Examining the Efficacy of the ASSC School Climate Assessment Instrument (SCAI) to Promote Improved School Climate, Psychological Factors Related to High Functioning Schools and Students and Student Achievement and Why it's Uniquely Qualified to do so When Compared to Other Climate Survey Instruments

Content Outline of this Document
1. Structural Differences of the SCAI compared to other Climate Instruments
2. SCAI Content and Conceptual Framework of the SCAI – Psychology of Success
3. SCAI Dimensions and Sub-scales
4. Exceptional Level of Reliability
5. Validity of the SCAI and its High Levels of Correlation with Student Achievement
6. SCAI Scores Map onto the ASSC School Function and Effectiveness Road-map
7. Captures the Essential Phenomena at the School and its Real Problems vs. Symptoms
8. Cross-reference Data from Various Stakeholder Groups
9. Usefulness of the SCAI within the School Change Process
10. How Schools have Used the ASSC SCAI to Achieve Results

Introduction
This document explains the unique design, capability and effectiveness of the Alliance for the Study of School Climate (ASSC) School Climate Assessment Instrument (SCAI). The SCAI will be contrasted to other school climate instruments. This contrast begins with the unique analytic trait design that is a contrast to most surveys that use a Likert scale. The SCAI has versions for students, teachers/staff, and parents at both the elementary and secondary levels. Items from each version can be cross referenced and compared. The result is a more accurate and reliable assessment process and more valid data to use as schools undertake the improvement process. The ASSC SCAI is the only survey instrument whose data can be mapped onto a conceptual road-map of function and effectiveness. All of these features make the SCAI the most accurate, usable and predictive of such things as the levels of student achievement, school function, practice quality and social and emotional health. The relative efficacy of the ASSC SCAI was confirmed in an independent study from St. John's University (Gangi, 2010), in which the ASSC SCAI was rated as the best school climate assessment instrument out of all leading options. This document will progress through ten areas that characterize the qualities and capabilities of the SCAI and contrast it to other surveys in each area.

1. Structural Differences of the SCAI compared to other Climate Instruments
The SCAI survey structure is unique among school climate instruments since it uses an analytic trait structure. This design provides the survey participant with three options that represent three levels of phenomena. Item options represent the range of levels of institutional function, quality of practice and/or the experience of the participant at the school. Most items in the SCAI represent a range of phenomena from the most effective, functional and/or desirable to those that represent the least functional, effective and/or desirable. The middle option statement usually represents a commonly practiced or experienced average condition that is neither entirely high nor low. The following example items from the SCAI come from dimensions 2: Teacher Relations, 4: Leadership and Decisions and 5: Classroom Management and Discipline. They illustrate the analytic trait structure and the content design of the SCAI:

High	high-middle	middle	middle-low	low
2.a------------O----------------------- O ----------------------- O ----------------------- O ---------------------- O --------------------				
Faculty members commonly collaborate on matters of teaching.	Most faculty members are congenial to one another, and occasionally collaborate.		Typically faculty members view one another competitively.	
4.a------------O----------------------- O ----------------------- O ----------------------- O ---------------------- O --------------------				
School has a sense of vision and a mission that is shared by all staff.	School has a set of policies, a written mission, but no cohesive vision.		School has policies that are used inconsistently.	
5.e------------O----------------------- O ----------------------- O ----------------------- O ---------------------- O --------------------				
Maximum use of student-generated ideas and input.	Occasional use of student-generated ideas.		Teachers make the rules and students should follow them.	

In the SCAI survey participants are asked to select which phenomenon is closest to the one that they perceive or experience at their school. Participants are also given two in-between point options (middle/high and middle/low) if they feel that the reality they see is more in-between two of the three options.

Comparison – Likert Scale items
In comparison, most school climate surveys use a Likert scale structure. In this format respondents select from two to five degree options based on a root statement. The following item illustrates an example of a common item from a school climate survey using a Likert structure.

Students are safe at the school from violence
   a. Strongly Agree
   b. Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

The ASSC SCAI elects to use the analytic structure rather than the Likert scale structure for the following reasons
   1. The analytic structure provides the ability to describe the range of conditions that exist in various schools related to particular area of school life rather than a simply "more or less" of a single phenomenon implied by the Likert scale. This is especially important for the content of the SCAI. As will be discussed in the next section, the SCAI measures not just impressions but attempts to measure what is actually happening at the school. To do that, concrete language is necessary. With the analytic structure this range of phenomena that may potentially exist within any school is able to be captured. Neither this concreteness nor the range of conditions is possible with a Likert structure.
   2. The concrete descriptions within the analytic structure provide more reliability between raters and more accuracy of ratings. This can be seen in the reliability ratings shown below (See Appendix B). When raters are asked to simply agree or disagree to a statement as is the case with a Likert scale, there will be a higher level of subjectivity and bias in their response than when they are asked to select from three descriptions of concrete phenomena as is the case with an analytic trait design. Moreover, many times students or teachers perceive an area as fine and would rate it so on a Likert scale, yet when they are asked to read all three descriptions for the SCAI item they find themselves selecting a lower rating since it is the most true to their experience. This ability of the analytic model helps protect against respondents rating their level of comfort, loyalty or general contentment with their institution. For example, it is not

uncommon for some students in low income schools to rate their school highly on a Likert scale since their school reality is all they know, and their perception is that they are being treated in a manner that is to them "as good as it gets." However, in reality the practices at the school can often be relatively lower level in terms of all possible levels of function, as well as their ability to produce a psychology of success or social and emotional health and well-being. On the other hand when students are given three concrete descriptive options they are more likely to make an accurate assessment.

