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ABSTRACT

The Wayson School Climate and Context Inventory (SCCI) was used in previously reported comparative studies of six good high schools in Tennessee and Kentucky (three in each state). This study added data for three similar high schools in North Carolina to bring the pool of data to nine schools, making possible the determination of similarities and differences in SCCI items and the identification of climate characteristics rated high and low in high schools. The 3 North Carolina schools generated responses from 140 faculty members. The climate of all nine schools has been enhanced by administration and faculty giving attention to the development of clear, written rules and procedures and extensive efforts to communicate these rules and procedures. Climate has also been enhanced by the use of due process procedures for students. Teachers in these schools have a great deal of autonomy in instructional decision making, and a real effort has been made by educators to know students and include them in activities. Identification of the low rated climate characteristics shows areas in which schools can improve, largely through parent, staff, and student involvement. Four tables list ranked SCCI items. Appendix A presents the SCCI; and appendixes B, C, and D list item scores, analysis of variance test results, and SCCI item rankings, respectively. (SLD)

EVALUATING CLIMATE IN NINE "GOOD" HIGH SCHOOLS IN TENNESSEE, KENTUCKY, AND NORTH CAROLINA

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I. INTRODUCTION

The investigators began use of the Wayson School Climate and Context Inventory (SCCI) in comparative studies of six high schools in Tennessee and Kentucky (three in each state) which were reported in education meetings and conferences (Bobbett, French, et al., 1990, 1991a, 1991b). The study reported here added to the pool of existent SCCI data from those six high schools and data from three similar high schools in the state of North Carolina.

II. PURPOSE

The purposes of this investigation were:

1. to determine similarities and differences in responses to SCCI items across the three states and nine high schools, and
2. to determine which climate characteristics are regularly rated "high" in high schools and which ones are commonly rated "low".

III. METHODOLOGY

A. School Identification and Selection

The SCCI data already existed for the six high schools constituting the sample from Tennessee and Kentucky. The inventory (see Appendix A) was administered to faculty and administrators in the three North Carolina high schools selected for inclusion. Respondent samples were not the same in all schools. The Kentucky Chief State School Officers nominated three "good" school in rural Appalachia while the researchers, using the Tennessee Report card data, selected the top three "good" Tennessee's rural Appalachian schools. Finally, using a list of "good" schools provided by the North Carolina State Department of Education, three schools were selected in North Carolina. The earlier studies had drawn responses from 20 randomly selected faculty in each of the three schools in Kentucky and the three schools in Tennessee. The three North Carolina schools generated 140 sets of responses.

B. Research Questions

To guide data analysis, three research questions were posited:

1. How similarly or differently do faculty in the nine schools perceive the climate existing in their schools?

2. Are there elements of school climate that appear to characterize these schools, even though they function in three different states?

3. Since these schools are all perceived to be "good" schools by persons external to them, are there lessons to be leaned from them by educators and policymakers seeking to improve schools and the images of schools in their communities and states?

C. Research Design

In order to respond to the research questions 1 and 2, a mean score for each respondent group for each SCCI item at each school was generated, as well as a mean score for the three schools in each state. Mean scores were then converted to z-scores, and the 45 items were ranked from high to low according to their mean z-scores. In addition, an ANOVA analysis was conducted to determine where significant differences existed among item responses.

IV. FINDINGS

Findings are reported for research questions 1 and 2. Research question 3 was used to organize conclusions and discussion derived from the findings.

1. How similarly or differently do faculty in the nine schools perceive the climate existing in their schools?

Appendix B provides the mean z-scores for responses to each item in each school and the mean z-score for responses to each item by state. Table 1 is organized by z-score ranking of the items from greatest difference to least difference.

Eight items exhibited mean z-score differences greater than +1 z-score. Based on the responses from faculty in the nine schools, these characteristics can be considered to be most different from school to school. Across the nine schools, there appears to be substantial variation (significant variation according to the results of the ANOVA test appearing in Appendix C) in faculty perceptions of (a) their interactions with students and families outside school, (b) the use of the full range of school facilities for

Table 1. SCCI items with the largest z-score differences among nine "good" high schools, 1992.

Item No.	Content	Z-score Difference
29	School faculty members visit students' homes.	+2.89
34	Places are designed where small groups can work together without having to talk loudly to be heard.	+1.92
8	School secretaries, aides, custodians, and other school staff (such as bus drivers) participate in faculty meetings and inservice sessions.	+1.64
44	Discipline in our school is firm, fair and consistent. All students are treated equally; no group "gets away" with things.	-1.62
19	A few good rules are made and enforced rather than having many rules which aren't enforced.	+1.20
22	School-Playgrounds, school buses, cafeteria, hallways, and lavatories are seen as places where students learn; teachers design and implement positive curriculum for teaching behavior in those areas.	+1.18
35	The school is attractive and inviting.	+1.16
6	Status differences that imply inferiority or superiority of one staff or student group over another are eliminated.	+1.09

learning, (c) the attractiveness of their schools, (d) the drawing of support staff into decision making and development activities, (e) the number of rules in the schools, (f) fairness and consistency in discipline, and (g) the presence of cliques or status groups in the school setting.

