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|  | Views of Climate and Learning (VOCAL) Survey: User Guide for Schools | | |
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| Guide on what you need to know to use your VOCAL survey data  November 2022 | | |
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**Background**

The user guide is provided to help schools understand the basics of what they need to know about the Views of Climate and Learning (VOCAL) school climate data. The VOCAL survey measures three dimensions and nine topics of school climate. The table below presents a brief description of each topic measured by the VOCAL survey:

|  |  |  |
| --- | --- | --- |
| **Dimension** | **Domain (label)** | **Definition** |
| Engagement  (ENG) | Cultural and Linguistic Competency (CLC) | The extent students feel adults/students value diversity, manage dynamics of differences, and avoid stereotypes. |
| Engagement  (ENG) | Relationships (REL) | The extent students feel there is a social connection and respect between staff/teachers and students, and between students and their peers. |
| Engagement  (ENG) | Participation (PAR) | The extent students feel engaged intellectually, emotionally, and behaviorally in the classroom, and the extent that students or their parents are engaged in school life. |
| Safety  (SAF) | Emotional Safety (EMO) | The extent students feel a bond to the school, and the extent adults/students support the emotional needs of others. |
| Safety  (SAF) | Physical Safety (PSF) | The extent that students feel physically safe within the school environment. |
| Safety  (SAF) | Bullying/Cyber-bullying (BUL) | The extent that students report different types of bullying behaviors occurring in the school and the extent that school/staff/students try to counteract bullying. |
| Environment  (ENV) | Instructional (INS) | The extent that students feel the instructional environment is collaborative, relevant, challenging, and supportive of learning. |
| Environment  (ENV) | Mental Health (MEN) | The extent that students have access to support systems that effectively support their social, emotional, and mental-health well-being. |
| (ENV) | Discipline (DIS) | The extent that discipline is fair, applied consistently and evenly, and a shared responsibility among staff, teachers, and students. |

1Based on the United States’ Department of Education’s conceptual framework for school climate.

The number of items for each dimension and topic within each grade-level survey are listed here:

| **Dimension** | **Indicator (Code)** | **Grade 4** | **Grade 5** | **Grade 8** | **Grade 10** |
| --- | --- | --- | --- | --- | --- |
| Engagement | Cultural competence (ENGCLC) | 4 | 4 | 5 | 4 |
| Engagement | Relationships (ENGREL) | 4 | 4 | 4 | 4 |
| Engagement | Participation (ENGPAR) | 9 | 9 | 11 | 9 |
| Engagement | Sub-total | 17 | 17 | 20 | 17 |
| Safety | Emotional (SAFEMO) | 5 | 5 | 4 | 6 |
| Safety | Physical (SAFPSF) | 2 | 2 | 2 | 2 |
| Safety | Bullying/cyber-bullying (SAFBUL) | 8 | 7 | 8 | 8 |
| Safety | Sub-total | 15 | 14 | 14 | 16 |
| Environment | Instructional (ENVINS) | 8 | 9 | 8 | 9 |
| Environment | Mental health (ENVMEN) | 2 | 2 | 2 | 2 |
| Environment | Discipline (ENVDIS) | 4 | 4 | 4 | 4 |
| Environment | Sub-total | 14 | 15 | 14 | 15 |
|  | Total number of items | 46 | 46 | 48 | 48 |

**Types of data in your school reports**

The school climate reports include two types of data: responses to individual items and aggregate index scaled scores that combine item responses. Each are used for different purposes.

