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# The Development and Validation of the Elementary School Ethical Climate Index

*Kay A. Keiser and Laura E. Schulte*

## Abstract

The purposes of this study were to develop and validate an instrument that measures the ethical climate of elementary schools. To create the Elementary School Ethical Climate Index (ESECI), we adapted the ethical climate index for middle and high schools. The ESECI assesses student and teacher interactions and relationships through the application of five ethical principles: respect for autonomy, nonmaleficence, beneficence, justice, and fidelity (Kitchener, 1984, 1985). To provide evidence of the ESECI's reliability and validity we distributed the ESECI to the students and teachers/staff at one urban elementary school in a Midwestern city. There was a significant difference in student perceptions of student to student interactions and relationships across grade levels. Schools could use the ESECI to pinpoint areas where changes need to be made in order to enhance a school's sense of community.

Key Words: sense of community, school climate, elementary school, ethics

## Introduction

When entering an elementary school, one of the first things a visitor notices is its climate – the feel or personality of the organization (Hoy & Clover, 1986). It is evident in the voices of the teachers, the faces of the children, and the atmosphere of the building. Yet school climate can be subtle, complex, and perplexing. Tied closely to the norms, traditions, and cultures of the school, climate is often an important but intangible factor of decision making and organizational behavior.

Elementary school climate has many facets, including safety, students' sense of belonging, and interactions between faculty and administration. While different instruments measure school climate, the facet chosen for study defines the view of climate revealed. For example, attention to improving student achievement led to studies of factors in the school environment that support student development (Esposito, 1999; Ma & Klinger, 2000; Spence, 2003; West, 1985). As reports of school violence and bullying came to greater public awareness in the years since Columbine, interest turned to measuring climate in terms of student behavior (Glover, Gough, Johnson, & Cartwright, 2000; Leff, Power, Costigan, & Manz, 2003; Orpinas, Horne, & Staniszewski, 2003; Peterson & Skiba, 2001). In response to concerns for both achievement and safety, research has been conducted to uncover various factors that create a positive school culture and methods to reform negative cultural aspects (Garcia, 1992; Griffith, 2000; Schulte, Shanahan, Andersen, & Sides, 2003). Whatever their purpose, these studies have a similar focus – a search for relationship.

> If there is a common thread to creating a positive school climate, it is the importance of relationships – student to student, teacher to student, teacher to family, administrator to staff, school to community….The development of strong and sustainable relationships will contribute more to a healthy and safe school than metal detectors ever will, and our ability to teach our students how to develop supportive relationships of their own is as essential a skill as math and reading. (Noonan, 2004, p. 65)

By viewing school climate from the perspective of ethics, elements of caring relationships may emerge (Noddings, 1988, 1992). Schools that exhibit fairness, justice, respect, cooperation, and compassion have been shown to have a positive sense of community that supports and motivates both teachers and students (Bushnell, 2001; Furman, 1998; Noddings, 1992; Schulte et al., 2003). Studying school climate from the viewpoint of ethics may provide a way to evaluate these relationships, and so the purposes of this study were to develop and to validate an instrument that measures the ethical climate of elementary schools.

### Ethical Principles

We developed the Elementary School Ethical Climate Index (ESECI) by applying five ethical principles: respect for autonomy, nonmaleficence, beneficence, justice, and fidelity to the interactions and relationships between students and teachers, specifically *teacher to student* (i.e., how teachers interact with and relate to students), *student to teacher/learning environment* (i.e., how students interact with and relate to teachers), and *student to student* (i.e., how students

interact with and relate to other students) (Brown & Krager, 1985; Kitchener, 1984, 1985; Schulte et al., 2002). Respect for autonomy involves allowing a person to act independently; nonmaleficence refers to doing no harm to others; beneficence means benefiting others; justice involves treating others fairly; and fidelity means being faithful and trustworthy. Respect for persons lies at the heart of these principles. To create the ESECI we adapted the School Ethical Climate Index (SECI) items, which were developed for middle and high schools (Schulte et al., 2002). This was necessary because of the developmental and school-based differences between elementary and secondary levels.