Seven items produced z-score differences less than -1.0 z-score between the nine schools in three states (see Table 2). In other words, respondents saw great consistency in these areas in their schools. Essentially, these similarities focus on procedures for communication and enforcing student involvement in activities, helping relationships, problem solving behavior, faculty/staff autonomy, and staff member sense of responsibility. Items falling between these two clusters of items generated responses demonstrating varying degrees of difference in perceived climate within the nine schools.

According to the ANOVA test for significance of difference (Appendix C), responses to 44 or 45 SCCI items were significantly different across the nine schools. Only response to item 40 (Each student has a definite contact, preferably an advocate, on the faculty.) did not demonstrate significant difference at the .05 level.

An ANOVA analysis of item responses by state indicates that responses to five items did not differ significantly ($p \leq .05$) across the three states, although four of the five differed significantly across schools (see Table 3, p. 6). Clearly, there are both similarities and differences in climate factors as perceived by respondents in the three states and the nine schools.

2. Are there elements of school climate that appear to characterize these schools, even though they function in three different states?

The table appearing as Appendix D ranks mean z-score item responses from high to low. Higher, positive z-scores in the table identify higher ratings across the nine schools. The same information is available from the mean rating for each item.

Five items generated mean z-score above 1.0, signifying consistently high rating in the nine schools (see Table 4). Respondents perceived a lack of inclusion of support staff student and parents in decision-making, lack of student sense of responsibility for facilities and environment, and a lack of outreach into students' homes.

A review of the school by school and state by state mean ratings for the 45 SCCI items (Appendix D) shows that there was not always consistency in the ratings given an

Table 2. SCCI items with the smallest z-score differences among nine "good" schools.

Item No.	Content	Z-score Difference
45	School rules are written and steps are taken to see that each person (pupil/parent/school faculty member, etc.) know the rules, or has a copy of the rules (code of conduct).	-1.75
13	All students are actively included in classroom and school activities, regardless of sex, race, religion, socio-economic status or academic ability.	-1.35
27	People assist one another in ways that help them to become independent.	-1.35
24	Before rushing to solve a problem, people clarify whether there is a problem and define what it is.	-1.35
32	Staff members feel responsible for keeping the school environment attractive and clean.	-1.26
42	Due process is applied before punishment (e.g., students have their say and know why they are being punished).	-1.26
21	Teachers choose the methods and materials which they can best use to achieve explicit goals.	-1.16

Table 3. When the ANOVA was used to identify differences among states, there was no significant difference ($p \leq .05$) among (state/individuals) on 5 SCCI items .

Item No.	Content	p
12	Students' work is displayed in classrooms, display cases, corridors, and cafeteria.	.73
34	Places are designed where small groups can work together without having to talk loudly to be heard.	.28
35	The school is attractive and inviting.	.06
40	Each student has a definite contact, preferably an advocate, on the faculty.	
45	School rules are written and steps are taken to see that each person (pupil/parent/school faculty member, etc.) know the rules, or has a copy of the rules (code of conduct).	.10 .08

item within the schools in the same state. Some of the highest and lowest ratings awarded in any particular school were awarded to items other than the 10 discussed above. Further, several items received higher mean ratings within a state than one or more of the items with the highest mean ratings for the nine schools:

Kentucky: Items 17, 35, 28
Tennessee: Items 20
North Carolina: Items 20, 32, 41, 16, 35, 12

Ultimately, it can be said that there are elements of school climate that appear to be present to a great extent in all of the nine schools investigated (the five highly rated items). There are also climate elements (five low rated items) that appear to be lacking in most or all of these schools, and there are elements that seem to be present in the schools within a given state that are not present to the same degree in the schools within another state.

Table 4. The five SCCI items with the largest mean score and with a z-score greater than 1.0.

Item No.	Content	Mean Rating	Mean Z-score
45	School rules are written and steps are taken to see that each person (pupil/parent/school faculty member, etc.) know the rules, or has a copy of the rules (code of conduct).	4.58	1.80
42	Due process is applied before punishment (e.g., students have their say and know why they are being punished).	4.47	1.57
21	Teachers choose the methods and materials which they can best use to achieve explicit goals.	4.42	1.46
15	Teachers know the names of their students, not only those in their classrooms but others in the school.	4.27	1.14
13	All students are actively included in classroom and school activities, regardless of sex, race, religion, socio-economic status or academic ability.	4.24	1.08

V. CONCLUSIONS AND DISCUSSION

As previously mentioned, research question 3 was developed as a means of organizing conclusions and discussion.

3. Since these schools are all perceived to be "good" schools by persons external to them, are there lessons to be leaned from them by educators and policymakers seeking to improve schools and the images of schools in their communities and states?

