

Created Variables for CCSSE

2017 - PRESENT

Introduction

This document provides detailed descriptions of how all calculated variables in the CCSSE data set are created. These variables include, among others, developmental status, first-generation status, traditional-age/nontraditional-age, race/ethnicity, and weights.

This document includes two major sections. The first section describes created variables that apply to all colleges. The second section (beginning on [page 6](#)) describes additional created variables that apply only to oversample records.

Documentation for all colleges

Developmental Status [DEVED]

Item 8: Which of the following have you done, or are you currently doing at this college?

8c. Developmental/remedial reading course (also referred to as Basic Skills, College Prep, etc.)
 DONEDEVRD 0 = No 1 = Yes

8d. Developmental/remedial writing course (also referred to as Basic Skills, College Prep, etc.)
 DONEDEVWR 0 = No 1 = Yes

8e. Developmental/remedial math course (also referred to as Basic Skills, College Prep, etc.)
 DONEDEVMT 0 = No 1 = Yes

If respondents indicate that they have taken or are currently taking any one or more of these three types of courses, they are classified as developmental (1); if respondents indicate that they have not nor are currently taking any of these three types of courses, they are classified as non-developmental (0). Additionally, to be classified as developmental or non-developmental, a student must have responded to all three items.

First-Generation Status [FIRSTGEN]

Item 47: Who in your family has attended at least some college? (Mark all that apply).

First-Generation status is based on responses for mother and father’s college education experiences only. This maintains the logic from the original CCSSE instrument and aligns with item 38 on the SENSE instrument.

Relation	Variable	Value if not marked	Value if marked
47a. Mother	SOMECOLMO	0	1
47b. Father	SOMECOLFA	0	1
47c. Brother/Sister	SOMECOLSIB	0	1
47d. Child	SOMECOLCHLD	0	1
47e. Spouse/Partner	SOMECOLSP	0	1
47f. Legal Guardian	SOMECOLGUAR	0	1
47g. No one	SOMECOLNONE	0	1

If a student marked neither 47a [SOMECOLMO] nor 47b [SOMECOLFA], the student is coded as first-generation (1) regardless of whether or not the student marked other subitems.

If a student marked either 47a [SOMECOLMO] or 47b [SOMECOLFA] or both, the student is coded as not first-generation (0) regardless of whether the student marked other subitems.

Traditional/Non-Traditional Age [TRADAGE]

Item 38: Mark your age group

- 1 = Under 18
- 2 = 18–19
- 3 = 20–21
- 4 = 22–24
- 5 = 25–29
- 6 = 30–39
- 7 = 40–49
- 8 = 50–64
- 9 = 65+

Students under the age of 18 are excluded from all data sets.

If a student marked 2 (18–19), or 3 (20–21), or 4 (22–24) on item 38, the student is coded as traditional-age (1).

If a student marked 5 (25–29), or 6 (30–39), or 7 (40–49), or 8 (50–64), or 9 (65+) on item 38, the student is coded as non-traditional age (0).

Race/Ethnicity [RACE_ETH]

Item 45: What is your racial or ethnic identification? (Mark all that apply)

- 45a. American Indian or Alaska Native
- 45b. Asian
- 45c. Black or African American
- 45d. Hispanic or Latino

- 45e. Native Hawaiian
- 45f. Pacific Islander (non-Native Hawaiian)
- 45g. White
- 45h. Other
- 45i. I prefer not to respond.

If a student marked only one of the above population subgroups, the student is classified as belonging to that subgroup. If a student marked two or more of the above responses, the student is reported as “Two or More Races” (9). Finally, if the student marked “I prefer not to respond” (10), regardless of any other subgroups that may have been marked, the student’s race/ethnicity classification is set to missing.

Hours Completed [CREDIT]

This calculated variable reflects the number of credit hours a student completed prior to the academic term the student completed CCSSE.

Item 33: How many total credit hours have you earned at this college, not counting the courses you are currently taking this academic term? [TOTCREARND]

- 0 = None
- 1 = 1–14 credits
- 2 = 15–29 credits
- 3 = 30–44 credits
- 4 = 45–60 credits
- 5 = Over 60 credits

If a student marked 0 (None), or 1 (1–14 credits), or 2 (15–29 credits) on item 33, the student is coded as earning 0-29 credits (1).

If a student marked 3 (30–44 credits), or 4 (45–60 credits), or 5 (Over 60 credits) on item 33, the student is coded as earning 30 or more credits (2).

Credential-Seeking [CREDENTIAL]

Item 26: Indicate which of the following are your reasons/goals for attending this college? (Please respond to each item). The response options are “Yes” and “No.”

- a. Complete a certificate program [GOALCERT]
- b. Obtain an associate degree [GOALAA]
- c. Transfer to a 4-year college or university [GOALTR4YR]
- d. Obtain or update job-related skills [GOALJOBKILL]
- e. Change careers [GOALCHGCAR]
- f. Self-improvement/personal enjoyment

If a student marked “No” for subitems a, b, and c, (these are not goals), the student is coded as a non-credential-seeking student (0).