### Research Questions

We addressed the following research questions during the development and validation of the ESECI: (1) Can the ethical climate of elementary schools be assessed with an acceptable degree of reliability and validity? (2) Is there a relationship between elementary school student perceptions of the ethical climate of their school and their gender, involvement in extracurricular activities, ethnicity, attendance, academic achievement, and grade level? (3) Is there a relationship between elementary school teacher/staff perceptions of the ethical climate of their school and their position, age, highest degree attained, and length of employment? (4) Do elementary school student and teacher/staff perceptions of the ethical climate of their school differ?

## Method

The procedures used in this study replicated those used by Schulte et al. (2002) in the development and validation of the School Ethical Climate Index (SECI) for middle and high schools. The development and validation of the ESECI included an item development phase as well as procedures to provide evidence of its content and construct validity and an estimation of its reliability.

### Item Development

The item development panel consisted of 13 students enrolled in a doctoral level advanced statistics course. Included in the group were two university professors, three elementary school principals, one elementary school teacher, four high school assistant principals, one college student development specialist, one university technology coordinator, and one K-12 director of curriculum and instruction. At the time of this study, the members of the item development panel had a mean of 12.46 ($SD$ = 7.05) years of experience in the field of education.

The item development panel adapted items from the SECI to create the ESECI, paying close attention to readability level so that elementary students would be able to read independently and respond accurately. Of the 26 original SECI items that measure *teacher to student* interactions and relationships, the panel reworded 12 items to apply to elementary schools, discarded 2 items, and added 3 new items for a total of 27 ESECI *teacher to student* items, such as "Teachers respect the differences of all students." Of the 9 original SECI items that measure *student to teacher/learning environment* interactions and relationships, the panel reworded 7 items to apply to elementary schools, discarded 2 items, and added 8 new items for a total of 15 ESECI *student to teacher/learning environment* items, such as "Students cooperate with their teachers." Of the 14 original SECI items that measure *student to student* interactions and relationships, the panel reworded 8 items to apply to elementary schools, discarded 1 item, and added 3 new items for a total of 16 ESECI *student to student* items, such as "Students encourage their classmates to do their best." In summary, the ESECI contained 58 items after the item development phase. The 58 items included 27 *teacher to student* items, 15 *student to teacher/learning environment* items, and 16 *student to student* items.

## Validation of the ESECI

### Content Validity

A group of 15 fourth ($n = 5$), fifth ($n = 3$), and sixth ($n = 7$) grade students and 15 fourth ($n = 6$), fifth ($n = 5$), and sixth ($n = 4$) grade teachers reviewed the 58 items to provide evidence of the ESECI's content validity. The content validity panel did not include any members of the item development panel.

We asked the reviewers to rate the appropriateness of the ESECI items in measuring the ethical climate of elementary schools on a 3-point scale (1 = not appropriate, 2 = marginally appropriate, and 3 = very appropriate). We provided the reviewers with information about the five ethical principles that the ESECI assesses. When possible, the reviewers provided ways to improve the items they rated "1" or "2." When the students had difficulty understanding words or phrases, they underlined them.

Based on the reviewers' appropriateness ratings and comments, we made changes to the items. Of the 27 original *teacher to student* items, we discarded 6 items (e.g., "Teachers allow students to choose topics for projects.") and reworded 3 items, resulting in a 21-item *teacher to student* subscale. Of the 15 original *student to teacher/learning environment* items, we reworded 6 items and added 1 new item, resulting in a 16-item *student to teacher/learning environment* subscale. Of the 16 original *student to student* items, we discarded 1 item

("Students make fun of classmates because of the way they dress.") and reworded 3 items, resulting in a 15-item *student to student* subscale.

In summary, we discarded seven items and added one new item as a result of the content validity procedures. After the content validity procedures, the ESECI contained a total of 52 items: 21 *teacher to student* items, 16 *student to teacher/learning environment* items, and 15 *student to student* items.

### Participants

To further validate the ESECI and to provide an estimation of its reliability, we distributed the 52-item ESECI to 106 fourth (38%), fifth (32%), and sixth (30%) grade students and 43 teachers (67%) and staff (paraprofessionals; 33%) at an urban elementary school in a Midwestern city. Of the students, 46% were males, and 54% were females. The ethnicity of the students included 44% Caucasian Americans, 37% African Americans, and the remainder (19%) were Hispanic, Native Americans, Asian Americans, or other. The majority (71%) of the teachers/staff were 50 years of age or younger, and 67% had taught at the surveyed school for more than 3 years.