In many ways, conclusions from this study must be limited. We do no have climate related data from groups other than the educators within the schools. Therefore, we are limited to their perceptions of the elements that are "true" in their schools and those that are lacking. The findings of this study simply provide us some

insights upon which to develop a few practices to enrich climate and numerous questions for further consideration and investigation.

It is probably fair to say that the climate of all nine schools in the sample has been enhanced by administration and faculty giving attention to development of clear, written rules and procedures and extensive effort to communicate these rules and procedures to those who need to know (students, parents, faculty, others). Climate has also been enhanced by establishment of and adherence to due process procedures for the students. Teachers in these schools appear to have a good deal of autonomy in instructional decision-making, and a real effort has been made by educators to know students across the school and to include all student s in both classroom and school activities. Essentially, the most common climate-enhancing factors in these schools are explicitness and fairness in processes involving students and the school personal and inclusive.

If we assume that climate in any school can be improved and that the presence of the elements identified in the SCCI together constitute a positive climate that supports learning and projects to all a positive image of the school, then there are clearly areas in which these schools can improve climate. Educators in the schools agree that support staff have not been made an integral part of the process of schooling and education, that there has not been as much outreach to student's homes or as much "pulling into" the school of parents as there could/should be, and that students usually are not invited to participate in problem-solving and that, in turn, they (students) do not feel responsible for the school.

From the patterns we have seen in the five items rated highest and the five rated lowest across the nine schools, it appears that educators' attention to climate begins first with those internal processes and procedures that they deem important to carrying out their responsibilities. Without specific attention to school improvement and climate improvement, there appears to be a tendency to overlook inclusionary, invitational behaviors and procedures that would bring others (students, parents, support staff, et al.) into the school team.

In addition to the patterns of climate elements clearly identifiable in responses to the five highest and five lowest rated items, there are responses to 35 other SCCI items that suggest their varying degrees of presence across the schools. If positive

productive climate is composed of all 45 SCCI elements, these, too, need attention. It is obvious that climate is a complex, multidimensional entity. To improve it will require multiple, specific activities involving every constituency that interacts in some way with the school.

We have seen that there is both similarity and difference in climate-producing factors across schools. On the one hand, those findings simply underscore the need to identify climate status in every school and to develop a plan for improving it. On the other hand, we must be reminded that these nine schools were selected for study because they were identified by persons external to them as "good" schools. This fact suggests that there may be different configurations of climate that are best suited to different local communities. We do no yet know enough to suggest that one pattern of climate is right for all situations.

Finally, there is the matter of state boundaries. While there were variations in findings within and across states, these were not major. Whatever constitutes positive, productive climate in a school does not appear to be state specific.

V. REFERENCES

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Appendix A

SCHOOL CLIMATE AND CONTEXT INVENTORY[1]

We are seeking information about the climate of your school. We request your help through your voluntary completion of this inventory. All resulting data will be combined for analysis; therefore, no individual responses will be identified. You are free to withdraw your participation at any time.

Find response item **A** below. Darken the correct space to indicate your race:

A. (1) (2) (3) (4) (5) 1. American Indian 2. Asian 3. Black 4. Hispanic 5. White

Find response item **B** below. Darken the space that tells how many years you have been in this school, include this year.

B. (1) (2) (3) (4) (5) 1. year 2. years 3. years 4. years 5. (5 or more years)

DIRECTIONS: Darken a number to rate your school from 1 to 5. A rating of 1 shows that the statement is **not true** of your school. A rating of 5 means that the statement is **very true** of your school.

NOT TRUE **TRUE**

1. (1) (2) (3) (4) (5) A sense of direction and mutual purpose is shared among many staff, students, and (to some extent) parents. (They can describe some goals and achievements in specific, understandable terms).
2. (1) (2) (3) (4) (5) Problems do not fester; they are identified and resolved. The question, "What can we do?" replaces the sentiment, "It can't be done."
3. (1) (2) (3) (4) (5) Nearly all members feel that the school belongs to them, and that he or she can make a difference in it.
4. (1) (2) (3) (4) (5) A large number of the staff is involved in planning and implementing school activities. Participation is high and widely distributed.
5. (1) (2) (3) (4) (5) School staff members know how to prevent discipline problems caused by adults, by school procedures or by the school organization.
6. (1) (2) (3) (4) (5) Status differences that imply inferiority or superiority of one staff or student group over another are eliminated.
7. (1) (2) (3) (4) (5) Each person accepts criticism from those who receive his/her services.
8. (1) (2) (3) (4) (5) School secretaries, custodians, and other school staff (such as bus drivers) participate in faculty meetings and in-service sessions.
9. (1) (2) (3) (4) (5) Responsibilities and "territories" are shared and respected; people are not possessive nor are they fearful that someone will "take over" their job, space, or materials. They say "our school" and "our students", not "mine".
10. (1) (2) (3) (4) (5) Many students are involved in the school's activities—in planning and in implementing. Participation is high and widely distributed.
11. (1) (2) (3) (4) (5) Students participate in solving the problems of the classroom and the school.
12. (1) (2) (3) (4) (5) Students' work is displayed in classrooms, display cases, corridors, and cafeteria.
13. (1) (2) (3) (4) (5) All students are actively included in classroom and school activities, regardless of sex, race, religion, socio-economic status or academic ability.
14. (1) (2) (3) (4) (5) Students feel responsible for keeping the school environment attractive and clean.
15. (1) (2) (3) (4) (5) Teachers know the names of their students, not only those in their classrooms but others in the school.
16. (1) (2) (3) (4) (5) Rules and expectations are clearly defined, stated, and communicated so that people know what to do.
17. (1) (2) (3) (4) (5) Rules apply only to relevant behavior and not to matters that are trivial, highly personal, or have no effect upon the school or class.
18. (1) (2) (3) (4) (5) Disciplinary techniques are used to teach positive ways of behaving, not just to punish or to teach blind obedience.
19. (1) (2) (3) (4) (5) A few good rules are made and enforced rather than having many rules which aren't enforced.
20. (1) (2) (3) (4) (5) Individual differences and a variety of learning styles are respected and accommodated.