3. After surveys are completed and processed, those interpreting school climate survey data are better able to understand where the school is when they are given a breakdown of ratings describing different conditions related to the same phenomenon (from the analytic trait design and concrete descriptions), versus the data that is simply proportions of how much raters agreed with a description of a single condition (Likert scale design). And the concrete description of alternative conditions in the analytic design is much more useful in the process of interpretation and planning for school improvement action, as will be discussed in more detail in section 8.

2. The SCAI Content and How a "Psychology of Success" is Integrated into Each Item

The content of the SCAI is designed to represent descriptions of real phenomena within a school, and provide participants with three statements that depict levels of these true phenomena. Each item on the SCAI implies a range from highest quality – practice, value, or desired experience to lowest quality – practice, value or experience. These options reflect micro-realities that can be mapped more broadly to macro phenomena or examined in and of themselves. Therefore each item reflects the current state at the school for a micro-phenomenon. Because all phenomena at a school are connected, the items of the SCAI are all related. Therefore all SCAI items reflect a broader set of macro principles, and imply a larger overall intention within the school.

Integrated into each item are levels of the conceptual definition of a "psychology of success" (POS) versus a "psychology of failure" (POF), how it appears and how it is promoted or undermined in school practice. A POS vs. POF is defined by three sub-factors.
1) Internal vs External Locus of Control
2) Acceptance and Belonging vs. Alienation and Inadequacy
3) Growth vs. Fixed Ability Orientation

Each of these sub-factors is inter-related to the others, and provides a root psychological foundation for student success and mental health. (See our website for research and full explanation of POS vs. POF). Each SCAI item assumes that any phenomenon that is desired and therefore representative of a "high level" item, embodies a POS, and likewise any item description that is depicted as "low level embodies a POF. As you examine items 4a and 5e shown in the section above you can see how POS and POF are embedded in each item, as is the case for all other SCAI items.

Comparison to the item content of other surveys
- The analytic trait structure provides the SCAI the capability of capturing a true range of phenomena at the school. Likert scale surveys can only assess perceptions of degrees of a single phenomenon. Because "more effective vs. less effective," "POS vs. POF" and "healthy vs. unhealthy" exist as competing forces, only an analytic structure is able to capture the degree to which each is present. Likert scale items can only capture perceptions related to one phenomenon at a time.

- The accuracy of the SCAI that is produced by asking participants to select from a range of concrete phenomena vs. their degrees of agreement to a single stem creates a much more reliable measure. The concrete descriptors anchor the meaning of high, middle and low rather than it being left to subjective interpretation. This accuracy becomes increasingly important throughout the process of data interpretation.
- Items in the SCAI imply both the diagnosis and the cure, since the range of quality is described concretely in each item. This feature is useful at all stages of the process. Using a Likert scale item, this benefit is not present.

3. The SCAI Offers a Complete Picture of Overall School Climate and Function Given its Eight to Ten Dimensions and Multiple Sub-scales

The ASSC SCAI provides the most comprehensive view of the level of climate and function within a school. To capture the level of health and effectiveness at a school and a complete picture of the experience of the students and teachers, to the maximum extent reasonably possible, it requires a wide range of items across multiple dimensions. Most climate inventories neglect to measure many of the areas that have been found to be critical contributors to the climate and function at a school. The complete versions of the ASSC SCAI address the following main areas of the school phenomena:

Dimension	Teacher Versions	Student Versions	Parent Versions
Physical Environment	Yes	Yes	Yes
Teacher Relations	Yes	No	No
Student Interactions	Yes	Yes	Yes
Leadership and Decisions	Yes	No	Partial
Management and Discipline	Yes	Yes	Yes
Learning and Assessment	Yes	Yes	Yes
Attitude and Culture	Yes	Yes	Yes
Parents and Community	Yes	Yes	Yes
Special Education	Optional	Optional	Optional
Project-Based Learning	Optional	Optional	Optional

Because the SCAI contains comparable items for six of its dimensions, responses from the teachers and students (and parents if they participate) can be cross analyzed. Knowing how each stakeholder group viewed a particular item is useful. And having comparable items that were used in instruments for the various stakeholders to derive a dimension mean makes it possible to see how group perceptions compared.

Often SCAI data reflect divergent perspective among stakeholder groups. But more often, because of the uniform structure and the concreteness of the language in each item, what is typically found is that most groups generally agree. When this is the case, a very confident assessment can be made at the school as to what the common level of a phenomenon related to a particular item or dimension is at the point in time that the survey was given.

Comparison to other surveys
In comparison to other school climate surveys, the SCAI is one of the most broad and comprehensive. The ASSC model recognizes that when there is no data being collected in terms of leadership, discipline, teaching practices, or teacher relations important information will be missing from the process. For example if some of the problems at a school are related to the adult culture and that dimension is missing from what is being collected in a survey, the process will miss detecting a critical piece of the solution. Likewise, if the classroom management

practices are "causing" the poor climate, without assessing those practices, later remediation efforts will be blind at best, and more often predictably ineffective and unsuccessful.