### Data Collection Procedures

We surveyed the students by going to their classrooms and the teachers/staff by going to a teacher/staff meeting. The survey information included: (a) a cover letter that explained the purposes of the study and informed the students and teachers/staff that participation was voluntary and that responses would be anonymous, (b) demographic questions used to describe the students and teachers/staff, (c) the 52-item ESECI, and (d) a bag of candy that served as a small incentive. Before distributing the survey information, we received approval from the principal at the school, the school district's director of research, and the university's research review board. We received a signed consent form from the parent(s) of each student who participated in the study. We explained the purposes of the study before distributing the surveys to the participants, and then waited while the participants completed the surveys, which took approximately 15 minutes. Students self-reported on items such as academic achievement and extracurricular involvement. The participants responded to the ESECI items by giving their perception of their school's ethical climate based on their experiences and/or the experiences of their peers. They considered how true each ESECI item was in their school using the following response scale: 1 = rarely or never true, 2 = seldom true, 3 = sometimes true, 4 = often true, and 5 = usually or always true.

### Data Analyses

Following the work of Schulte et al. (2002), we conducted the following statistical analyses to investigate the construct validity and reliability of the ESECI:

1. We evaluated the construct validity and dimensionality of the ESECI with exploratory factor analyses using a principal axis factoring method followed by a varimax rotation of the number of factors extracted. We used the principal axis factoring method rather than the principal components method because we wanted to investigate common variance in order to determine the number of dimensions that the ESECI measured (Kachigan, 1991).
2. We estimated the reliability of the ESECI subscales using coefficient alpha (Cronbach's alpha; Crocker & Algina, 1986).
3. We summarized the respondents' perceptions of the ethical climate at their school by calculating mean scores for each of the ESECI subscales.
4. To provide additional evidence of the ESECI's construct validity, we conducted independent t-tests, one-way analyses of variance, and correlation analyses to determine if participants' perceptions varied across demographic characteristics. Because we conducted multiple statistical tests, we used a .01 level of significance to control for Type I errors (Schulte et al., 2002).

## Results

### Factor Analysis

We recoded the negatively worded items before conducting the factor and reliability analyses. The initial factor analysis indicated that a three-factor solution fit the data. The scree plot confirmed the initial eigenvalue information. The first factor had an eigenvalue of 18.57 and accounted for 35.70% of the total variance. The second factor had an eigenvalue of 4.61 and accounted for 8.86% of the total variance. The third factor had an eigenvalue of 2.48 and accounted for 4.76% of the total variance. In total the three factors accounted for approximately 49% of the variance in the ESECI items.

Using a factor loading cutoff value of .50, the factor loadings for the three-factor solution revealed that the ESECI items measured a *teacher to student* dimension, a *student to teacher/learning environment* dimension, and a *student to student* dimension (see Table 1). The ESECI *teacher to student* items loaded on the first factor; the ESECI *student to teacher/learning environment* items loaded on the second factor; and the ESECI *student to student* items loaded on the third factor. Thirteen of the original ESECI items did not load any of the factors, and one item loaded on two factors. Therefore, we removed 14 items before conducting the reliability analysis.