*** * OVER * ***

21. (1) (2) (3) (4) (5) Teachers choose the methods and materials which they can best use to achieve explicit goals.

22. (1) (2) (3) (4) (5) Playgrounds, school buses, cafeteria, hallways, and lavatories are seen as places where students learn; teachers design and implement positive curriculum for teaching behavior in those areas.

23. (1) (2) (3) (4) (5) Field trips, outside speakers, and disciplinary practices are seen as ordinary teaching methods which teachers may use without extraordinary administrative procedures.

24. (1) (2) (3) (4) (5) Before rushing to solve a problem, people clarify whether there is a problem and define what it is.

25. (1) (2) (3) (4) (5) If a person has a problem with another, he or she discusses it **directly** with that person.

26. (1) (2) (3) (4) (5) Individual and cultural differences are respected and valued and are openly expressed in the school.

27. (1) (2) (3) (4) (5) People assist one another in ways that help them to become independent.

28. (1) (2) (3) (4) (5) Staff members know the neighborhood, the street names, the stores, and the places of entertainment where their students live.

29. (1) (2) (3) (4) (5) School faculty members visit students' homes.

30. (1) (2) (3) (4) (5) Staff members recognize the stereotypes they may hold about the students and the community and work to see students and parents as individuals; the school community works in various ways to break down stereotypes.

31. (1) (2) (3) (4) (5) Staff and administrators frequently participate in groups, institutions, and organizations within the community which can offer support to students and to the school (ex., churches, clubs).

32. (1) (2) (3) (4) (5) Staff members feel responsible for keeping the school environment attractive and clean.

33. (1) (2) (3) (4) (5) Adults and students are able to analyze "trouble areas" in the environment and make provisions to solve problems.

34. (1) (2) (3) (4) (5) Places are designed where small groups can work together without having to talk loudly to be heard.

35 (1) (2) (3) (4) (5) The school is attractive and inviting.

36. (1) (2) (3) (4) (5) Parents participate in school activities and/or are represented in some faculty meetings and inservice sessions.

37. (1) (2) (3) (4) (5) Students take responsibility for enforcing agreed-upon patterns of relationships with other students, teachers and administrators.

38. (1) (2) (3) (4) (5) When decisions are made and procedures established, the educational growth of individual students takes priority over concerns such as adult convenience, pleasing superiors, saving face or maintaining tradition.

39. (1) (2) (3) (4) (5) Teachers know and respect the students' languages, cultures, and individual styles.

40. (1) (2) (3) (4) (5) Each student has a definite contact, preferably an advocate, on the faculty.

41. (1) (2) (3) (4) (5) Rules and other expectations are clearly defined, stated, and communicated so that people know what to do.

42. (1) (2) (3) (4) (5) Due process is applied before punishment (e.g., students have their say and know why they are being punished).

43 (1) (2) (3) (4) (5) Parents are interested in good discipline in the school and work with school personnel to obtain it.

44. (1) (2) (3) (4) (5) Discipline in our school is firm, fair and consistent. All students are treated equally; no group "gets away" with things.

45. (1) (2) (3) (4) (5) School rules are written and steps are taken to see that each pupil/parent/school faculty member, etc., know the rules, or has a copy of the rules (code of conduct).

[1]

Mean Z-scores for SCCI items In Nine High Schools and Three States Ranked by Difference

