School Climate IMPROVEMENT | Resource Package

**Data Interpretation Topical Discussion Guide**

# Interpreting Physical Environment School Climate Survey Data

## Introduction

This *Discussion Guide* provides suggestions to help you use your school climate data to make meaningful interpretations about the topic of Physical Environment within your state, district, or school, taking into account the viewpoints of the people who took the survey in your state, district, or school (i.e., students, instructional staff, noninstructional staff, parents/guardians).[1] It accompanies the School Climate Improvement Resource Package (SCIRP) *Data Interpretation Guide*, which contains information, support, and resources to help you interpret and use your survey results, using the U.S. Department of Education (ED) School Climate Surveys (EDSCLS) model of school climate domains and topic areas as a framework. We encourage you to read the full *Data Interpretation Guide* before using this *Discussion Guide* so that you have a better understanding of the model and types of results you will see.

This document is intended for use by EDSCLS users as well as users of other school climate surveys, which often include a topic area similar in composition to the Physical Environment topic area in the EDSCLS. Directions specific to EDSCLS users are denoted in this guide with the EDSCLS logo (right).

This guide, along with the *Data Interpretation Guide*, can help you to derive meaning from your state's, district's, or school's Physical Environment results, which you can use to identify areas for improvement.[2,3] In the following sections, you will find:

- A definition of physical environment as it relates to school climate
- Guiding questions to help you think through your Physical Environment data from a multi-tiered perspective—universal and targeted (Click on the *Data Interpretation Guide* and the *Reference Manual* to find additional information on multi-tiered approaches.)
- Guiding questions organized by data types (Physical Environment scale scores and item-level Physical Environment data):
- Initial and deeper guiding questions about Physical Environment for **districts** (Appendix A)
- Initial and deeper guiding questions about Physical Environment for **schools** (Appendix B)

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1 This document provides strategies applicable to public schools and districts, including charter authorizers, charter management organizations, education management organizations, individual charter schools, charter local educational agencies, and private schools.

2 Information in this *Discussion Guide* has been updated to reflect a change in the reporting of scale scores. Beginning with the release of the EDSCLS platform Virtual Machine (VM) 3.0 in December 2017, the platform reports benchmarked scale scores, allowing users to compare scale score levels across the EDSCLS domains and topic areas. Note that the scale scores themselves cannot be compared across domains; only the levels in which they fall can be compared in this way.

3 States that host the EDSCLS can use the same suggestions as given here for districts; states will also be able to compare data across their districts, as well as across their schools.

- A link to a Physical Environment webpage that includes resources on interventions that districts and schools can implement immediately to address specific areas of need as well as longer term resources for improving physical environment
- Additional guiding questions for those wishing to use average (mean) Physical Environment values:
  - Initial and deeper guiding questions about physical environment for **districts** using average (mean) Physical Environment values (Appendix C)
  - Initial and deeper guiding questions about physical environment for **schools** using average (mean) Physical Environment values (Appendix D)

Schools and districts are also required to report information about school climate pursuant to ED's Civil Rights Data Collection (CRDC). Information collected by the EDSCLS or other similar surveys may help schools and districts prepare their responses to the CRDC survey. More information about the CRDC can be found at ocrdata.ed.gov.

# What Is Physical Environment?

For the purposes of interpreting data, we have defined *physical environment* as the level of upkeep, ambient noise, lighting, indoor air quality, or thermal comfort of the school's physical building and its location within the community. The physical environment of the school speaks to the contribution that safe, clean, and comfortable surroundings make to a positive school climate in which students can learn.

You can find a brief overview of physical environment as it relates to school climate here.

# Guidance for Districts and Schools

## 1. Examining Physical Environment Data Overall: Focus on a Universal Approach

You can use your Physical Environment scale scores to focus on a universal approach to improving the physical environment. Scale scores (described in the *Data Interpretation Guide*) are the premier way that the EDSCLS as well as many other school climate surveys measure school climate. A scale score, which combines multiple survey items related to different aspects of a topic area such as Physical Environment, is a more robust measure than just attempting to measure that topic by asking about it with a single item.

Beginning with the release of the EDSCLS platform VM 3.0 in December 2017, the way the EDSCLS platform reports scale scores changed. Based on psychometric benchmarking, the scale scores are anchored into fixed cut scores across EDSCLS domains and topic areas, allowing users to compare all scale score levels no matter the topic or domain (i.e., you can compare benchmarked scale score levels for topic areas within and across the three EDSCLS domains: Engagement, Safety, and Environment). The platform produces

graphs showing three "performance" levels into which the benchmarked scale scores may fall: Least Favorable, Favorable, and Most Favorable.[4]

**CAUTIONS: You cannot compare the scale scores themselves across domains; only the levels in which they fall can be compared in this way. (However, you can compare the scores themselves within domains.) Also, you cannot compare older "legacy" scale scores to newer benchmarked scale scores.**

Because any EDSCLS data produced by platforms lower than VM 3.0 are not recalibrated, the scale scores they produced, called "legacy" scores, cannot be compared to the new benchmarked scale scores. If you want to preserve a trend line, you can convert your older legacy scores from prior years to benchmarked scale scores and then compare across years. You will find information on how to convert legacy scores to benchmarked scores at https://safesupportivelearning.ed.gov/edscls/benchmarks.

After you have these data for your district or school students and staff, and you have read the *Data Interpretation Guide*, you can use initial guiding questions in Appendix A (for districts) and in Appendix B (for schools) to help make meaningful interpretations of your results.

If you are a **district**, click on Appendix A to go to initial guiding questions for overall Physical Environment scale scores.

If you are a **school**, click on Appendix B to go to initial guiding questions for overall Physical Environment scale scores.