Table 1. ESECI Items with Factor Loadings

| Elementary School Ethical Climate Index Item | Factor 1 | Factor 2 | Factor 3 |
|---|---|---|---|
| *Teacher to Student* | | | |
| 1. Teachers praise students for excellent work. | .576 | .223 | .154 |
| 2. Teachers help students improve their study habits. | .754 | .203 | .181 |
| 3. Teachers make students feel safe. | .664 | .088 | .369 |
| 4. Teachers treat all students with respect. | .699 | .200 | .090 |
| 5. Teachers encourage students to ask appropriate questions. | .697 | .223 | .016 |
| 6. Teachers give students the chance to practice what they learn. | .763 | .252 | .070 |
| 7. Teachers are well prepared. | .644 | .272 | .207 |
| 8. Teachers are positive role models for students. | .576 | .444 | -.047 |
| 9. Teachers respect the differences of all students. | .709 | .323 | .057 |
| 10. Teachers set high expectations for good behavior. | .691 | .340 | .054 |
| 11. Teachers are available to help students. | .764 | .246 | .104 |
| 12. Teachers help students with special needs. | .741 | .154 | .147 |
| 13. Teachers return assignments in a reasonable amount of time. | .676 | .111 | .135 |
| 14. Students who have questions about assignments feel free to talk to their teachers. | .632 | -.011 | .240 |
| 15. Teachers help students when they have a problem. | .683 | .100 | .275 |
| 16. Teachers encourage cooperation among students. | .694 | .203 | .087 |
| 17. Teachers grade assignments fairly. | .746 | .169 | .192 |
| 18. Teachers allow students to express their ideas. | .671 | .205 | .264 |
| 19. Students can depend on their teachers. | .701 | .172 | .255 |
| *Student to Teacher/Learning Environment* | | | |
| 1. Students follow directions. | .219 | .676 | .018 |
| 2. Students perform their personal best on their school work. | .161 | .614 | .165 |
| 3. Students are respectful to teachers. | .211 | .696 | .216 |
| 4. Students actively participate in class activities. | .164 | .561 | .142 |
| 5. Students pay attention during class. | .188 | .596 | .118 |
| 6. Students learn from their mistakes. | .256 | .508 | .389 |
| 7. Students are trusted by their teachers. | .255 | .616 | .202 |
| 8. Students cooperate with their teachers. | .261 | .690 | .249 |
| 9. Students enjoy learning from their teachers. | .270 | .536 | .336 |
| 10. Students treat their teachers fairly. | .245 | .620 | .389 |
| 11. Students respect things that belong to their classmates. | .144 | .600 | .323 |
| *Student to Student* | | | |
| 1. Students help their classmates even if it means more work for themselves. | .129 | .300 | .573 |
| 2. Students encourage their classmates to do their best. | .153 | .446 | .616 |
| 3. When working in a group with their classmates, students do their fair share of the work. | .267 | .353 | .511 |
| 4. Students treat their classmates with respect. | .237 | .473 | .561 |
| 5. Students stick up for classmates who are being picked on by others. | .178 | .123 | .633 |
| 6. All students are accepted by their classmates. | .199 | .295 | .553 |
| 7. Students will get help if they see others in a fight. | .137 | .078 | .686 |
| 8. Students feel free to stand up for what they believe, even if it's not popular. | .301 | .241 | .526 |

### Reliability Analysis

We calculated Cronbach's alpha for each of the three subscales, *teacher to student, student to teacher/learning environment*, and *student to student.* The reliability estimate for the 19-item *teacher to student* subscale was .96. The mean of the corrected item-total correlations was .73 ($SD$ = .05). The reliability estimate for the 11-item *student to teacher/learning environment* subscale was .89. The mean of the corrected item-total correlations was .61 ($SD$ = .07). The reliability estimate for the 8-item *student to student* subscale was .87. The mean of the corrected item-total correlations was .62 ($SD$ = .06). The ESECI contained 38 items after the factor and reliability analyses (see Table 1).

Table 2. ESECI Subscales for Students Across Demographic Characteristics

| Subscale | Gender | n | Mean | SD | Independent t-Test |
|---|---|---|---|---|---|
| Teacher to Student | Male | 48 | 4.35 | 0.74 | $t(103) = 0.117, p = .907$ |
|  | Female | 57 | 4.34 | 0.75 |  |
| Student to Teacher | Male | 48 | 3.83 | 0.68 | $t(103) = 0.080, p = .936$ |
|  | Female | 57 | 3.81 | 0.77 |  |
| Student to Student | Male | 48 | 3.76 | 0.84 | $t(103) = 0.596, p = .552$ |
|  | Female | 57 | 3.66 | 0.86 |  |
| **Subscale** | **Activities** | **n** | **Mean** | **SD** | **Independent t-Test** |
| Teacher to Student | Yes | 71 | 4.29 | 0.76 | $t(101) = -1.010, p = .315$ |
|  | No | 32 | 4.45 | 0.71 |  |
| Student to Teacher | Yes | 71 | 3.78 | 0.73 | $t(101) = -0.579, p = .564$ |
|  | No | 32 | 3.87 | 0.72 |  |
| Student to Student | Yes | 71 | 3.64 | 0.85 | $t(101) = -0.727, p = .469$ |
|  | No | 32 | 3.78 | 0.84 |  |
| **Subscale** | **Ethnicity** | **n** | **Mean** | **SD** | **Analysis of Variance** |
| Teacher to Student | African Am. | 38 | 4.38 | 0.60 | $F(5, 97) = 0.711, p = .616$ |
|  | Asian Am. | 3 | 3.86 | 1.35 |  |
|  | Caucasian | 45 | 4.35 | 0.78 |  |
|  | Hispanic | 6 | 4.66 | 0.29 |  |
|  | Native Am. | 5 | 4.18 | 1.06 |  |
|  | Other | 6 | 4.61 | 0.39 |  |
| Student to Teacher | African Am. | 38 | 3.80 | 0.63 | $F(5, 97) = 0.315, p = .903$ |
|  | Asian Am. | 3 | 3.94 | 0.77 |  |
|  | Caucasian | 45 | 3.83 | 0.83 |  |
|  | Hispanic | 6 | 4.17 | 0.56 |  |
|  | Native Am. | 5 | 3.70 | 0.80 |  |
|  | Other | 6 | 3.85 | 0.53 |  |
| Student to Student | African Am. | 38 | 3.77 | 0.74 | $F(5, 97) = 0.811, p = .545$ |
|  | Asian Am. | 3 | 4.35 | 0.63 |  |
|  | Caucasian | 45 | 3.67 | 0.94 |  |
|  | Hispanic | 6 | 4.08 | 0.66 |  |
|  | Native Am. | 5 | 3.40 | 1.16 |  |
|  | Other | 6 | 3.53 | 0.61 |  |