SCAI Subscales
In addition to its main dimensions, the SCAI provides sub-scale measures related to the next deeper level of climate phenomena. This level includes the social and emotional learning variable and the degree to which what is happening at the school is promoting more or less of POS or POF. These sub-dimensions can be obtained by combining the ratings of smaller but selected numbers of items across dimensions. These sub-dimensions include:
- Internal Locus of Control
- Belonging and Acceptance
- Student Voice and Empowerment
- Growth Orientation
- Sense of Emotional and Physical Safety
- Cooperative vs. Competitive Ethos

Comparison to other surveys
The ASSC SCAI is generally as complete or more complete than other school climate surveys. Upon examination, other climate surveys, to varying degrees, tend to be limited in their ability to capture the breadth of phenomena that is captured with the SCAI. Typically the limits are related to one of the following areas:
- The kinds of teacher practices that are taking place at the school (usually the cause of climate issues).
- The underlying psychological climate at the school.
- The climate among the adults, which is necessary for both quality function and the capacity to make improvements in the future.
- The common form that leadership and decision-making practices take.
- The underlying values that drive the culture of the school.

4. The ASSC SCAI obtains High Levels of Reliability

In practice, the ASSC SCAI demonstrates exceptionally high levels of reliability as measured by the Chronbach's Alpha reliability test (0.97). The accepted standard for a reliable instrument is 0.7. Each of the individual sub-scales of the SCAI full version reflect alpha scores much better than that standard. And when the reliability level of the SCAI is compared to other school climate measure, it will be as high or higher, depending on the survey in question. The reasons that the SCAI will consistently out-perform other instruments in the area of reliability are related to 1) its conceptual integrity, 2) it content validity and its true to school life content, 3) the analytic trait structure, and 4) the concreteness of the item descriptions.

A Chart depicting the reliability ratings of each of the SCAI instruments and their dimensions is provided in Appendix A.

5. Validity of the SCAI and its Capability of Achieving High Levels of Correlation with Student Achievement

One of the qualities that separates the ASSC SCAI from other instruments is its validity. Validity is the ability of an instrument to measure the true and essential reality. The high level of general validity of the SCAI can best be seen in its predictive validity. In nearly all cases, if one knows the SCAI rating at a school, s/he can infer two other variables 1) the kinds of practices that are

common at the school, and 2) the level of student achievement. The correlation between the SCAI score and the student achievement measures at a school will be approximately 0.7. This correlation can be seen in a scatter plot diagram below comparing SCAI and California Academic Performance Index (API) for a set of schools in Los Angeles (data collected between 2010 and 2012). Note the near perfect correlation as shown by all schools being on or near the predicted mean line.

School Climate Score (SCAI) by Student Achievement (CA API)

School Climate(SCAI)/Student Achievement (API)
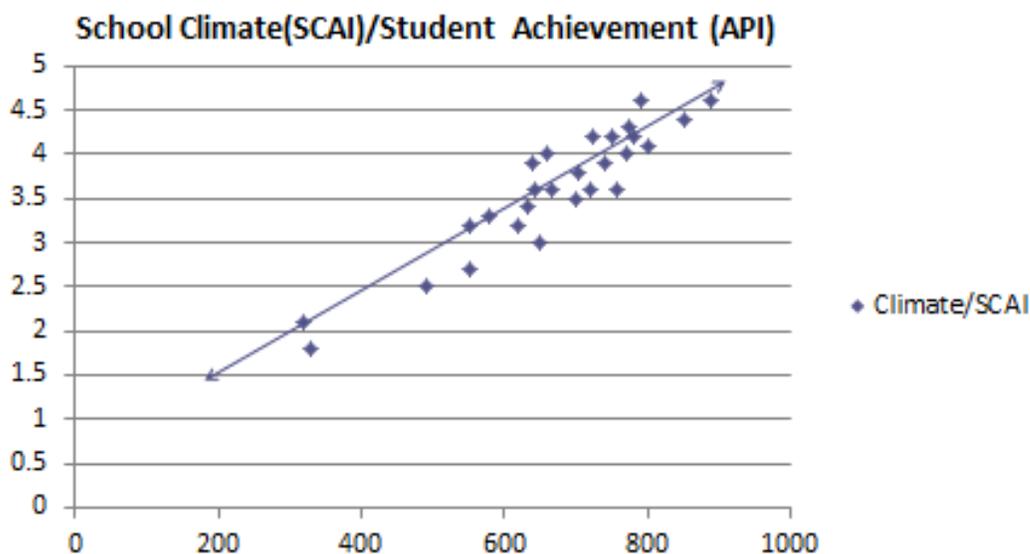
Comparison to other surveys' level of validity and ability to produce correlations to achievement

This near perfect level of correlation is not achievable with any other climate measure. Other climate instruments will demonstrate a positive correlation between climate and achievement, but it will not approach the 0.7 level of the SCAI. The reasons are many and include, as outlined earlier, the analytic structure, content, conceptual integrity, reliability, and overall validity of the SCAI when compared to other instruments. This correlation has been robustly demonstrated in schools from all of the several states where SCAI data has been collected. No other instrument can achieve the same level of correlation, because no other instrument can match the predictive validity of the SCAI.

