**Delaware School Surveys Interpretation Worksheet**

**School Climate and Techniques**

**STAFF Version**

|  |  |  |  |  |
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| **Report Interpretation Key** | | | | |
| Table Code by Scale |  | Table Code by Score Type |  |  |
| School Climate Scale – Table 1 |  | Standard Scores – Table a |  | **Bold** – Total Scores |
| Techniques Scale – Table 2 |  | Average Scores – Table b |  | Green – Favorable |
|  |  | Percentage Response Scores – Table c |  | Red – Unfavorable |

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|  | **Favorable (GREEN)** | | **Unfavorable (RED)** | |
| **Scale** | **Standard Score** | **Average Score** | **Standard Score** | **Average Score** |
| School Climate & Techniques | 110 and above | 3.2 and above | 89 and below | 2.5 and below |
| School Climate – Bullying SW | 89 and below | 2.0 and below | 110 and above | 3.0 and above |
| Techniques – Punitive Techniques | 89 and below | 2.0 and below | 110 and above | 3.0 and above |

Standard Score Distribution Average Item Score Calculation

**Determine: *Do your respondents’ scores reflect positive or negative perceptions of school climate, regardless of how your school compares to other schools?***

**Determine: *How does your school compare to other like schools?***



SS = 110

SS = 89

**Considerable Sizeable**

**Concerns** **Strengths**

Average scores are calculated by finding the average of all responses for each item.

Example:

Responses to Item 5 = 2,3,3,3,4,2

2+3+3+3+4+2= 17

17/6= 2.82

Average Item Score = 2.83

**Determine:** **How does one know if differences in scores are significant?**  See pg. 9-10.

**TEACHER/STAFF DATA REPORT**

**School Climate Scale – Table 1**

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**Response Scale:** 1=Disagree A Lot 2=Disagree 3=Agree 4=Agree A Lot

**AVERAGE ITEM SCORE (AIS): TRENDS REVIEW**

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| --- | --- | --- |
| **Graph** | **Use to…** | **Ask yourself…** |
| **1b**  School Climate  Average Score  Cross-Year Review | Note school’s average item scores per subscale for this school year and 2 previous years (if data are available). | By subscale and overall, have our average item scores per subscale increased, decreased, or maintained over the years? |

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| **Our Increased Areas** | **Our Decreased Areas** | **Our Maintained Areas** |
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| **Additional Notes** | | |

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| **Table** | **Use to…** | **Ask yourself…** |
| **1b**  School Climate  Average Item Scores | Note the sizable strengths and considerable concerns for YOUR school. A score of 3 or above means that the respondents on average agree or agree a lot. Remember, lower scores are preferred for Bullying School-wide. | What areas are strengths for our school? What areas do we need to address? Are there differences within or between position groups? Do staff members view student relationships positively? Do staff members feel rules are clear and fair? |

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| **School Climate Scale Totals** (AIS) | |
| **Our Strengths** | **Concerns to Address** |
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| **Additional Notes** | |
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| **School Climate Scale by Position** (AIS) | |
| **Our Strengths** | **Concerns to Address** |
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| **Additional Notes** | |
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**PERCENT RESPONSE SCORE: TRENDS REVIEW**

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| **Table** | **Use to…** | **Ask yourself…** |
| **1c**  School Climate  Percentage Response Scores | Note individual items that caused scores to be low or high. By looking at this data, you can find out which items staff members feel strongly about and direct efforts accordingly. | Were there any individual items from a subscale that had particularly high or low response percentage? How did this impact our overall score? What can we do to address these focus areas? |

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| **Subscales** | **Our Strengths**  (Item Numbers) | **Concerns to Address**  (Item Numbers) |
| Teacher-Student Relations |  |  |
| Student-Student Relations |  |  |
| Student Engagement School-wide |  |  |
| Clarity of Expectations |  |  |
| Fairness of Rules |  |  |
| School Safety |  |  |
| Bullying School-wide\* |  |  |
| Teacher-Home Communications |  |  |
| Staff Relations |  |  |
| **Additional Notes** |  |  |

\*A high score on this subscale is negative because items are negatively worded

**STANDARD SCORE (SS): TRENDS REVIEW**

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| --- | --- | --- |
| **Table** | **Use to…** | **Ask yourself…** |
| 1a  School Climate  Standard Scores | Compare your school to other schools serving the same grade level (e.g. ES, MS, HS). A score of 100 is average, so in general, scores above 100 illustrate your school has higher scores than other same level schools. | What are our strengths and weaknesses compared to other schools that serve similar age students? Are there differences between and within position groups that we need to explore? |

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| **School Climate Scale Totals** (SS) | |
| **Our Strengths** | **Concerns to Address** |
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| **Additional Notes** | |
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| **School Climate by Position** (SS) | |
| **Our Strengths** | **Concerns to Address** |
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| **Additional Notes** | |
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**TEACHER/STAFF DATA REPORT**

**Techniques Scale – Table 2**



**Response Scale:** 1=Disagree A Lot 2=Disagree 3=Agree 4=Agree A Lot

**AVERAGE ITEM SCORE (AIS): TRENDS REVIEW**

|  |  |  |
| --- | --- | --- |
| **Graph** | **Use to…** | **Ask yourself…** |
| 2b  Techniques  Average Scores  Cross-Year Review | Note your school’s average item scores per subscale for this school year and 2 previous years (if data are available). | By subscale and overall, have our average item scores per subscale increased, decreased, or maintained over the years? |

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| --- | --- | --- |
| **Our Increased Areas** | **Our Decreased Areas** | **Our Maintained Areas** |
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| **Additional Notes** | | |