Average (mean) topic area values (see "Appendix C. Average (Mean) Topic Area Values" in the *Data Interpretation Guide*) also can be used to focus on a universal approach to improving Physical Environment. As described in the *Data Interpretation Guide*, average (mean) topic area values can be used to gauge how favorably respondents perceive the topic.[5]

If you are a district, click on Appendix C to go to initial guiding questions for overall average (mean) Physical Environment values.

If you are a school, click on Appendix D to go to initial guiding questions for overall average (mean) Physical Environment values.

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[4] The EDSCLS platform produces graphs showing three "performance" levels into which the benchmarked scale scores may fall: *Least Favorable* (scale scores below 300): The most likely answer to each positively valenced question in the scale is *disagree* or *strongly disagree*; the most likely answer to each negatively valenced question in the scale is *agree* or *strongly agree*. *Favorable* (scale scores 300–400): The most likely answer to each positively valenced question in the scale is *agree*; the most likely answer to each negatively valenced question in the scale is *disagree*. *Most Favorable* (scale scores above 400–500): The most likely answer to each positively valenced question in the scale is *strongly agree*; the most likely answer to each negatively valenced question in the scale is *strongly disagree*. (See the *Data Interpretation Guide* for further information.)

[5] Average (mean) topic area values are not directly available from the EDSCLS platform but can be calculated from raw survey data. Click on the *Data Interpretation Guide* to go to information about calculating, using, and interpreting average (mean) topic area values.

## 2. Examining Physical Environment Data Across Student and Staff Respondent Characteristics: Focus on a Targeted Approach

Physical Environment scale scores broken out by respondent characteristics provide a richer set of data, a way to see how perceptions of Physical Environment differ across subgroups of students and staff.

Benchmarked scale scores are produced for EDSCLS users for the following subgroups.[6]

- Student scale scores per topic area can be examined by:
  - Gender,
  - Race/ethnicity, and
  - Grade.
- Staff (instructional and noninstructional) scale scores per topic area can be examined by:
  - Gender and
  - Race/ethnicity.

### WHAT ABOUT USING ITEM-LEVEL DATA TO EXAMINE PARENTS'/ GUARDIANS' PERCEPTIONS?

Because of the brevity of the parent/guardian survey, the EDSCLS was not designed to produce Physical Environment scale scores for parents; however, parent results can be examined at the item level, which is discussed in the section Digging Deeper Into the Data by Using Item-Level Data.

*Note:* In the event of a possible disclosure risk that would allow a respondent or small subgroup of respondents to be identified (e.g., if there is only one Asian teacher in the school), the EDSCLS platform will suppress the results for that subgroup (i.e., results for that subgroup will not be shown). (To understand how a small subgroup perceives school climate, see the *Reference Manual* for tips on conducting interviews and focus groups.)

Examining student and staff perceptions of physical environment in your district or school by respondent characteristics can be extremely useful, not only in understanding the areas of strength and weakness in your school environment, but also in targeting interventions. For example, if perceptions of physical environment differ by student characteristics (gender, race/ethnicity, grade), this will help you highlight areas of targeted need.

Supports should be designed to improve school climate for the students who are most in need regardless of the subgroup(s) to which they belong. Targeting supports based on need as opposed to membership in a subgroup will support compliance with relevant civil rights laws.

If you are a **district,** click on Appendix A to go to initial guiding questions for Physical Environment scale scores **by respondent characteristics.**

If you are a **school,** click on Appendix B to go to initial guiding questions for Physical Environment scale scores **by respondent characteristics.**

[6] Note that the EDSCLS platform does not produce crossed demographics (e.g., Asian females). Users can obtain crossed demographics analytically by downloading the raw data file.

Average (mean) topic area also can be used to focus on a targeted approach to improving physical environment.

If you are a **district,** click on Appendix C to go to initial guiding questions for overall average (mean) Physical Environment values **by respondent characteristics.**

If you are a **school,** click on Appendix D to go to initial guiding questions for overall average (mean) Physical Environment values **by respondent characteristics.**

### WHAT ABOUT USING ITEM-LEVEL DATA TO EXAMINE PARENTS'/ GUARDIANS' PERCEPTIONS?

**Yes!** As noted earlier, the EDSCLS parent data do not include Physical Environment scale scores; however, parent/guardian item-level data can be used to consider how parents perceive specific areas of Physical Environment.

## 3. Digging Deeper Into the Data by Using Item-Level Data: Focus on a Targeted Approach

After you have examined your scale scores (and average [mean] Physical Environment values, if you wish to use them), looking at item-level data may help you to dig deeper to target specific areas or issues. (See the *Data Interpretation Guide* to learn more about examining item-level data.) Item-level results can often provide districts and schools with concrete information on the physical environment that may be more actionable, warranting more immediate implementation of interventions found on the Physical Environment webpage, as well as planning and preparation for longer term interventions and strategies.

Sites using the EDSCLS can produce percentage distributions and item averages (means) for each item in the survey that is included in the Physical Environment scale produced by the platform as well as any important Physical Environment items that are not in the scale but have been kept on the survey as stand-alone items.

These guiding questions include suggestions for examining item-level data about how:

a. A Physical Environment item is perceived by individual respondent groups;

b. A Physical Environment item is perceived across respondent groups, but only for items *worded exactly the same way* for each group (called *comparable items*); and

c. Physical Environment items organized by content (called an *item content group*) are perceived across respondents.

These types of guiding questions are detailed here.

### A. Examining Physical Environment Items Within a Respondent Group

You can compare individual Physical Environment items with each other within an individual respondent group (students, instructional staff, noninstructional staff, or parents/guardians). Comparing items in this way may provide districts and schools with concrete examples of physical environment that may be more actionable, warranting more immediate implementation of interventions found on the Physical Environment webpage, as well as planning and preparation for longer term interventions and strategies.