One of the findings from schools using the SCAI and the ASSC road-map explained in the next section is that any improvement in any area of climate will result in an overall improvement, and therefore an improvement in student achievement. In school phenomena generally, and thus in the ASSC SCAI conceptual model, everything is connected. Therefore, a rising tide will lift all boats, or climate dimensions, and that increase will result in an increase in achievement since each variable is interdependent.

6. SCAI Scores Map onto the ASSC School Function and Effectiveness Road-map

Another unique feature of the ASSC SCAI is that all school climate ratings can be located/mapped onto the ASSC School function and effectiveness road-map. This road-map implies the kinds of values, practices and outcomes that define the school at the point in which the survey was taken. The vertical axis of the map represents the level of function at the school. The horizontal axis represents whether the school exhibits more of an empowering and democratic set of values and practices or a more controlling and autocratic set of values and practices. This road-map is explained in detail on our website and briefly in Appendix B. The complete school level application of the road-map is depicted in the diagram below.

Complete School Improvement Theoretical Road-map with Pathway pattern reflected

Comparison to other climate surveys where there is no map or the ability to map to the same extent

The SCAI is the only inventory that can be used to plot the precise location of a school's climate and function onto such a road-map. It requires the high level of validity and correlation to desired outcomes unique to the SCAI, as well as an overall theoretical framework that can represent the alignment between a) the values and principles that underlie the school, b) the common practices, and c) the expected outcomes (most notably the level of student achievement).

Having a road-map and SCAI data enables a school to know where it is currently. The self-understanding provided by knowing one's location on a road-map gives a school a clear starting point and mirror into who they and where they are. Given that the data are derived from multiple levels of climate data from multiple stakeholders and imply a whole series of predicted kinds of values and practices, the SCAI data mapped onto the road-map offer those at a school a complete picture of their current location. Contrast that to having data related only to response rates, as is the case with all other climate surveys. The road-map not only gives a clearer sense of starting point, but also helps the school better understand a) what they have been doing and b) what they have been trying to do up to this point. Other surveys can only give percentages for

each item or dimension normed to other schools' data. The SCAI can provide a normed score, but strongly encourages the school to view itself on the road-map location – which is vastly more meaningful to its growth process, rather than seeing itself in terms of percentile, which does not have any value in the growth process.

Moreover, the road-map implies how to move up to more functional and effective locations, and what that would require. No other survey can offer that practical or theoretical direction. The question could be asked, "If you don't know where your school is or where it is going, what are you using to inform your improvement efforts?"

7. Captures the Essential Phenomena at the School and its Real Problems vs. Symptoms

One of the primary ways that the SCAI varies from other school climate inventories is that it succeeds at measuring all three domains of the school phenomena – 1) the underlying values and principles used to guide the practices, 2) the primary cause of the climate quality – the practices that are commonly being used, and 3) the outcomes and experiences of the various members of the school community. Most other instruments only focus on the last one. As a result, when one examines a typical non-SCAI climate report what s/he is examining is by and large the symptoms of the values and practices at the school. The SCAI is able to identify the root causes of the climate and function level, be it low or high or somewhere in the middle on the road-map.

Addressing the real problems versus the symptoms of those problems can make all the difference. When improvement initiatives are generated by a response to the real problems the solutions will be grounded and purposeful. When they are responding to symptoms of those real problems, improvement initiatives tend to be misguided and/or attempt to solve the symptom directly and miss the real problem. What we have increasingly seen in the past 10 years is that climate data that highlight symptoms are used to support all manner of program and change initiatives. The use of these superficial assessment data commonly leads to the justification of almost any action. Most often that takes the form of using more of the same kinds of practices that were used to create the current climate level, while expecting improved results.

At best when we are responding to a symptom of a problem, we tend to try to fix the symptom directly by adding a remedy to the symptom. The result is a lot of effort spent implementing a program that may or may not be helpful, while the causes of the problems are still being practiced regularly by the adults and students at the school. And at worst, when we focus on the symptoms, it is seen as a license to do anything that we can convince others might be a good idea. As the research is catching up to all the ill-advised program implementations that are touted to be sure-fire cures, we are seeing that many are actually making schools worse in some ways. This is especially true for schools in the middle of the road-map. The program that helped the low performing school move up a notch may actually be limiting the progress of the middle function school. If the school was clearly aware of its real problems and its location on the road-map, it would be able to make an informed choice as to how to move forward. When a school has no idea where it is on the road-map, is responding to superficial data related mostly to symptoms and has no idea what progress would imply either theoretically or practically, the choices it is bound to make to improve will reflect no such clarity.

8. Cross-reference Data from Various Stakeholder Groups

One of the useful features of the SCAI is that there are versions for teachers and staff, students, and parents (for both elementary and secondary, including versions in Spanish). Items in each version can be cross-referenced with one another. This excludes the leadership and teacher relations scales since it is not fruitful to survey students about areas in which they do not have first-hand knowledge. Yet for all other items, schools have the ability to compare the responses across any stakeholder group for which there were data collected. Seeing how each group rated, for example, the consistency of the discipline policy will be useful data for the school moving forward (see example below).