If a student responded “Yes” for any sub-item a, b, or c, (these are goals), AND did not leave any of these blank, the student is coded as a credential-seeking student (1).

Institutional weight based on enrollment status and gender [IWEIGHT]

This variable is the post-stratification weight used to correct for the sampling and respondent bias in the data. For colleges that administered the survey on paper, the sampling process results in full-time students having a higher probability of being selected compared to part-time students. For colleges that administered the survey online, both full-time students and women are typically over-represented among the respondents. To address these biases in both types of administrations, CCCSE research staff created new weights based on both enrollment status and gender¹. The following formulas are used to create the weights for the four groups.

Part-time Man weight

$$PTMan_{WEIGHT} = \frac{(\% \text{ PT Male population as reported to IPEDS})}{(\% \text{ PTMan respondents from the college's surveys})}$$

Part-time Woman weight

$$PTWoman_{WEIGHT} = \frac{(\% \text{ PT Female population as reported to IPEDS})}{(\% \text{ PTWoman respondents from the college's surveys})}$$

Full-time Man weight

$$FTMan_{WEIGHT} = \frac{(\% \text{ FT Male population as reported to IPEDS})}{(\% \text{ FTMan respondents from the college's surveys})}$$

Full-time Woman weight

$$FTWoman_{WEIGHT} = \frac{(\% \text{ FT Female population as reported to IPEDS})}{(\% \text{ FTWoman respondents from the college's surveys})}$$

If a student indicated they are enrolled less than full-time (Item 2, ENRLMENT) and a man (Item 39, GENDER), the IWEIGHT value is set to the PT Male weight above; students reporting they are women and enrolled less than full-time are assigned the PT Woman weight. Students indicating they are enrolled full-time and a man are assigned an IWEIGHT based on the FT Man weight and students identifying as a woman and enrolled full-time are assigned the FT Woman weight above. If a respondent selected "Other" for gender, their IWEIGHT is set to 1 regardless of their enrollment status. If a student did not answer either the enrollment status or gender item, their IWEIGHT will be set to missing. For colleges that administered the survey online, enrollment status and gender are required fields so the only missing values for gender will be those students who answered "I prefer not to respond." The only options for enrollment status are full-time or part-time; this item cannot be skipped.

Institutional weight based only on enrollment status [IWEIGHT_ENRL]

This variable is retained in the raw data file for institutional researchers who may wish to examine results using the prior weights. Because full-time students, by definition, are more likely to be sampled than part-time students the IWEIGHT_ENRL values are created to correct for the bias introduced by the sampling procedure. The following formulas are used to create these weights.

¹ It should be noted that, since IPEDS does not report an "Other" category for GENDER, only male and female, the weight for students who selected "Other" as their gender is set to one so they are not lost in weighted analyses. GENDER was coded to missing for students who selected "I prefer not to respond."

Please note that this weight variable should not be used when analyzing standardized benchmarks as benchmark scores are created using the new IWEIGHT variable based on enrollment status and gender.

Part-time weight

$$PT_{WEIGHT} = \frac{(\% \text{ PT population at college as reported to IPEDS})}{(\% \text{ PT respondents from the college's surveys})}$$

Full-time weight

$$FT_{WEIGHT} = \frac{(\% \text{ FT population at college as reported to IPEDS})}{(\% \text{ FT respondents from the college's surveys})}$$

If a student marked a response of being enrolled full-time on Item 2 (ENRLMENT), then IWEIGHT_ENRL is set to the full-time weight value above. If the student marked a response of being enrolled less than full-time, their IWEIGHT_ENRL is set to the part-time weight value above. If a student does not mark either response, IWEIGHT_ENRL will be missing since the information necessary to assign the proper weight is missing.

Took classes only online or ever face-to-face [ONLINE_ONLY]

This variable has been created to allow colleges that administered the survey to at least some of their students online to examine differences in engagement for students who took classes exclusively online and those who had at least some face-to-face classes on campus. This variable has two possible values: 0 = not online only, 1 = online only and missing.

Responses to Item 32 and survey administration modality (in-class or online) are used to create this variable.

Item 32: During the current academic term, how many classes are you taking...

- a. Face-to-face (a class in which all instruction is face-to-face in a classroom) (NUMCLF2F)
- b. Online (a class in which all instruction is online) (NUMCLOL)
- c. Hybrid (a class that is a mixture of face-to-face and online instruction) (NUMCLHYB)

The response options for the three items above are

- 0 = None
- 1 = 1
- 2 = 2
- 3 = 3
- 4 = 4
- 5 = 5 or more

If a student completed the survey in the classroom, by definition, this person could not be considered an online-only student as they had to be in a face-to-face environment to complete the survey. Therefore, ONLINE_ONLY = 0 for these students. For students who completed the survey online, the following logic is used to classify respondents:

ONLINE_ONLY coded 1 (one) if the following conditions are met:

- 1. NUMCLOL is 1, 2, 3, 4, or 5 and NUMCLF2F and/or NUMCLHYB are either zero or missing.
- 2. NUMCLOL is missing and NUMCLF2F and NUMCLHYB are both zero.