	Kentucky				Tennessee				North Carolina				Total			Nine Schools				
SCCI	KY1	KY2	KY3	KY	TN1	TN2	TN3	TN	NC1	NC2	NC3	NC	Mean							
Question	M	M	M	M: SCH	M	M	M	M: SCH	M	M	M	M: SCH	(x/9)	Z	RK	Max	MIN	DIFF	Z	Rank
29	2.25	2.20	2.84	2.43	2.80	2.40	4.25	3.15	1.92	2.10	1.50	1.84	2.47	-2.71	2	4.25	1.50	2.75	2.87	45
34	3.40	3.00	3.90	3.43	3.55	2.60	4.90	3.68	3.22	3.34	3.12	3.23	3.45	-0.61	10	4.90	2.60	2.30	1.92	44
8	1.05	3.45	2.35	2.28	3.15	1.85	3.05	2.68	1.95	1.28	1.75	1.66	2.21	-3.27	1	3.45	1.28	2.17	1.64	43
44	4.10	3.00	3.75	3.62	4.30	3.65	4.70	4.22	3.36	3.69	2.55	3.20	3.68	-0.12	18	4.70	2.55	2.16	1.62	42
19	3.85	3.50	3.95	3.77	4.50	3.90	4.70	4.37	3.45	3.75	2.74	3.31	3.82	0.18	24	4.70	2.74	1.96	1.20	41
22	3.20	3.00	4.05	3.42	4.10	3.00	4.55	3.88	2.70	2.90	2.60	2.73	3.34	-0.85	6	4.55	2.60	1.96	1.18	40
35	4.45	3.90	4.75	4.37	4.70	2.80	4.00	3.83	3.70	4.22	4.30	4.07	4.09	0.76	35	4.75	2.80	1.95	1.18	40
6	3.55	3.45	3.50	3.50	4.15	3.70	4.55	4.13	3.05	3.47	2.64	3.05	3.56	-0.38	13	4.55	2.64	1.91	1.09	38
40	3.25	3.05	3.63	3.31	3.85	3.10	4.90	3.95	2.95	3.33	3.40	3.23	3.50	-0.51	11	4.90	3.05	1.85	0.97	37
14	2.75	2.55	3.20	2.83	3.75	2.70	4.35	3.60	2.09	3.38	2.61	2.69	3.04	-1.49	3	4.35	2.55	1.80	0.86	36
25	3.05	3.25	3.65	3.32	4.00	3.55	4.60	4.05	2.97	3.07	2.83	2.96	3.44	-0.64	9	4.60	2.83	1.77	0.80	35
36	3.15	2.65	4.20	3.33	3.05	2.74	4.15	3.31	2.39	2.91	2.48	2.59	3.08	-1.41	4	4.20	2.48	1.72	0.69	34
28	4.15	4.35	4.45	4.32	4.45	4.40	2.75	3.87	3.44	3.75	3.37	3.52	3.90	0.35	27	4.45	2.75	1.70	0.65	33
3	3.35	3.30	4.10	3.58	4.50	4.25	4.30	4.35	2.64	3.56	2.93	3.05	3.66	-0.17	17	4.50	2.93	1.57	0.37	32
11	3.10	3.30	3.05	3.15	3.50	3.00	4.20	3.57	2.25	2.97	2.79	2.67	3.13	-1.30	5	4.20	2.67	1.53	0.29	31
9	2.90	4.00	4.20	3.70	4.45	3.75	4.30	4.17	2.83	3.48	2.93	3.08	3.65	-0.19	16	4.45	2.93	1.52	0.27	30
2	3.45	3.65	4.15	3.75	4.20	3.50	4.45	4.05	3.17	3.72	3.00	3.30	3.70	-0.08	20	4.45	3.00	1.45	0.12	29
43	3.65	2.95	4.00	3.53	3.60	3.90	4.25	3.92	3.10	3.50	2.84	3.14	3.53	-0.44	12	4.25	2.84	1.41	0.03	28
30	3.55	3.80	4.00	3.78	4.15	3.55	4.50	4.07	3.16	3.44	3.10	3.23	3.69	-0.10	19	4.50	3.10	1.40	0.01	26
37	3.45	3.00	3.55	3.33	3.70	3.21	4.30	3.74	2.70	3.47	2.90	3.02	3.36	-0.81	7	4.30	2.90	1.40	0.01	26
18	3.70	3.75	4.05	3.83	4.35	3.75	4.75	4.28	3.03	3.90	3.38	3.44	3.85	0.24	26	4.75	3.38	1.37	-0.05	25
15	3.90	4.45	4.65	4.33	4.70	4.42	4.90	4.67	3.55	4.31	3.58	3.81	4.27	1.14	42	4.90	3.58	1.31	-0.18	24
31	3.85	4.10	4.40	4.12	4.45	4.05	4.80	4.43	3.48	4.00	3.54	3.67	4.07	0.71	34	4.80	3.54	1.27	-0.29	22
1	3.75	3.80	4.25	3.93	4.30	4.00	4.65	4.32	3.31	3.88	3.39	3.52	3.92	0.39	29	4.65	3.39	1.26	-0.29	22
41	4.15	3.65	4.30	4.03	4.30	4.10	4.90	4.43	3.89	4.06	3.64	3.86	4.11	0.80	36	4.90	3.64	1.26	-0.29	22
12	3.60	3.45	4.55	3.87	3.90	3.55	4.70	4.05	3.73	4.53	3.98	4.08	4.00	0.56	32	4.70	3.45	1.25	-0.31	20
17	4.60	4.30	4.00	4.30	4.45	4.05	4.55	4.35	3.65	4.16	3.35	3.72	4.12	0.82	38	4.60	3.35	1.25	-0.31	20
33	3.35	3.63	3.90	3.63	3.90	3.45	4.30	3.88	3.02	3.67	3.07	3.25	3.59	-0.31	14	4.30	3.07	1.23	-0.35	18
5	3.70	3.80	4.20	3.90	4.15	3.70	4.45	4.10	3.46	3.76	3.23	3.48	3.83	0.20	25	4.45	3.23	1.22	-0.37	16
4	3.35	3.60	4.35	3.77	4.40	3.85	4.35	4.20	2.97	3.31	3.27	3.18	3.72	-0.04	22	4.40	3.18	1.22	-0.37	16
10	2.90	3.35	3.55	3.27	3.75	3.55	4.25	3.85	2.46	3.63	3.07	3.05	3.39	-0.74	8	4.25	3.05	1.20	-0.41	15
38	3.60	3.80	4.10	3.83	4.15	3.70	4.35	4.07	3.09	3.42	3.21	3.24	3.71	-0.06	21	4.35	3.21	1.14	-0.54	14
16	4.35	3.55	4.30	4.07	4.35	4.15	4.63	4.38	3.95	4.19	3.54	3.89	4.11	0.80	36	4.63	3.54	1.10	-0.63	13
7	3.20	3.75	3.90	3.62	4.20	3.53	4.16	3.96	3.16	3.57	3.13	3.28	3.62	-0.25	15	4.20	3.13	1.08	-0.67	12
26	3.75	4.00	4.35	4.03	4.35	4.25	4.50	4.37	3.18	3.81	3.44	3.48	3.96	0.48	31	4.50	3.44	1.06	-0.71	11
23	3.45	3.60	4.50	3.85	4.65	3.80	4.45	4.30	2.88	4.25	3.74	3.62	3.92	0.39	29	4.65	3.60	1.05	-0.73	10
20	3.55	4.15	4.25	3.98	4.70	4.35	4.85	4.63	3.64	4.09	3.86	3.86	4.16	0.91	40	4.85	3.86	0.99	-0.86	9
39	3.50	4.30	4.30	4.03	4.55	4.20	3.90	4.22	3.50	4.13	3.59	3.74	4.00	0.56	32	4.55	3.59	0.96	-0.92	8
21	4.45	4.55	4.55	4.52	4.80	4.65	4.33	4.59	3.92	4.59	3.96	4.15	4.42	1.46	43	4.80	3.96	0.85	-1.16	7
42	4.75	4.65	4.65	4.68	4.55	4.45	4.80	4.60	4.03	4.38	4.00	4.14	4.47	1.57	44	4.80	4.00	0.80	-1.26	6
32	3.84	3.95	4.65	4.15	4.60	4.15	4.45	4.40	3.71	4.13	3.86	3.90	4.15	0.88	39	4.65	3.86	0.79	-1.28	5
13	3.95	4.15	4.45	4.18	4.65	4.45	4.55	4.55	3.60	4.47	3.89	3.98	4.24	1.08	41	4.65	3.89	0.76	-1.35	3
27	3.50	4.00	4.15	3.88	4.35	4.05	4.15	4.18	3.54	3.97	3.59	3.70	3.92	0.39	29	4.35	3.59	0.76	-1.35	3
24	3.50	3.85	4.00	3.78	4.05	3.95	4.00	4.00	3.24	3.74	3.29	3.43	3.74	0.01	23	4.05	3.29	0.76	-1.35	3
45	4.80	4.65	4.80	4.75	3.90	4.70	4.85	4.48	4.60	4.65	4.28	4.51	4.58	1.80	45	4.85	4.28	0.57	-1.75	1