However, we strongly encourage you *not* to focus excessively on a single item rather than the more robust construct (topic area) of which it is a part. If you focus change efforts solely on behaviors and attitudes as defined by specific items, you may run the risk of a form of unintentional "teaching to the test" in which you are able to show growth with respect to specific items even though perceptions of the underlying topic area have not changed.

When comparing the averages (means) of individual items, it is important to make sure that you are comparing "apples to apples." Sometimes a high average (mean) item value represents a positive perception and sometimes a high average (mean) item value represents a negative perception, depending on how the item response options of 1–4 are valenced, or directed. If you want to compare item averages (means), go to the *Data Interpretation Guide* section on item valence and reverse-coding to access important information you will need before comparing them.

For sites using the EDSCLS, negatively valenced items are marked for you in the EDSCLS codebook and survey item lists (questionnaires) at https://safesupportivelearning.ed.gov/edscls/administration and in Table 1 below.

### B. Comparing Physical Environment Items Across Respondent Groups *if Worded Exactly the Same Way*

Item frequencies and averages (means) can be examined across respondent groups, *but only if the items are worded exactly the same way*. This approach is helpful in cases where differences between groups or subgroups of respondents were found in the Physical Environment scale scores (or average [mean] values, if applicable). For example, both instructional staff and noninstructional staff are presented with the item "This school is an inviting work environment." Because the survey items are identical, you can compare the responses of instructional staff to the responses of noninstructional staff on this item.

### C. Considering Physical Environment Item Content Groups

Although looking at scale scores and items in the survey is important in examining and interpreting your data, it may be overwhelming to examine all of the items at once, and you may want to look at them in chunks or groups by substantive content. You are free to use groups of items of similar substantive content that are important to your district or school. We provide examples in Table 1 from the EDSCLS, although similar groupings may be found in other school climate surveys.

Table 1 displays items included in the EDSCLS Physical Environment scale from all respondent groups as well as any important stand-alone items that have been retained. In the table, we suggest the following areas of focus using the Physical Environment items in the EDSCLS: Building Appearance/Setting; Building/Grounds Maintenance; Teaching/Learning Environment; and Working Environment. Note that negatively valenced items are marked for you with an asterisk (*).

**Table 1. Item Content Groupings for the Physical Environment Topic Area**

| | |
|---|---|
| **Building Appearance/Setting** | |
| Student | I think that students are proud of how this school looks on the outside. |
| **Building/Grounds Maintenance** | |
| Student | The bathrooms in this school are clean. |
| Student | The school grounds are kept clean. |
| Student | Broken things at this school get fixed quickly. |
| Instructional staff | This school looks clean and pleasant. |
| Noninstructional staff | The school looks clean and pleasant. |
| Parent | The school looks clean and pleasant. |
| Parent | The school building is clean and well-maintained. |
| **Teaching/Learning Environment** | |
| Instructional staff | My teaching is hindered by poor heating, cooling, or lighting systems at this school.* |
| Instructional staff | My teaching is hindered by a lack of instructional space (e.g., classrooms) at this school.* |
| Instructional staff | My teaching is hindered by a lack of textbooks and basic supplies at this school.* |
| Instructional staff | My teaching is hindered by inadequate or outdated equipment or facilities at this school.* |
| **Working Environment** | |
| Student | The temperature in this school is comfortable all year round. |
| Instructional staff | This school is an inviting work environment. |
| Noninstructional staff | My work is hindered by inadequate or outdated equipment or facilities at this school.* |
| Noninstructional staff | My work is hindered by poor heating, cooling, or lighting systems at this school.* |
| Noninstructional staff | My work is hindered by a lack of materials and basic supplies at this school.* |
| Noninstructional staff | This school is an inviting work environment. |
| Noninstructional staff | My work is hindered by insufficient workspace at this school.* |

*Negatively valenced items are marked with an asterisk. You can click on the *Data Interpretation Guide* section on *item valence and reverse-coding* for further information on negatively and positively valenced items.

These content areas provide an example of how you can examine Physical Environment items in a meaningful way across respondent groups. Identifying differences in the perceptions across

respondents within the same block of items may be especially helpful in targeting action items for improvement.[7]

For example, at least one question on each survey (i.e., students, instructional staff, noninstructional staff, parents) asks respondents about Physical Environment in terms of Building/Ground Maintenance, as follows:

| | |
|---|---|
| Student | The bathrooms in this school are clean. |
| Student | The school grounds are kept clean. |
| Student | Broken things at this school get fixed quickly. |
| Instructional Staff | This school looks clean and pleasant. |
| Noninstructional Staff | The school looks clean and pleasant. |
| Parent | The school looks clean and pleasant. |
| Parent | The school building is clean and well-maintained. |

Looking at these items in tandem may provide you with more in-depth information on whether your district or school needs to place more emphasis on physical environment. If you find that student responses on the Building/Ground Maintenance item grouping are not as you would like (or if you find a discrepancy between the perceptions of students and other respondents), you may want to think about the following question:

**What can my district or school do to provide a greater focus on Building/ Ground Maintenance at school?**

Similarly, there are survey items that group together as Building Appearance/Setting. Looking at the results for this item content group may help you to gauge how well your Physical Environment efforts are perceived. If you find that responses are not as favorable as you would like (or if you find a discrepancy among the perceptions of different respondent groups), consider the following:

**What can my district or school do to better ensure that our physical environment efforts are addressing the needs of students, staff, and parents?**

**What policies and procedures are currently in place in my school to enhance the physical environment? What new policies and procedures need to be implemented? Which policies and procedures should we consider modifying or eliminating? What are our state requirements in this area? What are our obligations under federal civil rights laws in this area?**

*Note:* In all cases, you must comply with your obligations under federal civil rights laws and any applicable state requirements.

