Guidelines for Using AIR's Conditions for Learning Scales

Introduction

Schools' efforts to implement programs and strategies designed to help all students achieve high academic standards are most effective if they include multiple components. One important component is the ability to mitigate potentially negative effects of students' experiences outside the school setting by creating and maintaining within the school what we refer to as effective conditions for learning.

Since 2004, the American Institutes for Research (AIR) has been engaged in promoting the measurement of conditions for learning in schools and the use of resultant data as part of a larger effort to improve and monitor school climate. In 2005, AIR developed an instrument to assess these indicators among high school students. Since then, this Conditions for Learning (CFL) survey has been adapted for middle grade and students in grades 2-4.

The conditions for learning identified by AIR include four primary constructs—safe and respectful school climate, challenge (also called high expectations or academic rigor), student support, and peer social and emotional learning. Research conducted by AIR has shown that these CFL scales are associated with positive outcomes, such as higher grades and achievement scores, and decreased levels of unexcused absences.

By monitoring students' opinions about conditions for learning, the CFL scales are often used as a measure of the effect of schools' and districts' efforts to improve school climate. AIR's development of a school-based survey is one part of a comprehensive program to identify, measure, and report on school conditions that foster and promote student academic success and achievement. The survey can be used along with surveys of teachers, other staff, and partners, and in coordination with the collection of qualitative data, such as classroom observations and focus groups, to provide additional understanding of a school's strengths and needs for improvement.

For example, the CFL survey has been used by school districts as part of an initiative to improve school climate by, first, collecting baseline data that measure the four scales, followed by choosing and implementing evidence-based programs that are designed to address the needs revealed by those data. After these programs are in place, the CFL survey is administered again, with the programs evaluated based on this and other more recent information, and revised or replaced as needed. The administration of the survey and the adjusting of programs are typically done on an annual basis, to effect a repeating cycle of continual quality improvement.

Conditions for Learning Scales

The CFL survey measures four concepts or dimensions of conditions for learning: safe and respectful school climate, challenge (also called high expectations or academic rigor), student support, and peer social and emotional learning. The items in the survey corresponding to each of these scales are color-coded in the survey mock-ups that AIR has provided to you. Following is a description of each scale:

Safe and Respectful Climate: The Safe and Respectful Climate scale measures two things: how physically safe students feel and how emotionally safe students feel. Students who attend safe schools are more likely to be academically engaged and are less likely to exhibit problem behaviors such as drug use or violence. Students are less likely to drop out of safe schools.

Challenge: The Challenge scale measures how much students perceive that teachers and other adults in the school encourage them to think, work hard, do their best, and connect what they are learning in school to life outside of school. A challenging curriculum, presented in a way that is relevant to students, will promote student achievement.

Student Support: The Student Support scale measures how much students feel listened to, cared about, and helped by teachers and other adults in the school. Strong relationships between teachers and students lead to higher academic achievement, even for students who have previously done poorly in school or come from disadvantaged backgrounds.

Peer Social and Emotional Learning: The Peer Social and Emotional Learning scale measures students' perception of their peers' social and problem-solving skills. Developing students' social and emotional learning skills improves their grades, attendance, behavior, and attitudes toward school. Students with good social and emotional skills are less likely to drop out of school.

Guidelines for Use

Timing and frequency of administrations

Movement of results over time: AIR has typically administered the CFL survey on an annual basis in schools. The survey items and scales are sufficiently sensitive to change over shorter periods of time, but more frequent timing of administrations must take into account the sensitivity of the measures to assess what is likely to be smaller levels of

change that will be observed. If administered too frequently, it may be difficult to determine whether little or no change observed between administrations is due to no change in the conditions for learning or to too little time having elapsed for change to become measurable.

How many times a year? Some schools or districts may choose to administer the CFL survey or component scales multiple times during the year, in order to identify patterns and trends within the school year. AIR recommends no more than three administrations per year—1) about one month after the beginning of the school year (so students have formed some opinion of their school environment); 2) mid-year; and 3) as close to the end of the school year as possible. This periodicity allows schools to have several data points to compare across the school year and reduces the risk of students being "primed" in their future responses.

Priming of respondents: When respondents are asked the same questions repeatedly within a relatively short time frame, results from later administrations may reflect increased attention to questionnaire content that would not have occurred had students not been asked about it previously. Thus students may be "primed" to attend to survey content. For example, when students respond to items in the Safe and Respectful School Climate scale, they may report more agreement with questions such as "Students at this school are often bullied" later in the year than they do at the beginning just because the earlier survey has made them more alert to watch for bullying in their environment. Thus, it may be difficult to distinguish whether an increase in agreement is "real" or a result of priming.