| Subscale | Attendance | n | Mean | SD | Analysis of Variance |
|---|---|---|---|---|---|
| Teacher to Student | Absences/yr: 0 to 2 days | 40 | 4.42 | 0.69 | $F(3, 101) = 0.340, p = .797$ |
| | 3 to 5 days | 39 | 4.33 | 0.81 | |
| | 6 to 9 days | 16 | 4.20 | 0.69 | |
| | $\geq$ 10 days | 10 | 4.37 | 0.84 | |
| Student to Teacher | Absences/yr: 0 to 2 days | 40 | 3.97 | 0.64 | $F(3, 101) = 2.655, p = .053$ |
| | 3 to 5 days | 39 | 3.89 | 0.77 | |
| | 6 to 9 days | 16 | 3.43 | 0.72 | |
| | $\geq$ 10 days | 10 | 3.58 | 0.68 | |
| Student to Student | Absences/yr: 0 to 2 days | 40 | 3.73 | 0.82 | $F(3, 101) = 1.241, p = .299$ |
| | 3 to 5 days | 39 | 3.85 | 0.87 | |
| | 6 to 9 days | 16 | 3.44 | 0.87 | |
| | $\geq$ 10 days | 10 | 3.45 | 0.76 | |
| Subscale | Achievement | n | Mean | SD | Analysis of Variance |
| Teacher to Student | I am a 1 student | 24 | 4.65 | 0.39 | $F(3, 99) = 3.968, p = .010$ |
| | 2 student | 45 | 4.33 | 0.78 | |
| | 3 student | 28 | 4.03 | 0.84 | |
| | 4 student | 6 | 4.75 | 0.27 | |
| Student to Teacher | I am a 1 student | 24 | 3.97 | 0.78 | $F(3, 99) = 1.146, p = .334$ |
| | 2 student | 45 | 3.88 | 0.70 | |
| | 3 student | 28 | 3.66 | 0.71 | |
| | 4 student | 6 | 3.56 | 0.77 | |
| Student to Student | I am a 1 student | 24 | 3.66 | 0.93 | $F(3, 99) = 1.536, p = .210$ |
| | 2 student | 45 | 3.89 | 0.78 | |
| | 3 student | 28 | 3.48 | 0.82 | |
| | 4 student | 6 | 3.92 | 0.74 | |
| Subscale | Grade Level | n | Mean | SD | Analysis of Variance |
| Teacher to Student | Fourth | 40 | 4.53 | 0.56 | $F(2, 103) = 4.088, p = .020$ |
| | Fifth | 34 | 4.40 | 0.77 | |
| | Sixth | 32 | 4.06 | 0.83 | |
| Student to Teacher | Fourth | 40 | 3.89 | 0.70 | $F(2, 103) = 2.219, p = .114$ |
| | Fifth | 34 | 3.96 | 0.73 | |
| | Sixth | 32 | 3.61 | 0.72 | |
| Student to Student | Fourth | 40 | 4.04 | 0.73 | $F(2, 103) = 8.437, p < .0005$ |
| | Fifth | 34 | 3.74 | 0.83 | |
| | Sixth | 32 | 3.27 | 0.82 | |

## Student Perceptions of Their School's Ethical Climate

Table 2 lists the means, standard deviations, and statistical tests (using a .01 level of significance) for each of the three ESECI subscales for the students broken down by their gender, involvement in extracurricular activities, ethnicity,

attendance, academic achievement, and grade level. There were no statistically significant relationships between student perceptions of *teacher to student*, *student to teacher/learning environment*, and *student to student* interactions and relationships and their gender, involvement in extracurricular activities, ethnicity, or attendance (see Table 2).