[7] Note that these groupings are different than those for scale scores or average (mean) topic area values, which were derived analytically. The groupings in Table 1 are based on items with similar substantive content or areas of focus that may prove more actionable for districts and schools.

# Appendix A: Guiding Questions for Districts

You can use the guiding questions in this appendix to help use your data to focus on universal and targeted approaches to improve the physical environment. In this appendix, you will find:

- Initial guiding questions (scale scores);
- Deeper guiding questions (overall);
- Deeper guiding questions (focused on interventions); and
- Other questions to consider.


Using benchmarked scale scores, you can compare scores of topic areas within a domain (Safety, Environment, and Engagement) for individual respondent groups (students, instructional staff, noninstructional staff). You can also compare "performance" levels into which topic area scale scores fall across domains and respondent groups. These comparisons will help you make meaningful interpretations of your data.

For more information, please see Appendix A in the *Data Interpretation Guide* for benchmarked scale score interpretations.

Consider using the EDSCLS Data Analysis Worksheet to guide your analysis and interpretation of scale scores.

## Initial Guiding Questions (GQs): District Scale Scores

Scale scores are the premier way that the EDSCLS as well as many other school climate surveys measure school climate. A scale score, which combines multiple survey items related to different aspects of a topic area, is a more robust measure than just attempting to measure the topic by asking about it with a single item. For more information on scale scores please see the *Data Interpretation Guide*.

### A Universal Approach

GQ1. What does our **student** Physical Environment scale score tell us about how students perceive physical environment in our district?

**For example, you can examine:**

- How do the student Physical Environment scale scores compare across schools in our district?
- How does our district's student Physical Environment scale score compare with our state's score (if available)?
- How does our district's student Physical Environment scale score compare with our district's student scores on other topic areas within the Environment domain—is it relatively low or high, or in the middle?
-  Districts that use the EDSCLS can examine how the student benchmarked scale score levels compare across schools, compare with the district, with other topic areas within and across domains, and across respondent groups.

GQ2. What does our **instructional staff** Physical Environment scale score tell us about how these staff perceive the physical environment in our district?

**For example, you can examine:**

- How do the instructional staff Physical Environment scale scores compare across schools in our district?
- How does our district's instructional staff Physical Environment scale score compare with our state's score (if available)?
- How does our district's instructional staff scale score compare with our district's instructional staff scores on other topic areas within the Environment domain—is it relatively low or high, or in the middle?
- Districts that use the EDSCLS can examine how the instructional benchmarked scale score levels compare across schools, compare with the district, with other topic areas within and across domains, and across respondent groups.

GQ3. What does our **noninstructional staff** Physical Environment scale score tell us about how these staff perceive the physical environment in our district?

**For example, you can examine:**

- How do the noninstructional staff Physical Environment scale scores compare across schools in our district?
- How does our district's noninstructional staff Physical Environment scale score compare with our state's score (if available)?
- How does our district's noninstructional staff scale score compare with our district's noninstructional staff scores on other topic areas within the Environment domain—is it relatively low or high, or in the middle?
- Districts that use the EDSCLS can examine how the noninstructional benchmarked scale score levels compare across schools, compare with the district, with other topic areas within and across domains, and across respondent groups.

## A Targeted Approach

GQ4. What do the district Physical Environment scale scores **by respondent characteristics** tell us about how different subgroups perceive the physical environment in our district?

**For example, you can examine:**

- How the perceptions of the physical environment compare across various subgroups of students (e.g., White students versus Asian students)?
- How the perceptions of the physical environment compare across various subgroups of instructional staff (e.g., Black or African-American staff versus Asian staff)?

- How the perceptions of Physical Environment compare across various subgroups of noninstructional staff (e.g., males versus females)?
-  Districts that use the EDSCLS can examine how topic area benchmarked scale score levels compare across respondent groups and across respondent subgroups.

Now that you have considered these questions, what would you like to do next? You can:

- Click on item-level data to see how item-level results can help provide you with concrete examples of the physical environment that may be more immediately actionable.

Taking a deeper look within a single respondent group using item-level data will allow for a more thorough picture of that group's perceptions. You also can:

- Click on deeper guiding questions to help you put all your data (survey, administrative, and qualitative) into context.
- Click on Physical Environment to go to a webpage with suggestions for interventions that can be implemented immediately as well as longer term strategies and interventions.

Examining the deeper guiding questions will help you more thoroughly put your data into context and use them moving forward, whereas the webpage will provide recommendations for strategies and interventions that may be implemented immediately.

If you have calculated average (mean) Physical Environment values, you also can:

- Click on average (mean) Physical Environment values to look at Physical Environment values across respondent groups.

# Deeper Guiding Questions (DGQs) About Data for Districts

## A Universal Approach

DGQ1. Are there other district-level databases that can give us additional information about what is going on **across stakeholders in the district** and what actions to take (e.g., administrative data such as incident data, attendance/truancy data, graduation rates, office discipline referrals and disciplinary actions, as well as other data such as Youth Risk Behavior Surveillance System survey data, if available)? (Click on the *Reference Manual* for more information on aligning indicators.)

a. Do they show the same picture of school climate as your district school climate survey data?

b. What additional information do these data give us?

c. How can we use these data to help us understand universal physical environment needs in our district?

DGQ2. Based on our overall Physical Environment scale scores, should we consider the physical environment a priority for improvement in our district?

