_2014\_2023\_avg}}$$

### 1.81 citations\_normalized

$$\frac{\text{citations\_2014\_2023\_avg}}{\text{t\_tt\_headcount\_2014\_2023\_avg}}$$

### 1.82 sri\_aau\_public\_peers

Academic Analytics SRI score when comparing units to Public AAU Institutions. If a unit has multiple SRI scores available, they were averaged.

### 1.83 comments

Comments from ORI regarding research metrics, their crosswalk to instructional units, etc.



## 1.84 instructional\_sch

Sum of SCH attributed to instructors' home departments. The formula takes the percentages designated to each instructor in Peoplesoft.

*Sum(Section SCH x Instructor %)*

Because this is very involved, the following example is provided. Suppose we are tracking the SCH/faculty/class meetings for the following two faculty members:

Fac Member	Unit	FTE
Albert Einstein	Physics	1.00
Marie Curie	Chemistry	0.51
Marie Curie	Physics	0.49

Albert Einstein has a 1.0 FTE appointment in Physics, whereas Marie Curie has a primary appointment in Chemistry (0.51 FTE) and secondary appointment in Physics (0.49 FTE).

Here are five courses from the course catalog:

No	Catalog Listing	Description	Owner	Faculty	Instr Pct	SCH
1	CHEM300 SEC01	Fun with Radium	Chemistry	Curie	1.0	100
2	PHYS201 SEC01	Light Speed I	Physics	Einstein	1.0	100
3	PHYS201 SEC02	Light Speed I	Physics	Curie	1.0	100
4	CHEM301 SEC01	Radium at Light Speed	Chemistry	Curie	0.5	100
4	CHEM301 SEC01	Radium at Light Speed	Physics	Einstein	0.5	100
5	CHEM400 SEC01	Chemical Makeup from Quite Far Away	Chemistry	Curie	1.0	125
5	PHYS400 SEC01	Chemical Makeup from Quite Far Away	Physics	Einstein	1.0	98

Course 1 is offered by Chemistry and instructed by Marie Curie, who has an appointment in Chemistry, so CHEM gets all 100 SCH (100 x 1.0). Similarly, SCH from courses 2 and 3 go to the course owner because the faculty have an appointment in that unit.

Course 4 is a Chemistry course team taught by Curie and Einstein. The 50 SCH (100 x 0.5) for Curie go to Chemistry based on the appointment logic. The 50 SCH for Einstein go to Physics (100 x 0.5) because he doesn't have an appointment in Chemistry.

Course 5 is cross-listed. 125 SCH (125 x 1.0) go to Chemistry since Curie has a CHEM appointment. 98 SCH (98 x 1.0) go to Physics based on the same logic.

## 1.85 budget\_to\_sch

Total original state aided budget divided by SCH

## 1.86 enrollment

Sum of U, G, and P unduplicated AY headcount

## 1.87 majors

Sum of U, G, and P majors (all majors).

## 1.871 minors\_U

Count of all undergraduate students in one or more minors offered by the unit.

## 1.872 minors\_G

Count of all graduate students in one or more minors offered by the unit.

## 1.88 degrees

Sum of Bachelors, Masters, Doctorate, and Post Masters primary degrees

## 1.89 ratio\_completions\_majors

Ratio of all degree completions (all majors attached to a degree) to all majors, including non-primary.

## 1.90 instructional\_sch\_to\_instructional\_fte

Instructional SCH divided by apportioned teaching FTE

## 1.91 average\_instructional\_sch

Mean of instructional SCH by unit.

## 1.92 instructional\_sch\_4Y\_share\_growth

Change in share (percentage) of total instructional SCH from AY2020 to AY2024.

## 1.93 all\_majors\_share\_growth

Change in share (percentage) of total (duplicated) majors from AY2020 to AY2024.

## 1.94 average\_enrollment

Mean of unduplicated enrollment headcount by unit.

## 1.95 instruction\_budget

Original state-aided budget multiplied by teaching fte as a percentage of total fte for unit.

### 1.96 research\_budget

Original state-aided budget multiplied by research fte as a percentage of total fte for unit.

### 1.97 service\_budget

Original state-aided budget multiplied by service fte as a percentage of total fte for unit.

### 1.98 extension\_budget

Original state-aided budget multiplied by extension fte as a percentage of total fte for unit.

### 1.99 admin\_budget

Original state-aided budget multiplied by admin fte as a percentage of total fte for unit.

### 1.991 total\_realizable\_base\_tuition\_less\_budget

This is estimated by total\_realizable\_base\_tuition (1.49) less original state-aided budget, apportioned for percent\_teaching (also instruction\_budget, see 1.95 above).

## 2. Instructional Z-scores in Instructional Metrics

All z-scores (also known as *standardized* or *normalized* scores) were calculated as the difference of the actual metric and the mean of the metric for included units divided by the standard deviation of the included units' metrics. It measures the number of standard deviations a metric is from the mean. In a normal distribution, approximately two-thirds of scores fall within +/- 1 standard deviation of the mean. Approximately 95% of cases fall within +/- 1.96 standard deviations of the mean. Traditionally – *but not universally* – cases beyond the 1.96 standard deviation threshold are considered outliers.

### 2.1 zinstructional\_sch\_4Y\_share\_growth

Standardized instructional\_sch\_4Y\_share\_growth.