Recency effects and external events: The CFL scales are designed to measure students' opinions about their school environment. As with all assessments of opinions, care must be taken to understand the possible effects of external events, particularly those that occur in temporal proximity to data collection and which may temporarily affect student perceptions. Extreme examples include instances of school violence that garner media attention, but more likely may involve an unusual event that occurs within the school or surrounding community about which the students are generally aware. To the extent that the external event has a disproportionate effect on, and *temporarily* distorts opinions, the resulting data may not be truly reflective of students' opinions, in general.

Analytic Considerations

AIR's CFL scales combine multiple items into one measure representing each concept. Scales are especially beneficial when trying to measure complex ideas that may be difficult to measure with a single or a few items. For example, when measuring perceptions of Safe and Respectful

Climate in schools, it is unlikely that students could accurately and consistently provide an estimate of their sense of personal and emotional safety by answering one item. Rather, we ask several items about student perceptions of specific aspects of physical and emotional safety (e.g., "Most students in this school don't care about each other," and "I sometimes stay home because I don't feel safe at school"), which are easier for students to answer. We then combine these items into a score that reflects their overall perception of the safe and respectful climate within the school. When measuring and analyzing conditions for learning, then, using scales provides a better estimate of the concept than does attempting to directly ask about the concept with a single item.

Analyze data at scale level: The CFL survey data should only be analyzed at the scale or dimension level, not at the item level. While a scale is a reliable measure of its associated dimension or attribute (e.g., academic challenge), the items, when considered individually, are not necessarily reliable measures. Any indicator (item) of an attribute consists of some true score component plus error. Although tools like factor analysis allow us to evaluate the degree to which each item measures the common underlying attribute, the attribute is defined by the common variance across all items, with variance unique to each item averaged out. So when we evaluate scale level performance, we have a reasonable measure of the intended attribute. When looking at responses to a single item, however, the variance unique to each item cannot be averaged out, so the item "score" represents both true score and error.

Perhaps as important are more substantive reasons for not focusing directly on individual items. When measuring any attribute, the indicators (items) should reflect a representative sample of behaviors from the content domain. If schools and teachers focus change on behaviors defined by specific items, they run the risk of a form of unintentional "teaching to the test" in which schools are able to show growth with respect to the scale even though the underlying attribute has not changed. We recommend the development of a set of detailed descriptors that define low and high performing schools with respect to each dimension, based both on item content and correlates of each scale, accompanied by specific strategies that schools can employ to improve dimensions of climate.

If a school wishes to review specific items, it is important to consider that the items represent aspects of the overall concept that is being measured, and have been selected for their ability to reflect aspects of student perceptions. If, for example, examining safety items suggest that hallway safety is an area for improvement, this might help contextualize student perceptions. However, focusing too much on one item might lead to improving student responses to the specific item, but may have less of an effect on the important underlying perception. One can think of excessive focus on improving a response to a single

item as a physician attempting to alleviate symptoms without curing the underlying problem.

Subgroup analyses: When possible, analysis of data by student subgroup (e.g., race/ethnicity, gender, grade, etc.) will provide a richer and more comprehensive picture of conditions for learning in a school.

Best Practices in Survey Administration and Research

AIR strongly recommends the use of best practices in the administration and analysis of the CFL scales. Researchers are encouraged to be familiar with and experienced in best practices in the administration of surveys and the analysis of data. A poorly designed or executed study will yield *an* answer, but not necessarily the *correct* answer. To ensure reliable and valid results of a survey administration, the researcher must ensure the quality of every step in the process. There are many resources for information on best practices in survey research, including professional associations such as the American Association for Public Opinion Research: (http://www.aapor.org/Best_Practices1.htm).

The National Center on Safe Supportive Learning Environments of the U.S. Department of Education provides periodic webinar trainings on issues of school climate, including best practices in survey administration and analysis. Past webinars are archived on the Center's website (http://safesupportivelearning.ed.gov/index.php?id=01) and can be accessed without charge. Webinars pertinent to school climate surveys include:

Making the Case for the Importance of School Climate and Its Measurement
http://safesupportivelearning.ed.gov/index.php?id=9&eid=1358

Survey Management
http://safesupportivelearning.ed.gov/index.php?id=9&eid=6

Survey Development
http://safesupportivelearning.ed.gov/index.php?id=9&eid=8

Survey Administration
http://safesupportivelearning.ed.gov/index.php?id=9&eid=10

Increasing Staff and Family Survey Response Rates
http://safesupportivelearning.ed.gov/index.php?id=9&eid=1525

Analysis of Survey Data
http://safesupportivelearning.ed.gov/index.php?id=9&eid=17

Evaluating the Reliability of Surveys and Assessments
http://safesupportivelearning.ed.gov/index.php?id=9&eid=1305

Reporting and Disseminating Survey Data
http://safesupportivelearning.ed.gov/index.php?id=9&eid=20

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