## A Targeted Approach

DGQ3. Are there other district-level databases that can tell us more about **subgroups of students or staff** needing support in physical environment (e.g., administrative data such as incident data, attendance/truancy data, graduation rates, office discipline referrals and disciplinary actions, as well as other data such as Youth Risk Behavior Surveillance System survey data, if available)?

a. Do they show the same picture of school climate as your district school climate survey data for these subgroups?

b. What additional information do these data give us?

c. How can we use these data to help us understand targeted physical environment needs in our district?

DGQ4. If we are using a three-tiered system of support in our district, what do these data tell us about our use of resources within that system? Are our practices and programs addressing the needs identified by our data?

a. What are our district's Tier 1 resource distribution needs? Tier 2 needs? Tier 3 needs?

DGQ5. Based on our scale scores **by respondent characteristics**, should we consider the physical environment for certain subgroups of students and staff a priority for improvement in our district?

## Other Questions to Consider

DGQ6. How can we drill down to further understand what students and other stakeholders think about the physical environment needs in our district (e.g., convene focus groups of students, staff, parents/guardians; conduct student fishbowls and facilitated discussion sessions).

DGQ7. Based on our answers to these questions, what conversations do we need to have about using our resources, and with whom should we have them?

# Deeper Guiding Questions About Interventions[8] for Districts

## A Universal Approach

DGQ8. What interventions pertaining to physical environment are currently in place in our district and how can we best evaluate whether these interventions are working?

DGQ9. How can we ensure that these Physical Environment interventions are implemented with fidelity?

DGQ10. How do we know which interventions are effective?

a. How can we best evaluate whether these interventions are working?

[8] Click on the *Reference Manual* for more information about interventions such as best practices, strategies, and programs; multi-tiered systems of support; and fidelity of implementation.

## A Targeted Approach

DGQ11. If we are using a three-tiered system of support in our district, what interventions pertaining to Physical Environment have been shown to work that should be continued or expanded at each tier?

DGQ12. What interventions pertaining to physical environment have been shown to work in other districts, per tier, and what are the conditions under which they work?

DGQ13. What resources do we need to improve Physical Environment for our students, per tier, in our district?

DGQ14. Which subgroups of respondents have been found to be in need of targeted support?

DGQ15. What interventions pertaining to Physical Environment have worked or are working and should be continued or expanded for students at higher levels of risk in our district?

DGQ16. What new interventions pertaining to Physical Environment can be introduced and implemented that will either provide new support or complement what is already being done at each tier?

a. Why do we think these interventions would be more effective than current or past efforts?

DGQ17. How can we sustain (institutionalize) tiered support for improving conditions pertinent to the physical environment in our district?

## Other Questions to Consider

DGQ18. How can we best fold training for implementing physical environment interventions into professional development efforts?

a. Which training efforts have been successful or unsuccessful in the past?

b. Why were some efforts more successful than others?

Now that you have considered these questions, what would you like to do next? You can:

- Click on item-level data to see how item-level results can help provide you with concrete examples of physical environment that may be more immediately actionable.
- Click on Physical Environment to go to a webpage with suggestions for interventions that can be implemented immediately as well as longer term strategies and interventions.

If you have calculated average (mean) Physical Environment values, you also can:

- Click on average (mean) Physical Environment values to look at the Physical Environment values across respondent groups.

# Appendix B: Guiding Questions for Schools

You can use the guiding questions in this appendix to help you use your data to focus on universal and targeted approaches to the physical environment. In this appendix, you will find:

- Initial guiding questions (scale scores);
- Deeper guiding questions (overall);
- Deeper guiding questions (focused on interventions); and
- Other questions to consider.


Using benchmarked scale scores, you can compare scores of topic areas *within* a domain (Safety, Environment, and Engagement) for individual respondent groups (students, instructional staff, noninstructional staff). You can also compare "performance" levels into which topic area scales scores fall across domains and respondent groups. These comparisons will help you make meaningful interpretations of your data.

For more information, please see Appendix B in the *Data Interpretation Guide* for benchmarked scale score interpretations.

Consider using the EDSCLS Data Analysis Worksheet to guide your analysis and interpretation of scale scores.

## Initial Guiding Questions: School Scale Scores

Scale scores are the premier way that the EDSCLS as well as many other school climate surveys measure school climate. A scale score, which combines multiple survey items related to different aspects of a topic area, is a more robust measure than just attempting to measure the topic by asking about it with a single item. For more information on scale scores please see the *Data Interpretation Guide*.

### A Universal Approach

GQ1. What does our **student** Physical Environment scale score tell us about how students perceive Physical Environment in our school?

**For example, you can examine:**

- How does our school's student Physical Environment scale score compare with our district's student Physical Environment scale score (if available)?
- How does our school's student Physical Environment scale score compare with our state's score (if available)?
- How does our school's student Physical Environment scale score compare with our school's student scores on other topic areas within the Environment domain—is it relatively low or high, or in the middle?
- Schools that use the EDSCLS can examine how the student benchmarked scale score levels compare with those of the district (if available), with other topic areas within and across domains, and across respondent groups.

GQ2. What does our **instructional staff** Physical Environment scale score tell us about how these staff perceive the physical environment in our school?

**For example, you can examine:**

- How does our school's instructional staff Physical Environment scale score compare with our district's score (if available)?
- How does our school's instructional staff Physical Environment scale score compare with our state's score (if available)?
- How does our school's instructional staff Physical Environment scale score compare with our school's instructional staff scores on other topic areas within the Environment domain—is it relatively low or high, or in the middle?
-  Schools that use the EDSCLS can examine how the instructional staff benchmarked scale score levels compare with those of the district (if available), with other topic areas within and across domains, and across respondent groups.