ONLINE_ONLY is coded 0 (zero) if the following conditions are met:

1. If the student completed the survey in the classroom
(Because the respondent completed the survey in the classroom, by definition, the student did have at least one class that met on campus at least part of the time.)
2. NUMCLF2F is 1 and/or NUMCLHYB is 1

ONLINE_ONLY is coded as missing if the following conditions are met:

1. All three variables are missing.
2. NUMCLF2F = 0 and NUMCLOL is missing and NUMCLHYB is missing
(Because NUMCLHYB is missing, we cannot determine if the student ever attended class on campus.)
3. NUMCLHYB = 0 and NUMCLOL is missing and NUMCLF2F is missing
(Because NUMCLF2F is missing, we cannot determine if the student ever attended class on campus.)

Type of survey administration (paper-and-pencil or online) [SURVEY_TYPE]

Note: This variable is only applicable to colleges that administered the paper-and-pencil survey to students in sampled classes and to online-only students online.

For respondents whose survey responses were collected through the paper-and-pencil administration, SURVEY_TYPE = 1; for data collected through the online administration, SURVEY_TYPE = 2.

Additional documentation for variables created for oversamples

Pseudo-Weights [IWEIGHT_P]

Oversample observations do not have an IWEIGHT value because they were not included in the calculation of the weights used for CCSSE reporting. However, to facilitate analyses of the raw data files, the Center includes a “pseudo-weight” [IWEIGHT_P], which is the same as the primary sample IWEIGHT.

Responses are also excluded from online reporting if they meet one of the following criteria: no response on item 2 (ENRLMENT) or straight-lined responses to all subitems in item 4.

If the variable PSAMPLE is 1, the respondent is in the primary sample, and if it is 0 (zero), the respondent is in the oversample.

Weights for oversample respondents (IWEIGHT_P) are set to match the weights for primary sample respondents. Therefore, the formula shown above applies to oversample respondents as well and is not repeated here.

The same process above is applied to the IWEIGHT_ENRL_P pseudo weight.

Raw Benchmark Scores for Oversamples

The raw benchmark score is simply the average of the rescaled items composing the respective benchmark. As with weights, this is the same process for both primary and oversample respondents. For complete documentation of how raw benchmarks are created, see "[How Benchmarks Are Calculated.](#)"

Standardized Benchmark Scores (pseudo-benchmark scores)

Because oversample respondents are not included in the creation of the standardized benchmark scores, a different process is followed to create pseudo-benchmark scores. This involves four steps:

- » For each benchmark score, subtract the mean of the raw benchmark scores (based only on the primary sample) from each student's score;
- » Divide the difference above by the standard deviation of the mean of the raw benchmark scores (based only on the primary sample);
- » Multiply this by 25 (standard deviation for standardized scores across the cohort);
- » Add 50 (mean for the standardized scores across cohort).

Following the steps above, the formulae for calculation of pseudo-benchmark scores are as follows:

Active and Collaborative Learning (7 items: 4a, 4b, 4f, 4g, 4h, 4i, and 4q)

$$\text{ACTCOLL_STD_P} = (((\text{actcoll} - \text{actcoll_m}) / \text{actcoll_s}) * 25) + 50)$$

Student Effort (8 items: 4c, 4d, 4e, 6b, 10a, 12d1, 12e1, and 12h1)

$$\text{STUEFF_STD_P} = (((\text{stueff} - \text{stueff_m}) / \text{stueff_s}) * 25) + 50)$$

Academic Challenge (10 items: 5b, 5c, 5d, 5e, 5f, 6a, 6c, 7, 9a, and 4o)

$$\text{ACCHALL_STD_P} = (((\text{acchall} - \text{acchall_m}) / \text{acchall_s}) * 25) + 50)$$

Student-Faculty Interaction (6 items: 4j, 4k, 4l, 4m, 4n, and 4p)

$$\text{STUFAC_STD_P} = (((\text{stufac} - \text{stufac_m}) / \text{stufac_s}) * 25) + 50)$$

Support for Learners (7 items: 9b, 9c, 9d, 9e, 9f, 12a1, and 12b1)

$$\text{SUPPORT_STD_P} = (((\text{support} - \text{support_m}) / \text{support_s}) * 25) + 50)$$

In the formulae above, the [benchmark]_m variables represent the mean of the raw benchmark scores for the primary sample; oversample respondents are not included in the calculation of the benchmark mean and standard deviation.

Please note, this process cannot be replicated with an individual college's data because the full cohort of primary respondents is required to obtain the appropriate mean and standard deviation.