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| **Table** | **Use to…** | **Ask yourself…** |
| 2b  Techniques  Average Item Scores | Note the sizable strengths and considerable concerns for YOUR school. The scores are a measure of how staff members perceive the techniques used by their peers. An average score of 3 or above means that the respondents on average agree or agree a lot. | What areas are strengths for our school? What areas do we need to address? Are there differences within or between position groups? Do staff members acknowledge the positive techniques used by their peers? Do staff members feel that their peers are more negative than positive? |

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| **Techniques Scale Totals** (AIS) | |
| **Our Strengths** | **Concerns to Address** |
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| **Additional Notes** | |
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| **Techniques by Position** (AIS) | |
| **Our Strengths** | **Concerns to Address** |
|  |  |
| **Additional Notes** | |
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**PERCENT RESPONSE SCORE: TRENDS REVIEW**

|  |  |  |
| --- | --- | --- |
| **Table** | **Use to…** | **Ask yourself…** |
| 2c  Techniques  Percentage Response Scores | Note individual items that caused subscale scores to be low or high. By looking at this data, you can find out which items staff members feel strongly about and direct efforts accordingly. | Were there any individual items from a subscale that had particularly high or low response percentage? How did this impact our overall score? What can we do to address these focus areas? |

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| **Subscales** | **Our Strengths**  (Item Numbers) | **Concerns to Address**  (Item Numbers) |
| Positive Techniques |  |  |
| Punitive Techniques\* |  |  |
| SEL Techniques |  |  |
| **Additional Notes** | | |

\*A high score on this subscale is negative because items are negatively worded

**STANDARD SCORE (SS): TRENDS REVIEW**

|  |  |  |
| --- | --- | --- |
| **Table** | **Use to…** | **Ask yourself…** |
| 2a  Techniques Standard Scores | Compare your school to other schools serving the same grade level (e.g. ES, MS, HS). A score of 100 is average, so in general, scores above 100 illustrate your school has higher scores than other same level schools. Remember, higher scores are preferred for positive techniques and SEL, and lower scores are better for punitive techniques. | What are our strengths and weaknesses compared to other schools that serve similar age students? Are there differences between and within groups position groups that we need to explore. |

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| **Techniques Scale Totals** (SS) | |
| **Our Strengths** | **Concerns to Address** |
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| **Additional Notes** | |
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| **Techniques by Position** (SS) | |
| **Our Strengths** | **Concerns to Address** |
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| **Additional Notes** | |
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**INTERPRETING SIGNIFICANT DIFFERENCES IN SCORES**

Schools may want to know if differences in scores (in subscales or from year to year) are “significant.” When thinking about significant differences, it is important to consider both **practical significance** and **statistical significance**.

* Practical significance: is the difference meaningful for our school?
* Statistical significance: 95% chance that the difference in scores is not due to chance
* \*Statistical significance **does not** imply practical importance
  + A difference can be statistically significant but of little practical value

Schools should have little concern about significant differences when all of their scores are fairly high (e.g., above 3.3)

Schools should be less concerned about a difference from year to year than about *general pattern* in scores over multiple years

**How to determine significant differences**

The table below helps schools determine if the difference in two **average item scores**—which are the scores ranging from 1.0 to 4.0 and NOT STANDARD SCORES—are likely to be statistically significant.

Note that the table shows *approximate* size differences needed for statistical significance. They are approximate because exact scores would depend on the exact size of the samples and on the standard deviation for each score. Because both sample sizes and standard deviations vary greater when comparing scores across the hundreds of possible comparisons, only approximate values are given.

1. Look at the number of respondents for the two given scores (i.e., the sample size, which we call N). If the number is different, use the lower N or an average of the two (e.g., 120 students completed the Teacher-Student subscale and 80 completed the Student-Student subscale, use 80 or 100, with 80 being more conservative).
2. Find the number in Column 1 that is closest to your N.
3. Find the number in Column 2 (Approximate Difference Needed) that aligns with your N. This difference is the minimal difference needed for statistical significance. For example, if you have 50 students, you need a difference of .20 or larger to conclude that there is a 95% chance that the difference is not an error and is statistically significant.

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| Approximate Difference in **Average Item Scores** (1.0-4.0) Needed to be  Statistically Significant | |
| Size of Sample (N) | Approximate Difference Needed |
| 15 | .38 or larger |
| 20 | .33 or larger |
| 30 | .29 or larger |
| 40 | .26 or larger |
| 50 | .20 or larger |
| 60 | .19 or larger |
| 70 | .17 or larger |
| 80 | .16 or larger |
| 90 | .15 or larger |
| 100 | .14 or larger |
| 120 | .13 or larger |
| 140 | .12 or larger |
| 160 | .11 or larger |
| 200 | .10 or larger |
| 240 | .09 or larger |
| 310 | .08 or larger |
| 400 | .07 or larger |
| 540 | .06 or larger |
| 780 | .05 or larger |

*Note*. Statistical significance is at the .05 level (two-tailed t-test) and based on a standard deviation of .50 for each score. The statistical significance of differences would vary depending of the actual standard deviations.

**Additional helpful notes to consider**:

* Observe that as the size of the sample increases, the size of the difference needed for statistical significance decreases. Thus, be very cautious in concluding that differences are important when looking at small samples.
* Keep in mind that the actual score may be more meaningful than a statistically significant difference. For example, 2.7 may be significantly greater than 2.3, but both scores are low compared to other schools. Likewise, 3.8 may be significantly greater than 3.5 but both are very high and likely indicate no need for improvement.
* Be aware that the size of the differences needed for statistical significance are estimates.
* Be aware that practical significance is NOT the same as statistical significance. A good example is finding a difference of only .05 to be statistically significant in a sample of 800 students. Is that difference truly meaningful or of practical significance?