GQ3. What does our **noninstructional staff** Physical Environment scale score tell us about how staff perceive the physical environment in our school?

**For example, you can examine:**

- How does our school's noninstructional staff Physical Environment scale score compare with our district's score (if available)?
- How does our school's noninstructional staff Physical Environment scale score compare with our state's score (if available)?
- How does our school's noninstructional staff Physical Environment scale score compare with our school's noninstructional staff scores on other topic areas within the Environment domain—is it relatively low or high, or in the middle?
-  Schools that use the EDSCLS can examine how the noninstructional staff benchmarked scale score levels compare with those of the district (if available), with other topic areas within and across domains, and across respondent groups.

## A Targeted Approach

GQ4. What do the school Physical Environment scale scores **by respondent characteristics** tell us about how each subgroup perceives the physical environment in our school?

**For example, you can examine:**

- How the perceptions of the physical environment compare across various subgroups of students (e.g., White students versus Asian students)?
- How the perceptions of the physical environment compare across various subgroups of instructional staff (e.g., Black or African-American staff versus Asian staff)?

- How the perceptions of the physical environment compare across various subgroups of noninstructional staff (e.g., males versus females)?
-  Schools that use the EDSCLS can examine how topic area benchmarked scale score levels compare across respondent groups and across respondent subgroups.

Now that you have considered these questions, what would you like to do next? You can:

- Click on item-level data to see how item-level results can help provide you with concrete examples of Physical Environment that may be more immediately actionable.

Taking a deeper look within a single respondent group using item-level data will allow for a more thorough picture of that group's perceptions. You also can:

- Click on deeper guiding questions to help you put all your data (survey, administrative, and qualitative) into context.
- Click on Physical Environment to go to a webpage with suggestions for interventions that can be implemented immediately as well as longer term strategies and interventions.

Examining the deeper guiding questions will help you more thoroughly put your data into context and use them moving forward, whereas the webpage will provide recommendations on strategies and interventions that may be implemented immediately.

If you have calculated average (mean) Physical Environment values, you also can:

- Click on average (mean) Physical Environment values to look at Physical Environment values across respondent groups.

# Deeper Guiding Questions About Data for Schools

## A Universal Approach

DGQ1. Are there school-level databases that can give us additional information about what is going on **across stakeholders in the school** and what actions to take (e.g., administrative data such as incident data, attendance/truancy data, graduation rates, office discipline referrals and disciplinary actions, as well as other data such as Youth Risk Behavior Surveillance System survey data, if available)? (Click on the *Reference Manual* for more information on aligning indicators.)

a. Do they show the same picture of school climate as your school's school climate survey data?

b. What additional information do these data give us?

c. How can we use these data to help us understand universal physical environment needs in our school?

DGQ2. Based on our overall Physical Environment scale scores, should we consider the physical environment a priority for improvement in our school?

## A Targeted Approach

DGQ3. Are there other school-level databases that can tell us more about **subgroups of students or staff** needing support in the physical environment (e.g., administrative data such as incident data, attendance/truancy data, graduation rates, office discipline referrals and disciplinary actions, as well as other data such as Youth Risk Behavior Surveillance System survey data, if available)?

a. Do they show the same picture of school climate as your school's school climate survey data?

b. What additional information do these data give us?

c. How can we use these data to help us understand targeted Physical Environment needs in our school?

DGQ4. If we are using a three-tiered system of support in our school, what do these data tell us about our use of resources within that system? Are our practices and programs addressing the needs identified by our data?

a. What are our school's Tier 1 resource distribution needs? Tier 2 needs? Tier 3 needs?

DGQ5. Based on our scale scores **by respondent characteristics**, should we consider the physical environment for certain subgroups of students and staff a priority for improvement in our school?

## Other Questions to Consider

DGQ6. How can we drill down to further understand what students and other stakeholders think about the physical environment needs in our school (e.g., convene focus groups of students, staff, parents/guardians; conduct student fishbowls and facilitated discussion sessions)?

DGQ7. Based on our answers to these questions, what conversations do we need to have about using our resources, and with whom should we have them?

# Deeper Guiding Questions About Interventions[9] for Schools

## A Universal Approach

DGQ8. What interventions pertaining to physical environment are currently in place in our school and how can we best evaluate whether these interventions are working?

DGQ9. How can we ensure that these physical environment interventions are implemented with fidelity?

DGQ10. How do we know which interventions are effective?

a. How can we best evaluate whether these interventions are working?

[9] Click on the *Reference Manual* for more information about interventions such as best practices, strategies, and programs; multi-tiered systems of support; and fidelity of implementation.

## A Targeted Approach

DGQ11. If we are using a three-tiered system of support in our school, what interventions pertaining to the physical environment have been shown to work that should be continued or expanded at each tier?

DGQ12. What interventions pertaining to the physical environment have been shown to work in other schools, per tier, and what are the conditions under which they work?

DGQ13. What resources do we need to improve the physical environment for our students, per tier, in our school?

DGQ14. Which subgroups of respondents have been found to be in need of targeted support?

DGQ15 What interventions pertaining to the physical environment have worked or are working for students in our school at higher levels of risk that should be continued or expanded?

DGQ16. What new interventions pertaining to the physical environment can be introduced and implemented that will either provide new support or complement what is already being done at each tier?

a. Why do we think these interventions would be more effective than current or past efforts?

DGQ17. How can we sustain (institutionalize) tiered support for improving conditions pertinent to the physical environment in our school?

## Other Questions to Consider

DGQ18. How can we best fold training for implementing physical environment interventions into professional development efforts?

a. Which training efforts have been successful or unsuccessful in the past?

b. Why were some efforts more successful than others?