### 2.2 zall\_majors\_share\_growth

Standardized all\_majors\_share\_growth.

### 2.3 zinstructional\_sch\_2024

Standardized instructional\_sch\_2024.

### 2.4 ztotal\_majors\_n\_2024

Standardized total\_majors\_n\_2024.

### 2.5 zinstructional\_sch\_to\_instructional\_fte\_2024

Standardized instructional\_sch\_to\_instructional\_fte\_2024.

### 2.6 zbudget\_to\_sch\_2024

Standardized budget\_to\_sch\_2024.

### 2.7 znet\_realizable\_tuition\_less\_budget\_2024

Standardized net\_realizable\_tuition\_less\_budget\_2024.

### 2.8 zavg\_retention\_rate\_2024

Standardized avg\_retention\_rate\_2024.

### 2.9 zratio\_completions\_majors\_2024

Standardized completions (all majors) to majors.

## 2.10 instructional\_average

Mean of instructional z-scores.

## 2.11 research\_average (Research Average z-score)

Mean of research z-scores

## 2.12 overall\_average

Mean of instructional and research average z-scores.

## 2.13 weighted\_overall\_average

Mean of *instructional\_average* and *research average* weighted by *instruction\_weight* and *research\_weight* respectively.

## 2.14 instruction\_weight

$\text{percent\_teaching} / (\text{percent\_teaching} + \text{percent\_research})$ . This is set to zero when the denominator is zero.

## 2.15 research\_weight

$\text{percent\_research} / (\text{percent\_teaching} + \text{percent\_research})$ . This is set to zero when the denominator is zero.

## 2.16 mad\_instructional\_sch\_4Y\_share\_growth

Standardized instructional\_sch\_4Y\_share\_growth using median and median absolute deviation (MAD). MAD was scaled using  $\text{sd}(x) / \text{mad}(x, \text{const} = 1)$  method.

## 2.17 mad\_all\_majors\_share\_growth

Standardized all\_majors\_share\_growth using median and median absolute deviation (MAD). MAD was scaled using  $\text{sd}(x) / \text{mad}(x, \text{const} = 1)$  method.

## 2.18 mad\_instructional\_sch\_2024

Standardized instructional\_sch\_2024 using median and median absolute deviation (MAD). MAD was scaled using  $\text{sd}(x) / \text{mad}(x, \text{const} = 1)$  method.

## 2.19 mad\_total\_majors\_n\_2024

Standardized total\_majors\_n\_2024 using median and median absolute deviation (MAD). MAD was scaled using  $\text{sd}(x) / \text{mad}(x, \text{const} = 1)$  method.

## 2.20 mad\_instructional\_sch\_to\_instructional\_fte\_2024

Standardized instructional\_sch\_to\_instructional\_fte\_2024 using median and median absolute deviation (MAD). MAD was scaled using  $\text{sd}(x) / \text{mad}(x, \text{const} = 1)$  method.

## 2.21 mad\_budget\_to\_sch\_2024

Standardized budget\_to\_sch\_2024 using median and median absolute deviation (MAD). MAD was scaled using  $\text{sd}(x) / \text{mad}(x, \text{const} = 1)$  method.

## 2.22 mad\_net\_realizable\_tuition\_less\_budget\_2024

Standardized net\_realizable\_tuition\_less\_budget\_2024 using median and median absolute deviation (MAD). MAD was scaled using  $\text{sd}(x) / \text{mad}(x, \text{const} = 1)$  method.

## 2.23 mad\_avg\_retention\_rate\_2024

Standardized avg\_retention\_rate\_2024 using median and median absolute deviation (MAD). MAD was scaled using  $\text{sd}(x) / \text{mad}(x, \text{const} = 1)$  method.

## 2.24 mad\_ratio\_completions\_majors\_2024

Standardized completions (all majors) to majors using median and median absolute deviation (MAD). MAD was scaled using  $\text{sd}(x) / \text{mad}(x, \text{const} = 1)$  method.

## 2.25 pool\_zninstructional\_sch\_4Y\_share\_growth

Standardized instructional\_sch\_4Y\_share\_growth within discipline pool.

## 2.26 pool\_zall\_majors\_share\_growth

Standardized all\_majors\_share\_growth within discipline pool.

## 2.27 pool\_zinstructional\_sch\_2024

Standardized instructional\_sch\_2024 within discipline pool.

## 2.28 pool\_ztotal\_majors\_n\_2024

Standardized total\_majors\_n\_2024 within discipline pool.

## 2.29 pool\_zinstructional\_sch\_to\_instructional\_fte\_2024

Standardized instructional\_sch\_to\_instructional\_fte\_2024 within discipline pool.

## 2.30 pool\_zbudget\_to\_sch\_2024

Standardized budget\_to\_sch\_2024 within discipline pool.

### 2.31 pool\_znet\_realizable\_tuition\_less\_budget\_2024

Standardized net\_realizable\_tuition\_less\_budget\_2024 within discipline pool.

### 2.32 pool\_zavg\_retention\_rate\_2024

Standardized avg\_retention\_rate\_2024 within discipline pool.

### 2.9 pool\_zratio\_completions\_majors\_2024

Standardized completions (all majors) to majors within discipline pool.