Item being Rated	Teachers/Staff	Students	Parents
5a. Consistent Policy	3.4/5	3.1/5	3.3/5

The table above depicts a typical set of ratings. In most cases all groups will rate such an item about the same given the three concrete descriptions in the analytic trait scale. But ratings such as this would tell the school that they are doing okay with this area, but could have a much more consistent discipline policy as experienced by each of the three groups. Yet in some cases teachers and students have somewhat different perceptions. That tells the school that both their assumptions as well as their practices need to be reexamined.

Comparison to other school climate surveys

Most other school climate surveys do not have the ability to cross-reference particular items across stakeholder groups. The reasons may include:

- They do not have surveys for all stakeholder groups
- Items in surveys for each group are not comparable
- Surveys ask different content to different groups

9. Usefulness of the SCAI within the School Change Process

All school climate data will be useful in the process of attempting to improve the practices at a school. However, as described above, the SCAI provides both more powerful data and tools that are unavailable from other climate instruments. As we walk through what would be an abbreviated but sound process for moving from data to action, the relative efficacy and capability of the SCAI will be demonstrated.

(These steps are expanded and outlined in detail in "Change from the Inside," available on the ASSC website)

Step 1: Assemble a group of representative stakeholders to examine the data.

Step 2: Have the leadership team examine the data. The tools that are available to this group using the SCAI as compared to other instruments are listed below:
.

SCAI	Other School Climate Surveys
• Cross-referenceable item means. • Cross-referenceable dimension. • Cross-referenceable sub-scale means. • Cross-referenceable overall mean. • Items that describe both the current condition and strongly hint at what better practice would look like. • Guiding questions and focus areas for each dimension. • Explanation for how to promote more psychology of success in policy and practice. • The road-map so that school can see where they are and where they need to go. • An understanding of the real problems at the school and the solutions to those problems.	• Item means. • Scale means. • Overall mean. • An understanding of the symptoms of the problems at the school. • General directions for school improvement. • Norms based on school to school comparisons (with some surveys).

Step 3: Prioritize focal areas for change
One of the unique features of the ASSC SCAI is that it implies both what a school would want to consider doing more of, and what it would want to consider doing less of. The leadership team is able to see where stakeholders identify dysfunctional practices that are common. What ASSC has found in leading change efforts is that as much or more improvement occurs from a school working to discontinue certain ineffective practices than occurs in one trying to increase new more effective practices. And as mentioned above, when using the SCAI in its diagnosis the school will more likely be responding to real problems rather than to symptoms.

Step 4: Make Plan for School Improvement
As the leadership team sets out a plan for improving the school, the SCAI will again offer substantive advantages. First, the school leadership will be able to situate improvement in a movement up the road-map. Any new initiative or program would have to meet the implied requirement "is this going to help us move up the road-map?" Second, because the SCAI is integrated, all improvements will lead to the collective improvement – efforts will have integrity. If one examines improvement efforts undertaken without a clear and holistic vision, the dis-integrity leads to competing attentions at best, and vast misguided effort at worst.

The SCAI is supported by several books that provide both a school wide leadership guide and a classroom level guide to the kinds of practices that will lead a school up the road-map. These include two resources from ASSC.
- Transformative Leader's Guide to Moving Your School up the School Effectiveness Road-map.
- Transformative Classroom Management.

Third, the SCAI encourages an organic and meaningful change process. That will inevitably entail real self-examination, deep analysis of the data and a clear understanding of what better looks like. Schools that do not fix their underlying real problems will not improve. Adding a program to a school that is spending a great deal of time engaged in failure psychology practices will have little or no impact in most cases.

Promoting Equity and Social Justice in the School Climate Assessment Process
The SCAI is an effective tool in the process of helping a school identify where its practices manifest as inequitable or unjust and how to remedy the situation. As a school better recognizes that certain practices or absence of practices tend to disproportionately target and ultimately harm certain groups of its students, the SCAI provides the most comprehensive means for understanding what is happening at the school, including how current forms of policy and practice are encouraging the problem, as well as how to fix the problem.

One example of this inequitable practice relates to how minority male students are disproportionately referred and targeted in the school's discipline process. When viewed as a road-map issue, this problem becomes clearly illuminated. What ASSC and other research suggests is that where practices (especially in the area of classroom management and discipline, but all dimension included) are defined by the lower quadrants of the road-map, minority males are 9x more likely to be targeted in class and also referred for discipline infractions. However, when practices are defined by the top left quadrant (the 1-paradigm school, and the 1-style classroom) the referral rate is about 1-1. And the number of referrals overall is many times less. The SCAI and the ASSC resources provide clear direction for how to move one's school practice upward toward that effective quadrant, contributing greatly to remedying issues of inequity, injustice and segregation.

Below we can compare the remediation implied by the SCAI as compared to another typical climate survey

SCAI	Other Climate Survey
Responses can be disaggregated so that the perceptions of students and parents of different ethnic and cultural groups can be determined.	This will be the same for most surveys.
Items identify where there are psychology of failure (POF) strategies taking place that are causing the problem. Items can show the degree to which each group experiences different school phenomena.	Items can show where there is an absence of perceived indicators of good climate.
The overall placement on the road-map can reliably predict the degree to which there is going to be a problem in this area.	No road-map available.
Both what to stop doing and what would lead to improvement is implied in each item as well as the road-map.	There may be a loose connection between climate scores and what is happening at the school, but Likert design surveys are not capable of identifying specific causes of the problem.