**Index scaled scores**

An index scaled score is a composite measure that summarizes student responses across several content-related items. As of 2022, DESE developed seven index scaled scores for schools: (1) an overall school climate scaled score; (2) an engagement dimension scaled score; (3) a safety dimension scaled score; and (4) an environment dimension scaled score. In addition, an index scaled score specific to (5) participation (engagement dimension topic), to (6) bullying (safety dimension topic), and to (7) instructional environment (environment dimension topic) was developed. Using a methodology that links common items across grades, all students, and all items across the four grades are on the same scale. The seven index scaled scores range from 1 to 99 and are anchored on to the 2018 scale; each scale in 2018 had a mean of 50 and a standard deviation of 20. Individual student scores are then aggregated to provide each school and district their VOCAL report. In all cases, a higher average scaled score indicates that students view the school climate more favorably (note: a higher bullying scaled score means that the school is safer for students). This type of data enables districts and schools to:

* Compare and identify meaningful differences in student perceptions across grades, dimensions, topics, student groups, and years
* Compare and identify meaningful differences across schools within a district
* Monitor school and district climate scores over time
* Calculate average scores (e.g., compute a 2- or 3-year average score); this facility is particularly important for schools who have small enrollments (<=40 students)
* Make narrative statements such as, “Grade 5 students score four points higher on the safety scale compared to their score on the engagement scale,” and “The difference this year between the average engagement score and the average safety score has halved this year, when compared to last year’s.”

Index scaled scores are only provided if 10 or more students respond within a student group, grade, school, or district**.** Topic scores (participation, bullying, and instructional environment) are only provided if 50 or more students respond at the school or district level. In addition, dimension scores are only provided for student groups (e.g., by race/ethnicity) if 20 or more students responded at the school or district level. Topic scores are not provided for student groups.

**Guidance on interpreting index score differences**

To help districts and schools interpret index score differences between schools, grades, and student groups, the following guidance is provided in the table below:

Guidance on interpreting index score differences

|  |  |  |  |
| --- | --- | --- | --- |
| **Index scaled score point difference** | **Size of effect (negative or positive)** | | |
| **Point difference description1** | **Percentile difference2** | **Difference in standard deviation units (s.d.)1** |
| Less than 2 points | Not meaningful | 2 to less than 4 | Less than 0.05 |
| 2 points to less than 4 points | Small | 4 to less than 8 | 0.05 to less than 0.20 |
| 4 points to less than 6 points | Moderate | 8 to less than 12 | 0.20 to less than 0.30 |
| 6 points to less than 10 points | Large | 12 to less than 19 | 0.30 to less than 0.50 |
| 10 points or greater | Very large | 19 and above | 0.5 and greater |

1This is a **rough guide** to scaled score point differences; the standard deviations of the average scaled score comparisons vary when analyzed. 2Effect can be interpreted as the percentile difference from the lowest group’s, or school’s outcome standardized mean score (set at the 50th percentile on the normal distribution) and the highest group’s standardized mean score.

* A difference of 3 to 4 scaled score points at the index scaled score level usually results in clear differences in student responses at the item level, and these changes help interpret and explain the meaning of the index score difference.
* Caution is always advised when your number of students is small (close to the reporting minimum of 10); taking a 2- or 3-year average may be warranted.
* DESE recommends educators focus on **patterns of index score differences** that replicate across years (e.g., engagement scores were 3 points higher than safety scores in 2018, 2019, and 2022). Replication of results across years supports the interpretation that a meaningful difference exists. Replication is key to validating results and their interpretation.
* The estimation of index scores for schools with small student populations is less reliable (scores will bounce around more). To ameliorate this consequence, small schools can take a 2- or 3-year rolling average of their scores to get a more accurate estimate of student perceptions.

**Index score benchmarks, score categorization, and grade-level profiles**

To further make meaning of the VOCAL index data, profiles were developed for three benchmark scores on the index score distribution (students’ index scores can range from 1 to 99). Benchmark profiles or narratives were developed for scores of 30, 50, and 70; this divides the student score distribution into four categories, namely, *least favorable* (<=30), *somewhat favorable* (31 – 50), *favorable* (51 – 70), and *most favorable* (>70). The benchmark profiles for each grade are available [here](https://www.doe.mass.edu/research/vocal/default.html). These profiles provide a detailed narrative of how students with an average score of 30, 50, and 70 typically respond to items and highlights where these students differ in their responses. Schools serving grade 5 in 2022, for example, can compare the distribution of their students to the one below that depicts the state-level distribution of students across the four categories. The state-level distribution will likely change each year.