Appendix C

ANOVA Test Results for Significance of Difference In School and State Responses

	Nine Schools			Three States		
Items	F-test:		RK	F-test:		RK
1	6.58		27	17.61		36
2	6.40		24	13.20		21
3	12.54		42	35.64		45
4	6.48		25	18.58		38
5	4.90		14	11.40		15
6	6.68		28	18.79		39
7	6.17		21	13.96		26
8	13.64		43	13.65		24
9	10.40		41	24.37		44
10	7.03		32	12.43		18
11	7.64		34	17.59		35
12	4.32		11.5	0.31	p = .7349	1
13	4.42		13	8.90	p = .0002	9
14	14.39		45	19.26		41
15	7.68		35	16.52		32
16	4.05		8	5.92	p = .0031	8
17	2.46	p = .0142	2	5.80	p = .0034	7
18	6.75		29	14.89		30
19	8.39		38	19.14		40
20	5.20		15	13.66		25
21	6.99		31	17.34		34
22	8.33		37	18.38		37
23	10.31		40	11.12		12.5
24	5.22		16	14.29		29
25	4.32		11.5	14.20		28
26	7.24		33	21.74		42
27	4.20		10	10.12		11
28	6.40		23	23.16		43
29	6.29		22	17.02		33
30	5.24		17	15.40		31
31	4.16		9	11.12		12.5
32	5.66		20	11 68		16
33	6.75		30	13.33		22
34	3.68	p = .0004	4	1.26	p = .2866	2
35	14.02		44	2.85	p = .0599	5
36	7.74		36	12.09		17
37	5.41		19	10.01		10
38	3.88	p = .0003	5	12.49		19
39	5.35		18	11.19		14
40	1.88	p = .0632	1	2.33	p = .0997	3
41	2.90	p = .0042	3	5.51	p = .0045	6
42	3.94	p = .0002	6	12.70	p = .0001	20
43	6.51		26	13.35		23
44	8.41		39	14.18		27
45	3.96	p = .0002	7	2.51	p = .0837	4