10. How Schools have Used the ASSC SCAI to Achieve Results

Hundreds of schools have given the SCAI surveys to their members. Some have gotten positive results and others have not. The difference is the degree to which they took advantage of the opportunities that the SCAI affords. Some schools superficially examined the final numbers and took away from them a general set of strengths and weaknesses and a feeling of either being pleased or displeased. In these cases, the SCAI was not used to its full advantage, and in most of those cases little change occurred as a result. Some schools have used the SCAI to measure before and after climate effects of a program implementation. It can function in this capacity, as it will be the most valid indicator of the true school climate level.

However, the first deficiency with many of these efforts is that most programs that are implemented are not designed to improve the school's climate or fundamental quality level. The second deficiency is that within these implementation efforts there is no consideration for the real problems at the school.

So in the end, the school climate and function will be about the same as it was after the initial assessment. In these cases most any climate instrument will be adequate if the goal is say that one went through an assessment process, in the first case, and/or to go through the motions of an assessment so that the school can attempt the implementation of a program in the second case.

But when schools use the SCAI effectively, they have in most cases achieved results. We would define effective use as the following:
1) Broad representation and ownership of those within the school community/change process and a transparent display of the data,
2) Close examination of what the data are actually suggesting to do less of and more of and the real problems at the school rather than just the symptoms,
3) Understanding of what moving up the road-map would imply, both practically and conceptually,
4) Action plans that are aligned with what the data and a "move up the road-map" would imply,
5) Professional development and/or program implementation that is aligned with the broader vision for moving up to a new location on the road-map.

And it should be repeated here that anytime the climate has been improved, the school's overall function and effectiveness has been improved. And that improvement in function and effectiveness manifests in multiple other correlative improvements, including student achievement and the social and emotional health at the school. When schools use the SCAI effectively they see real and fundamental change. To the degree to which the process elements described above exist we have seen changes in school climate ratings from year to year and, as always, commensurate changes in other desired outcomes such as student achievement. Below are examples of assessment/improvement efforts using the SCAI ranging in scope from a single school to a whole state.

Single School SCAI Use Example
School A was a relatively high performing school with a visionary principal. School A's district wanted to have a better sense of the climate of the school so it commissioned an ASSC climate study. School A followed the process fairly faithfully. It had a leadership team who examined the data carefully and made recommendations based on the findings.

Year	School Climate Rating	Student Achievement Rating
One	4.1/5	834/1000
Two	4.3/5	866/1000

As is nearly always the case, both the climate score and the student achievement score moved together in a positive direction (while sometimes the achievement rating will lag a year or two behind). So in terms of the road-map, School A which had been doing fine had moved up the road-map to a new location in which it was a) trying to do better practices, b) actually doing better practices, and c) getting better results.

This result is common to schools which approach the process like School A.

District SCAI Use Example
Pflugerville Independent School District (PISD) in Texas was being led by a visionary assistant superintendent who understood what it took to encourage school improvement. This Assistant Superintendent invited ASSC to present the road-map and the eight dimensions to leadership groups from each school, after each of the schools had completed the SCAI. Schools were able to examine their data in light of the growth model and then make plans that were data-driven. The following data table shows that most schools showed a significant improvement in climate from year one to two.