Now that you have considered these questions, what would you like to do next? You can:

- Click on item-level data to see how item-level results can help provide you with concrete examples of physical environment that may be more immediately actionable.
- Click on Physical Environment to go to a webpage with suggestions for interventions that can be implemented immediately as well as longer term strategies and interventions.

If you have calculated average (mean) Physical Environment values, you also can:

- Click on average (mean) Physical Environment values to look at Physical Environment values across respondent groups.

# Appendix C: Initial Guiding Questions: District Average (Mean) Physical Environment Values

You can use the guiding questions in this appendix to help you use your data to focus on universal and targeted approaches to physical environment. In this appendix, you will find:

- Additional guiding questions (average [mean] Physical Environment values)

Average (mean) Physical Environment values (on a scale of 1–4) can help you see how favorably respondents perceive the topic area. Click on the *Data Interpretation Guide* to go to more information on average (mean) Physical Environment values and an explanation of the scale of 1–4.


Using average (mean) Physical Environment values, you can compare the perceptions of students and staff within and outside of the Environment domain. These comparisons will help you make meaningful interpretations of the average (mean) Physical Environment values.

See Appendix C in the *Data Interpretation Guide* for more information on interpreting average (mean) topic area values for EDSCLS users.

## A Universal Approach

GQ1. What does our **student** average (mean) Physical Environment value tell us about how students perceive the physical environment in our district?

**For example, you can think about these comparisons:**

Comparing across respondent groups:

- How does our student average (mean) Physical Environment value compare with the average (mean) Physical Environment value for instructional staff in our district? For noninstructional staff in our district?

Comparing across topic areas:

- How does our student average (mean) Physical Environment value compare with the student average (mean) value of other topic areas of interest, within and outside of the Environment domain?

GQ2. What does our **instructional staff** average (mean) Physical Environment value tell us how these staff perceive the physical environment in our district?

**For example, you can think about these comparisons:**

Comparing across respondent groups:

- How does our instructional staff average (mean) Physical Environment value compare with the average (mean) Physical Environment value for noninstructional staff in our district? For students in our district?

Comparing across topic areas:

- How does our instructional staff average (mean) Physical Environment value compare with the instructional staff average (mean) value of other topic areas of interest, within and outside of the Environment domain?

GQ3. What does our **noninstructional staff** average (mean) Physical Environment value tell us about how these staff perceive the physical environment in our district?

**For example, you can think about these comparisons:**

Comparing across respondent groups:

- How does our noninstructional staff average (mean) Physical Environment value compare with the average (mean) Physical Environment value for instructional staff in our district? For students in our district?

Comparing across topic areas:

- How does our noninstructional staff average (mean) Physical Environment value compare with the noninstructional staff average (mean) value of other topic areas of interest, within and outside of the Environment domain?

## A Targeted Approach

GQ4. What do our average (mean) Physical Environment values **by respondent characteristics** tell us about how **students** perceive the physical environment in our district?

**For example, you can think about these comparisons:**

Comparing across topic areas:

- How does the average (mean) Physical Environment value for certain subgroups of students (e.g., female students) compare with that subgroup's average (mean) values on other topic areas within the Environment domain (e.g., female student average (mean) values on physical environment)?

Comparing across respondent subgroups:

- How does the average (mean) Physical Environment value for certain student subgroups (e.g., female students) compare with that subgroup of instructional staff and noninstructional staff (i.e., female instructional staff and female noninstructional staff)?

GQ5. What do our average (mean) Physical Environment values **by respondent characteristics** tell us about how **instructional staff** perceive the physical environment in our district?

**For example, you can think about these comparisons:**

Comparing across topic areas:

- How does the average (mean) Physical Environment value for certain subgroups of instructional staff (e.g., Asian instructional staff) compare with that subgroup's average (mean) values on other topic areas within the Environment domain (e.g., Asian instructional staff average [mean] values on Instructional Environment)?

Comparing across respondent subgroups:

- How does the average (mean) Physical Environment value for certain instructional staff subgroups (e.g., Black or African-American instructional staff) compare with that subgroup of noninstructional staff and students (i.e., Black or African-American students and Black or African-American noninstructional staff)?

GQ6. What do our average (mean) Physical Environment values by **respondent characteristics** tell us about how **noninstructional staff** perceive the physical environment in our district?

**For example, you can think about these comparisons:**

Comparing across topic areas:

- How does the average (mean) Physical Environment value for certain subgroups of noninstructional staff (e.g., male noninstructional staff) compare with that subgroup's average (mean) values on other topic areas within the Environment domain (e.g., male noninstructional staff average [mean] values on Instructional Environment)?

Comparing across respondent subgroups:

- How does the average (mean) Physical Environment value for certain noninstructional subgroups (e.g., Asian noninstructional staff) compare with that subgroup of instructional staff and students (i.e., Asian students and Asian instructional staff)?

Now that you have considered these questions, what would you like to do next? You can:

- Click on item-level data to see how item-level results can help provide you with concrete examples of Physical Environment that may be more immediately actionable.
- Click on deeper guiding questions to help you put all your data (survey, administrative, and qualitative) into context.
- Click on Physical Environment to go to a webpage with suggestions for interventions that can be implemented immediately as well as longer term strategies and interventions.

Examining the deeper guiding questions will help you more thoroughly put your data into context and use them moving forward, whereas the webpage will provide suggestions for strategies and interventions that may be implemented immediately.

# Appendix D: Initial Guiding Questions: School Average (Mean) Physical Environment Values

You can use the guiding questions in this appendix to help you use your data to focus on universal and targeted approaches to physical environment. In this appendix, you will find:

- Additional guiding questions (average [mean] Physical Environment values)

Average (mean) Physical Environment values (on a scale of 1–4) can help you gauge how favorably respondents perceive the topic area. Click on the *Data Interpretation Guide* to go to more information on average (mean) Physical Environment values and an explanation of the scale of 1–4.