Ranking of SCCI Items by Mean Z-Score

	Kentucky				Tennessee				North Carolina				Total			Nine Schools				
	KY1	KY2	KY3	KY	TN1	TN2	TN3	TN	NC1	NC2	NC3	NC	Mean							
Question	M	M	M	M: SCH	M	M	M	M: SCH	M	M	M	M: SCH	(x/9)	Z	RK	Max	MIN	DIFF	Z	Rank
45	4.80	4.65	4.80	4.75	3.90	4.70	4.85	4.48	4.60	4.65	4.28	4.51	4.58	1.80	45	4.85	4.28	0.57	-1.75	1
42	4.75	4.65	4.65	4.68	4.55	4.45	4.80	4.60	4.03	4.38	4.00	4.14	4.47	1.57	44	4.80	4.00	0.80	-1.26	6
21	4.45	4.55	4.55	4.52	4.80	4.65	4.33	4.59	3.92	4.59	3.96	4.15	4.42	1.46	43	4.80	3.96	0.85	-1.16	7
15	3.90	4.45	4.65	4.33	4.70	4.42	4.90	4.67	3.55	4.31	3.58	3.81	4.27	1.14	42	4.90	3.58	1.31	-0.18	24
13	3.95	4.15	4.45	4.18	4.65	4.45	4.55	4.55	3.60	4.47	3.89	3.98	4.24	1.08	41	4.65	3.89	0.76	-1.35	3
20	3.55	4.15	4.25	3.98	4.70	4.35	4.85	4.63	3.64	4.09	3.86	3.86	4.16	0.91	40	4.85	3.86	0.99	-0.86	9
32	3.84	3.95	4.65	4.15	4.60	4.15	4.45	4.40	3.71	4.13	3.86	3.90	4.15	0.88	39	4.65	3.86	0.79	-1.28	5
17	4.60	4.30	4.00	4.30	4.45	4.05	4.55	4.35	3.65	4.16	3.35	3.72	4.12	0.82	38	4.60	3.35	1.25	-0.31	20
41	4.15	3.65	4.30	4.03	4.30	4.10	4.90	4.43	3.89	4.06	3.64	3.86	4.11	0.80	36	4.90	3.64	1.26	-0.29	22
16	4.35	3.55	4.30	4.07	4.35	4.15	4.63	4.38	3.95	4.19	3.54	3.89	4.11	0.80	36	4.63	3.54	1.10	-0.63	13
35	4.45	3.90	4.75	4.37	4.70	2.80	4.00	3.83	3.70	4.22	4.30	4.07	4.09	0.76	35	4.75	2.80	1.95	1.18	40
31	3.85	4.10	4.40	4.12	4.45	4.05	4.80	4.43	3.48	4.00	3.54	3.67	4.07	0.71	34	4.80	3.54	1.27	-0.29	22
12	3.60	3.45	4.55	3.87	3.90	3.55	4.70	4.05	3.73	4.53	3.98	4.08	4.00	0.56	32	4.70	3.45	1.25	-0.31	20
39	3.50	4.30	4.30	4.03	4.55	4.20	3.90	4.22	3.50	4.13	3.59	3.74	4.00	0.56	32	4.55	3.59	0.96	-0.92	8
26	3.75	4.00	4.35	4.03	4.35	4.25	4.50	4.37	3.18	3.81	3.44	3.48	3.96	0.48	31	4.50	3.44	1.06	-0.71	11
1	3.75	3.80	4.25	3.93	4.30	4.00	4.65	4.32	3.31	3.88	3.39	3.52	3.92	0.39	29	4.65	3.39	1.26	-0.29	22
23	3.45	3.60	4.50	3.85	4.65	3.80	4.45	4.30	2.88	4.25	3.74	3.62	3.92	0.39	29	4.65	3.60	1.05	-0.73	10
27	3.50	4.00	4.15	3.88	4.35	4.05	4.15	4.18	3.54	3.97	3.59	3.70	3.92	0.39	29	4.35	3.59	0.76	-1.35	3
28	4.15	4.35	4.45	4.32	4.45	4.40	2.75	3.87	3.44	3.75	3.37	3.52	3.90	0.35	27	4.45	2.75	1.70	0.65	33
18	3.70	3.75	4.05	3.83	4.35	3.75	4.75	4.28	3.03	3.90	3.38	3.44	3.85	0.24	26	4.75	3.38	1.37	-0.05	25
5	3.70	3.80	4.20	3.90	4.15	3.70	4.45	4.10	3.46	3.76	3.23	3.48	3.83	0.20	25	4.45	3.23	1.22	-0.37	16