### Academic Achievement

Academic achievement was measured by asking students to indicate their level of achievement from 1 (highest) to 4 (lowest). There was a statistically significant difference across student academic achievement groups in student perceptions of *teacher to student* interactions and relationships (see Table 2). There were no statistically significant differences across student academic achievement groups in student perceptions of *student to teacher/learning environment* and *student to student* interactions and relationships (see Table 2).

Follow-up Tukey pairwise comparison tests indicated that students with grades of 1 (highest; $M = 4.65$, $SD = 0.39$) rated *teacher to student* interactions and relationships significantly higher than students with grades of 3 (next to the lowest; $M = 4.03$, $SD = 0.84$). Upon investigation of the differences between students with grades of 1 and those with grades of 3 on the *teacher to student* subscale, we found that students with grades of 1 rated all the *teacher to student* items more positively than students with grades of 3. There was at least a .40 standard deviation difference in mean ratings between the two student groups on all items except for the following: "Teachers return assignments in a reasonable amount of time;" "Teachers help students when they have a problem;" and "Students can depend on their teachers."

### Grade Level

There was a statistically significant difference across grade levels in student perceptions of *student to student* interactions and relationships (see Table 2). There were no statistically significant differences across grade levels in student perceptions of *teacher to student* and *student to teacher/learning environment* interactions and relationships (see Table 2).

Follow-up Tukey pairwise comparison tests indicated that students in fourth ($M = 4.04$, $SD = 0.73$) and fifth ($M = 3.74$, $SD = 0.83$) grades rated *student to student* interactions and relationships significantly higher than students in sixth grade ($M = 3.27$, $SD = 0.82$). To pinpoint the differences between fourth and sixth grade and fifth and sixth grade student perceptions of *student to student* interactions and relationships, we identified items on the *student to student* subscale with at least a .40 standard deviation difference between the means of fourth and sixth and fifth and sixth grade student perceptions. The items included the following:

- Students help their classmates even if it means more work for themselves.
- When working in a group with their classmates, students do their fair share of the work.
- Students treat their classmates with respect.
- Students stick up for classmates who are being picked on by others.
- All students are accepted by their classmates.

For each of these five items, fourth and fifth grade student mean ratings were more positive than sixth grade student mean ratings.

### Summary

Student perceptions of *teacher to student* interactions and relationships (*M* = 4.35, *SD* = 0.74) were the most positive with ratings of often to usually true. Their perceptions of *student to teacher/learning environment* interactions and relationships (*M* = 3.82, *SD* = 0.72) were somewhat positive with ratings of sometimes to often true. Their perceptions of *student to student* interactions and relationships varied across grade levels with fourth grader ratings (*M* = 4.04, *SD* = 0.73) of often true, fifth grader ratings (*M* = 3.74, *SD* = 0.83) of sometimes to often true, and sixth grader ratings (*M* = 3.27, *SD* = 0.82) of sometimes true.

## Teacher/Staff Perceptions of Their School's Ethical Climate

Table 3 lists the means, standard deviations, and statistical tests (using a .01 level of significance) for each of the three ESECI subscales for the teachers/staff broken down by their position, age, highest degree attained, and length of employment. There were no statistically significant relationships between teacher/staff perceptions of *teacher to student*, *student to teacher/learning environment*, and *student to student* interactions and relationships and their position, age, highest degree attained, and length of employment (see Table 3).

In summary, teacher/staff perceptions of *teacher to student* interactions and relationships (*M* = 4.33, *SD* = 0.46) were the most positive with ratings of often to usually true. Their perceptions of *student to teacher/learning environment* interactions and relationships (*M* = 3.54, *SD* = 0.50) were somewhat positive with ratings of sometimes to often true. Their perceptions of *student to student* interactions and relationships (*M* = 3.26, *SD* = 0.51) were the least positive with ratings of sometimes true.