Elementary Schools in PISD: SCAI Rating Change from 2012 to 2013
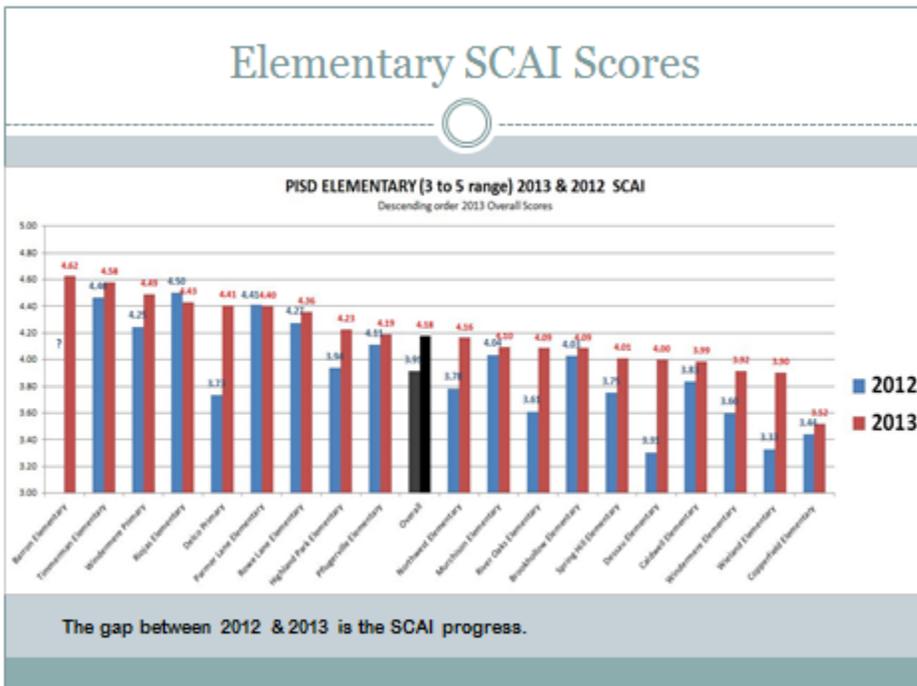
Secondary Schools in PISD: SCAI Rating Change from 2012 to 2013
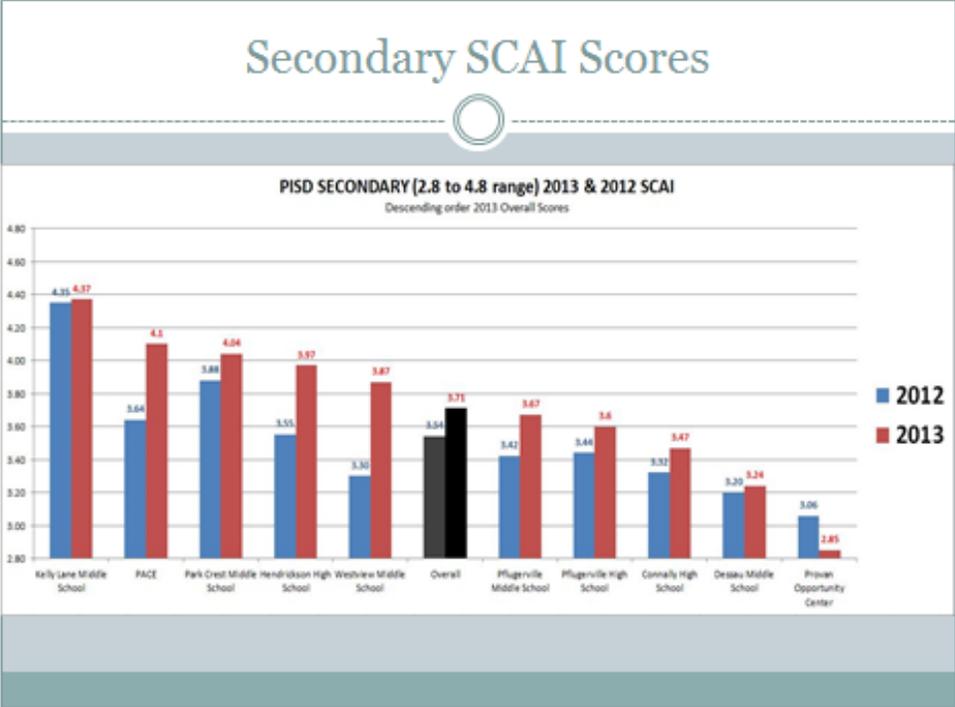
As one can see the year over year comparison shows that 10 of 11 schools improved their climate. Achievement data showed an increase in the same period. The following table shows the year to year average/mean achievement gains for all schools in the PISD district following the administration and self-improvement process using the SCAI at each school.

Year	Level 2: Proficiency ≥ College Readiness (All Subjects)	Level 3: Advanced – Exceeds Proficiency (All Subjects)	Level 2: Proficiency or Advanced (Science)
2012	37%	14%	32%
2013	39%	15%	38%
2014	44%	17%	48%

Also, teacher retention in PISD went up from 85% in 2011-12 to 91% in 2012-13

These kinds of results are possible for any district, but uncommon since most district implementations lack one or more of the key features required for success.

Large Scale Current Agency Led Assessment and Implementation Effort
In a large scale grant funded effort in CA using the SCAI, but being led by an independent group, first year findings have shown substantive year to year climate gains, as shown in SCAI ratings. In this implementation, the funded schools are required to set goals and create action plans based on their data and schools are educated in the road-map concept and use it to inform their thinking.

State-Wide Assessment Implementation
In a Safe and Supportive Schools (S3) climate improvement effort using a modified SCAI (the MiSCAI) in Michigan from 2011 to 2014, 23 schools from districts around the state were funded. All funded schools in the S3 effort used the SCAI during the first year of the process to assess their initial school climate level and set goals based on the data, and then used it on a volunteer basis after that. The funded schools showed the following results at the end of the grant period:

- 65% of schools improved school safety scores
- 70% moved off the "priority list" (i.e., schools performing in the bottom 5% state-wide) as compared to only 37% of the non S3 schools.
- 52% reported less bullying
- 30% received Reward status as compared to only 12% of the non S3 schools. Reward schools are those that have made significant improvement in student achievement from year to year.

Quote from DRIVE Consulting
One of the consulting groups that has been using the SCAI with its clients is DRIVE (formerly New View). DRIVE has been using the SCAI from 2010 to the present with the schools that they serve across several districts, mostly within North Carolina. In describing DRIVE's experience with SCAI, Director of DRIVE Charlie Lyons said in May 2016:

"As consultants coaching schools on real transformation, the SCAI instrument is by far the best tool. Instruments that use the Likert scale do not give enough information. Likert scale instruments are overwhelming and not practical to the process of change. In contrast, the SCAI gives specific information that easily lends itself to developing specific strategies for positive change. Teachers easily understand the results of the survey and feel empowered to make changes once seeing the results of the instrument. At DRIVE we are able to sit down with school leadership teams and provide specific examples and recommendations in their data for improvement. The SCAI is an invaluable tool to DRIVE as we work to transform schools across the country."