19	3.85	3.50	3.95	3.77	4.50	3.90	4.70	4.37	3.45	3.75	2.74	3.31	3.82	0.18	24	4.70	2.74	1.96	1.20	41
24	3.50	3.85	4.00	3.78	4.05	3.95	4.00	4.00	3.24	3.74	3.29	3.43	3.74	0.01	23	4.05	3.29	0.76	-1.35	3
4	3.35	3.60	4.35	3.77	4.40	3.85	4.35	4.20	2.97	3.31	3.27	3.18	3.72	-0.04	22	4.40	3.18	1.22	-0.37	16
38	3.60	3.80	4.10	3.83	4.15	3.70	4.35	4.07	3.09	3.42	3.21	3.24	3.71	-0.06	21	4.35	3.21	1.14	-0.54	14
2	3.45	3.65	4.15	3.75	4.20	3.50	4.45	4.05	3.17	3.72	3.00	3.30	3.70	-0.08	20	4.45	3.00	1.45	0.12	29
30	3.55	3.80	4.00	3.78	4.15	3.55	4.50	4.07	3.16	3.44	3.10	3.23	3.69	-0.10	19	4.50	3.10	1.40	0.01	26
44	4.10	3.00	3.75	3.62	4.30	3.65	4.70	4.22	3.36	3.69	2.55	3.20	3.68	-0.12	18	4.70	2.55	2.16	1.62	42
3	3.35	3.30	4.10	3.58	4.50	4.25	4.30	4.35	2.64	3.56	2.93	3.05	3.66	-0.17	17	4.50	2.93	1.57	0.37	32
9	2.90	4.00	4.20	3.70	4.45	3.75	4.30	4.17	2.83	3.48	2.93	3.08	3.65	-0.19	16	4.45	2.93	1.52	0.27	30
7	3.20	3.75	3.90	3.62	4.20	3.53	4.16	3.96	3.16	3.57	3.13	3.28	3.62	-0.25	15	4.20	3.13	1.08	-0.67	12
33	3.35	3.63	3.90	3.63	3.90	3.45	4.30	3.88	3.02	3.67	3.07	3.25	3.59	-0.31	14	4.30	3.07	1.23	-0.35	18
6	3.55	3.45	3.50	3.50	4.15	3.70	4.55	4.13	3.05	3.47	2.64	3.05	3.56	-0.38	13	4.55	2.64	1.91	1.09	38
43	3.65	2.95	4.00	3.53	3.60	3.90	4.25	3.92	3.10	3.50	2.84	3.14	3.53	-0.44	12	4.25	2.84	1.41	0.03	28
40	3.25	3.05	3.63	3.31	3.85	3.10	4.90	3.95	2.95	3.33	3.40	3.23	3.50	-0.51	11	4.90	3.05	1.85	0.97	37
34	3.40	3.00	3.90	3.43	3.55	2.60	4.90	3.68	3.22	3.34	3.12	3.23	3.45	-0.61	10	4.90	2.60	2.30	1.92	44
25	3.05	3.25	3.65	3.32	4.00	3.55	4.60	4.05	2.97	3.07	2.83	2.96	3.44	-0.64	9	4.60	2.83	1.77	0.80	35
10	2.90	3.35	3.55	3.27	3.75	3.55	4.25	3.85	2.46	3.63	3.07	3.05	3.39	-0.74	8	4.25	3.05	1.20	-0.41	15
37	3.45	3.00	3.55	3.33	3.70	3.21	4.30	3.74	2.70	3.47	2.90	3.02	3.36	-0.81	7	4.30	2.90	1.40	0.01	26
22	3.20	3.00	4.05	3.42	4.10	3.00	4.55	3.88	2.70	2.90	2.60	2.73	3.34	-0.85	6	4.55	2.60	1.96	1.18	40
11	3.10	3.30	3.05	3.15	3.50	3.00	4.20	3.57	2.25	2.97	2.79	2.67	3.13	-1.30	5	4.20	2.67	1.53	0.29	31
36	3.15	2.65	4.20	3.33	3.05	2.74	4.15	3.31	2.39	2.91	2.48	2.59	3.08	-1.41	4	4.20	2.48	1.72	0.69	34
14	2.75	2.55	3.20	2.83	3.75	2.70	4.35	3.60	2.09	3.38	2.61	2.69	3.04	-1.49	3	4.35	2.55	1.80	0.86	36
29	2.25	2.20	2.84	2.43	2.80	2.40	4.25	3.15	1.92	2.10	1.50	1.84	2.47	-2.71	2	4.25	1.50	2.75	2.87	45
8	1.05	3.45	2.35	2.28	3.15	1.85	3.05	2.68	1.95	1.28	1.75	1.66	2.21	-3.27	1	3.45	1.28	2.17	1.64	43