Table 3. ESECI Subscales for Teachers/Staff by Demographic Characteristics

| Subscale | Position | n | Mean | SD | Independent t-Test |
|---|---|---|---|---|---|
| Teacher to Student | Certified | 28 | 4.38 | 0.41 | $t(40) = 0.603, p = .550$ |
| | Non-Certified | 14 | 4.29 | 0.51 | |
| Student to Teacher | Certified | 28 | 3.66 | 0.50 | $t(40) = 2.042, p = .048$ |
| | Non-Certified | 14 | 3.33 | 0.47 | |
| Student to Student | Certified | 28 | 3.35 | 0.49 | $t(40) = 1.439, p = .158$ |
| | Non-Certified | 14 | 3.11 | 0.56 | |
| Subscale | Age | n | Mean | SD | Analysis of Variance |
| Teacher to Student | 30 or less | 12 | 4.41 | 0.34 | $F(4, 37) = 1.121, p = .362$ |
| | 31 to 40 | 6 | 4.46 | 0.40 | |
| | 41 to 50 | 12 | 4.18 | 0.51 | |
| | 51 to 60 | 11 | 4.34 | 0.48 | |
| | > 60 | 1 | 5.00 | | |
| Student to Teacher | 30 or less | 12 | 3.64 | 0.41 | $F(4, 37) = 0.624, p = .648$ |
| | 31 to 40 | 6 | 3.65 | 0.51 | |
| | 41 to 50 | 12 | 3.37 | 0.51 | |
| | 51 to 60 | 11 | 3.56 | 0.62 | |
| | > 60 | 1 | 3.91 | | |
| Student to Student | 30 or less | 12 | 3.15 | 0.54 | $F(4, 37) = 0.873, p = .489$ |
| | 31 to 40 | 6 | 3.52 | 0.51 | |
| | 41 to 50 | 12 | 3.24 | 0.41 | |
| | 51 to 60 | 11 | 3.24 | 0.61 | |
| | > 60 | 1 | 3.88 | | |
| Subscale | Degree | n | Mean | SD | Analysis of Variance |
| Teacher to Student | H.S. Diploma | 9 | 4.24 | 0.52 | $F(3, 38) = 0.429, p = .733$ |
| | Associate | 4 | 4.47 | 0.58 | |
| | Bachelor | 13 | 4.30 | 0.38 | |
| | Master | 16 | 4.41 | 0.44 | |
| Student to Teacher | H.S. Diploma | 9 | 3.40 | 0.49 | $F(3, 38) = 0.923, p = .439$ |
| | Associate | 4 | 3.28 | 0.50 | |
| | Bachelor | 13 | 3.66 | 0.45 | |
| | Master | 16 | 3.61 | 0.56 | |
| Student to Student | H.S. Diploma | 9 | 3.14 | 0.51 | $F(3, 38) = 0.860, p = .470$ |
| | Associate | 4 | 2.97 | 0.77 | |
| | Bachelor | 13 | 3.36 | 0.44 | |
| | Master | 16 | 3.34 | 0.52 | |
| Subscale | Length | n | Pearson's r | | |
| Teacher to Student | Time taught at this school | 42 | $r(40) = -.016, p = .920$ | | |
| Student to Teacher | Time taught at this school | 42 | $r(40) = -.154, p = .330$ | | |
| Student to Student | Time taught at this school | 42 | $r(40) = .080, p = .616$ | | |
| Teacher to Student | Total time taught | 41 | $r(39) = .012, p = .941$ | | |
| Student to Teacher | Total time taught | 41 | $r(39) = -.065, p = .688$ | | |
| Student to Student | Total time taught | 41 | $r(39) = .070, p = .664$ | | |

### Differences Between Student and Teacher/Staff Perceptions of the Ethical Climate

Table 4 lists the means, standard deviations, and t-tests (using a .01 level of significance) for each of the three ESECI subscales comparing student and teacher/staff perceptions. There was a statistically significant difference between student and teacher/staff perceptions of *student to student* interactions and relationships, with student perceptions more positive than teacher/staff perceptions (see Table 4). Because there was a statistically significant difference across grade levels in student perceptions of *student to student* interactions and relationships and teachers/staff gave their perceptions of *student to student* interactions and relationships for the school at large, this finding is difficult to interpret. There were no statistically significant differences between student and teacher/staff perceptions of *teacher to student* and *student to teacher/learning environment* interactions and relationships (see Table 4).