Using average (mean) Physical Environment values, you can compare the perceptions of students and staff within and outside of the Environment domain. These comparisons will help you make meaningful interpretations of the average (mean) Physical Environment values.

See Appendix C in the *Data Interpretation Guide* for more information on interpreting average (mean) topic area values for EDSCLS users.

## A Universal Approach

GQ1. What does our **student** average (mean) Physical Environment value tell us about how students perceive the physical environment in our school?

**For example, you can think about these comparisons:**

Comparing across respondent groups:

- How does our student average (mean) Physical Environment value compare with the average (mean) Physical Environment value for instructional staff in our school? For noninstructional staff in our school?

Comparing across topic areas:

- How does our student average (mean) Physical Environment value compare with the student average (mean) value of other topic areas of interest, within and outside of the Environment domain?

GQ2. What does our **instructional staff** Physical Environment average (mean) value tell us about how these staff perceive the physical environment in our school?

**For example, you can think about these comparisons:**

Comparing across respondent groups:

- How does our instructional staff average (mean) Physical Environment value compare with the average (mean) Physical Environment value for noninstructional staff in our school? For students in our school?

Comparing across topic areas:

- How does our instructional staff average (mean) Physical Environment value compare with the instructional staff average (mean) value of other topic areas of interest, within and outside of the Environment domain?

GQ3. What does our **noninstructional staff** average (mean) Physical Environment value tell us about how staff perceive the physical environment in our school?

For example, you can think about these comparisons:

Comparing across respondent groups:

- How does our noninstructional staff average (mean) Physical Environment value compare with the average (mean) Physical Environment value for instructional staff in our school? For students in our school?

Comparing across topic areas:

- How does our noninstructional staff average (mean) Physical Environment value compare with the noninstructional staff average (mean) value of other topic areas of interest, within and outside of the Environment domain?

## A Targeted Approach

GQ4. What do our average (mean) Physical Environment values **by respondent characteristics** tell us about how **students** perceive the physical environment in our school?

For example, you can think about these comparisons:

Comparing across topic areas:

- How does the average (mean) Physical Environment value for certain subgroups of students (e.g., female students) compare with that subgroup's average (mean) values on other topic areas within the Environment domain (e.g., female student average [mean] values on Instructional Environment)?

Comparing across respondent subgroups:

- How does the average (mean) Physical Environment value for certain student subgroups (e.g., female students) compare with that subgroup of instructional staff and noninstructional staff (i.e., female instructional staff and female noninstructional staff)?

GQ5. What do our average (mean) Physical Environment values **by respondent characteristics** tell us about how **instructional staff** perceive the physical environment in our school?

**For example, you can think about these comparisons:**

Comparing across topic areas:

- How does the average (mean) Physical Environment value for certain subgroups of instructional staff (e.g., Asian instructional staff) compare with that subgroup's average (mean) values on other topic areas within the Environment domain (e.g., Asian instructional staff average [mean] values on Instructional Environment)?

Comparing across respondent subgroups:

- How does the average (mean) Physical Environment value for certain instructional staff subgroups (e.g., Black or African-American instructional staff) compare with that subgroup of noninstructional staff and students (i.e., Black or African-American students and Black or African-American noninstructional staff)?

GQ6. What do our average (mean) Physical Environment values **by respondent characteristics** tell us about how **noninstructional staff** perceive the physical environment in our school?

**For example, you can think about these comparisons:**

Comparing across topic areas:

- How does the average (mean) Physical Environment value for certain subgroups of noninstructional staff (e.g., male noninstructional staff) compare with that subgroup's average (mean) values on other topic areas within the Environment domain (e.g., male noninstructional staff average [mean] values on Instructional Environment)?

Comparing across respondent subgroups:

- How does the average (mean) Physical Environment value for certain noninstructional subgroups (e.g., Asian noninstructional staff) compare with that subgroup of instructional staff and students (i.e., Asian students and Asian instructional staff)?

Now that you have considered these questions, what would you like to do next? You can:

- Click on item-level data to see how item-level results can help provide you with concrete examples of Physical Environment that may be more immediately actionable.
- Click on deeper guiding questions to help you put all your data (survey, administrative, and qualitative) into context.
- Click on Physical Environment to go to a webpage with suggestions for interventions that can be implemented immediately as well as longer term strategies and interventions.

Examining the deeper guiding questions will help you more thoroughly put your data into context and use them moving forward, whereas the webpage will provide suggestions for strategies and interventions that may be implemented immediately.

# Disclaimer

This *Physical Environment Topic Area Discussion Guide* was designed and written under the U.S. Department of Education (Department) Contract Number EDESE12O0035 by the American Institutes for Research, the National Center on Safe Supportive Learning Environments (NCSSLE). Rita Foy Moss served as the contracting officer's representative (COR) for the NCSSLE technical assistance center. This document contains resource materials that are provided for the user's convenience. The inclusion of these materials is not intended to reflect their importance, nor is it intended to endorse any views expressed, or products or services offered. These materials may contain the views and recommendations of various subject matter experts as well as hypertext links, contact addresses, and websites to information created and maintained by other public and private organizations. The opinions expressed in any of these materials do not necessarily reflect the positions or policies of the Department. The Department does not control or guarantee the accuracy, relevance, timeliness, or completeness of any outside information included in these materials.

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This resource is available free of charge at https://safesupportivelearning.ed.gov/sites/default/files/SCIRP/datainttopicalguidephyenvir.pdf.

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