Conclusion
In summary, the ASSC SCAI is a uniquely capable option among the many school climate instruments available. It is one of the few that can be used to measure whole school function and quality as well as the social and emotional learning climate at a school. Its unique structure provides a more accurate and useable data source. Its conceptual framework and integration into a whole school function road-map are features that further distinguish it in terms of validity as well as its ability to encourage meaningful school improvement. And finally, no other instrument is as predictive and illuminating when it comes to showing the relationships among the schools' climate, its practices, and its outcomes, including student achievement.

Appendix A: The Reliability of the SCAI

The ASSC SCAI instruments will tend to achieve greater levels of reliability than instruments that use a yes or no structure due to the descriptive nature of the items themselves. Analytic type measures (i.e., rubrics) such as that used in the SCAI have been shown to obtain higher degrees of reliability when compared to ratings obtained from undefined Likert scales or yes – no items. Subjectivity is greatly decreased in analytic type items when compared to purely Likert-type items.

In practice, the ASSC SCAI demonstrates exceptionally high levels of reliability as measured by the Chronbach's Alpha reliability test (0.97). The accepted standard for a reliable instrument is 0.7. Each of the sub-scales of the SCAI full version reflect alpha scores much better than that standard as well as other known school climate instruments.

ASSC SCAI Sub-scale	Chronbach's Alpha Reliability measure			Correlation with Student Achievement (overall school mean to mean)
	Student SCAI-S-S 7.3	Teacher SCAI-S-G 7.1.8	Parent SCAI-S-G 7.1.8	
Size of Data Set	N = 327	N = 208	N = 89	N = 30 schools
1. Physical Environment	.83	.84	.89	0.6
2. Teacher Interactions		.89		0.6
3. Student Interactions	.88	.83	.90	0.7
4. Leadership and Decisions		.96	.90	0.5
5. Discipline and Management	.91	.87	.94	0.8
6. Learning and Assessment	.93	.88	.96	0.7
7. Attitude and Culture	.92	.88	.94	0.7
8. Community	.88	.91	.87	0.6
All dimensions included	**.977**	**.981**	**.983**	**0.7**

- *Dimension-level Sub-scale Reliability* – As shown in the table above, each of the SCAI sub-scales generates a Chronbach's Alpha reliability measure of .83 or above. The overall Chronbach's Alpha for each instrument and data set ranged from .97 to .98.
- *Intra-rater Reliability* – given an adequate amount of time and a common path through a school, the SCAI has shown a high degree of inter-rater agreement. This is primarily a result of the clear and concrete language used to define the levels at each item. A school can expect to obtain around .9 levels of inter-rater reliability among independent observers. In addition, the mean standard deviation for scores for student surveys is 1.1, and for teacher surveys it is 0.8 on a 5 point scale. Given that all students do not have the same experience of school, this modest range is explainable.
- *Inter-dimension Reliability* – one of the most notable features of the SCAI will be the fact that ratings across dimension show a high level of correlation to one another (0.7 – 0.9). This is primarily a function of the nature of how school climate manifests itself, but it also reflects upon the reliability of the instruments. The implications of all 8 dimensions being related are profound. It points to one of our main assertions about school climate – that is, that everything is related. On a psychometric level this shows that principles that characterize the health of a school are integrated within each dimension separately as well as across dimensions. On a practical school assessment level, it implies that improvement efforts that take into consideration a broad spectrum of changes and a holistic focus will be more successful than those that are defined by piece-meal efforts or isolated interventions.

Appendix B: The School-Wide Road-map
The first step in constructing the school improvement road-map is to define our geography. In this case, that is done by combining the basic foundations of the road-map – the vertical and horizontal axes. The vertical axis is defined by higher or lower levels of function. The horizontal axis is defined by intentions, values and practices that are characterized by the polarities of – trust vs. fear, connection vs. comparison, and empowerment vs. control. The result of combining the two axes is depicted in Figure B below.

Figure B: Combining the two Axes into One Matrix – the Four Leadership Styles/School Paradigms

	Empowerment Connection Trust	Control Comparison Fear
High Function Intentional Leadership	**1-Paradigm School Empowering** • Vision-Driven Facilitative Leadership • Student-Centered Classrooms • Community Climate • Mostly 1-style teaching	**2-Paradigm School Managed** • Efficiency-Driven Top-Down Leadership • Teacher-Centered Classrooms • Institutional Climate • Mostly 2-style teaching
Low Function Accidental Leadership	**3-Paradigm School Amorphous** • Enabling Passive Leadership • Unstructured learning • Insecure Climate • Lots of 3-style teaching (but also a random combo of others)	**4-Paradigm School Bossy** • Dominating and Self-serving Leadership • Lecture and Test Teaching • Domesticating Climate • Mostly 4-style teaching

When we combine the two axes, 4 quadrants are created. Each quadrant characterizes an identifiable paradigm. Each paradigm is characterized by a somewhat predictable set of inter-related to the values, practices and outcomes. Combining an accidental structure with a control-based value results in what could be termed a Coercive 4-Paradigm school environment. When an accidental structure is combined with a trusting value the result is a somewhat permissive and amorphous 3-Paradigm environment. When there is a high level of function and a control-based value the result is 2-Paradigm school that is defined by structure and organization. Finally a 1-Paradigm school that combined both high intention and a trusting and connecting climate could best be characterized as empowering. All patterns of practice tend to fall into one of these four paradigms.