Table 4. Means, Standard Deviations, and t-Tests for the ESECI Subscales for Students and Teachers/Staff

| Subscale | Position | n | Mean | SD | Independent t-Test |
|---|---|---|---|---|---|
| Teacher to Student | Student<br>Teacher | 106<br>43 | 4.35<br>4.33 | 0.74<br>0.46 | $t(147) = 0.178$, $p = .859$ |
| Student to Teacher | Student<br>Teacher | 106<br>43 | 3.82<br>3.54 | 0.72<br>0.50 | $t(147) = 2.324$, $p = .021$ |
| Student to Student | Student<br>Teacher | 106<br>43 | 3.71<br>3.26 | 0.84<br>0.51 | $t(147) = 3.208$, $p = .002$ |

## Discussion

### Reliability and Validity of the ESECI

The results of this study indicate that the ethical climate of elementary schools can be assessed with an acceptable degree of reliability and validity. The reliability analyses provided evidence that respondents were consistent in their responses. The item development phase and the content validity procedures ensured that the ESECI measured the ethical climate of elementary schools across three types of student and teacher/staff interactions and relationships as defined by five ethical principles: respect for autonomy, nonmaleficence, beneficence, justice, and fidelity (Kitchener, 1984, 1985). The factor analysis indicated that the ESECI measures the three dimensions for which the items were developed, providing evidence of construct validity. The results of the statistical tests indicated that the ESECI can differentiate among student perceptions across grade levels, which provides further evidence of construct validity.

### Ethical Climate and Student Achievement

The significance of the students with high academic achievement and their positive perception of *teacher to student* interactions may suggest a linkage to success in school. Whether students who perceive teachers positively have a better chance at school achievement, or whether students who do well in school enjoy more positive relationships with teachers, these perceptions are encouraging from either perspective. However, that struggling students perceive teacher relationships less positively is not surprising – it is critical. Students may be having a more difficult time achieving in school if they do not have a positive perception of teacher interaction. It may also be true that because school achievement is difficult, struggling students see teachers as a cause or factor of their problems. For whatever reason, working with staff and students to foster positive relationships can improve the school climate, and in some cases, student achievement (Benton & Bulach, 1995; Esposito, 1999; Garcia, 1992).

### Student Age and Ethical Climate and Other Considerations

In this study, the older students reported *student to student* relationships less positively than their younger peers. Further investigation will be needed to determine if this reflects a change in student relationships over time, a maturing of their perceptions, or other factors. The oldest elementary students' responses most closely matched teachers' responses, but other factors, such as increasing departmentalization and adolescent physiological and psychological changes may influence student perceptions (Loukas & Robinson, 2004).

By using the same framework of the application of five ethical principles across *teacher to student*, *student to teacher/learning environment*, and *student to student* interactions and relationships, the ESECI aligns with the School Ethical Climate Index for middle and high school students (Schulte et al., 2002). Studying changes in perceptions from fourth to twelfth grades may create a more complete picture of the ethical climate in schools.

Students reading below grade level spent the same amount of time as their classmates in completing the ESECI, but may not have been able to comprehend the content in this written form. Accommodations for students with special needs and the addition of open-ended questions could provide a more clear understanding of some students' responses.

## Conclusions

Building more positive relationships begins with awareness. Teachers and administrators who participated in this study were able to use information from the ESECI to discuss ethical climate at a classroom and school-wide level.

Professional learning communities self-evaluated their teaching dispositions, and building-wide professional development helped staff link policies and norms to student achievement.

Creating an ethical school climate may now figure prominently in school improvement efforts. As long as school climate operates independently of efforts for increasing student achievement, systemic improvement may be difficult. While there has not been a causal relationship found between climate and achievement, outcomes may be affected by the dimension of school climate that is emphasized (Arter, 1987; Tagiuri, 1968). Schools can use the ESECI to pinpoint areas where changes need to be made in order to enhance a school's sense of community. Creating awareness and discussion through data from instruments such as the ESECI can assist school leaders in positively shaping the norms, traditions, and cultures of the school. Utilizing the ESECI as a valid and reliable instrument can also help teachers and administrators accentuate ethical school climate as a staff, strengthen student responsibility, and bring attention to the critical role of caring relationships in schools.

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