State-level distribution of G5 student scores

Schools can benchmark the relative strength of their school climate and use the distribution to assess the variability in student perceptions of school climate within their buildings in year. These comparisons should be done separately for each grade served by the school and use the guidance below:

* If a school’s average student score lies below 30, the narrative associated with the benchmark score of 30 is likely over-reporting the strength of the school’s climate.
* If a schools’ average student score falls between two benchmarks (e.g., a score of 40 lies between the benchmark profile of 30 and of 50), then the analyst should read the two benchmark profiles on either side of the score to make meaning of their average student score.
* If a school’s average student score lies above 70, the narrative associated with the benchmark score of 70 is likely under-reporting the strength of the school’s climate.

The state-level distributions for each grade and year are available in the Power BI state report that is posted on the [VOCAL webpage](https://www.doe.mass.edu/research/vocal/default.html).

**Item-level response data**

Item-level response data show the percentage of students who responded within each of the four response categories (always true, mostly true, mostly untrue, and never true). The data provide rich contextualized information about your students’ perceptions of school climate. **Item response data is** **specific to the cohort of students measured and should NOT be used to average and compare student responses across content-related areas or to average and compare student responses across years**.

Item-level response data are used to:

* Make meaning and identify what student views explain the index scaled score differences highlighted by your cohortanalyses.
* Identify replicable patterns of content-related differences highlighted by your cohort analyses each year.
* Assess the distribution of student responses. You can examine whether students respond relatively evenly across all four response categories (which suggests a variety of views regarding the item content) or respond predominantly in one or two response categories (which suggests a consensus of views).
* Rank-order the items from most positive views of your school climate to least positive views (e.g., by combining the two most positive response categories and sorting them from highest to lowest).
* Compare the percentage of a school’s students responding, “Always true” or “mostly true” to the school’s district or to the state’s percentage. Differences of seven percentage points or more are highlight by color coding in the VOCAL report. A blue-coded cell indicates student views are more favorable for the item when compared to the district or state; an orange coded cell indicates student views are less favorable for the item when compared to the district or state.

The item level response data does **not** allow you to:

* Average the responses together. “Always true” is a stronger response than “mostly true,” and “mostly true” is stronger than “mostly untrue.” But the distance between “always true” and “mostly true” may not be the same as the distance between “mostly true” and “mostly untrue,” so they cannot be averaged together. Item responses are transformed to put them on an equal-interval scale (hence, the index scaled score) so arithmetic and statistical comparisons can be made.
* Directly compare student percent responses across dimensions or grades. Like academic assessments where items range in difficulty, some items on a school climate survey are easier for students to agree with than others. Percent response data does not take this into account and treats every item as though it is of the same difficulty. For example, fostering a climate that encourages *students to intervene* when they see someone being teased has been shown to be much harder to engender than encouraging *a teacher to intervene* if told about a student being bullied. An index scaled score factors the difficulty of the item into a school’s or district’s score. Schools and districts who have favorable responses on the most difficult items in the survey are most likely among the highest scoring schools and districts in any one year.
* Directly compare students’ responses from one year to the next. The demographics and students’ propensity to agree may vary from cohort to cohort and from year to year. As a result, students’ responses may change over time even if the school climate itself has not changed. Index scores of future years are anchored on to the same scale as the baseline year (2018), so trends can be measured accurately and reliably.

**VOCAL in the cycle of inquiry**

Ultimately, educators know their districts and schools best. Student VOCAL data provide an important perspective for educators when evaluating school climate, but it should not be used in isolation. Research has shown that a positive school climate is associated with higher student social and emotional skills, higher student attendance, lower chronic absence, lower in-school and out-of-school suspensions, lower drop-out rates, and higher student achievement. When combined with other data each year (e.g., Early Warning Indicator System (EWIS) data, discipline, attendance, graduation rates, achievement etc.), VOCAL data can inform and empower districts and schools with information not previously available to support school programs, initiatives, and improvement efforts.