ON IMPROVING SCHOOL CLIMATE:
Reducing Reliance On Rewards And Punishment

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This study examined the impact of training early childhood teachers in an emotional intelligence and classroom management program titled Conscious Discipline®. The researchers conducted eight one-day workshops monthly from September through April to an initial group of more than 200 participants. To assess attitudinal changes teachers answered a survey about their school climate and classroom management methods. The survey was initially given in September to participants (n=206) consisting of pre-kindergarten through sixth grade teachers with no exposure to the Conscious Discipline workshops and then again in April to a subset of the group who completed the workshop (n=117). The statistical discriminant analysis found significant improvement in the teachers’ perceptions of school climate and in their knowledge and use of these new classroom management techniques (p < .05). The study demonstrates that the untrained group was unaware of the social relationship and cultural principles of Conscious Discipline that include releasing external control, embracing conflict resolution and implementing a more emotionally targeted reward structure in the classroom. Initial participants also expressed being unsatisfied with their school climate. However, those teachers who completed the workshops and were highly committed to using the Conscious Discipline skills exhibited a heightened positive feeling about school climate. Though, the more fully-engaged teachers scored somewhat lower on the favorable school climate dimension than those teachers who were only minimally using Conscious Discipline techniques. Many teachers also showed improvement in student/teacher relationships (r=.325) and in mutual support among teachers (r=.306).

Introduction

Most educational systems use rewards and punishments as common methods for behavior control. An example of using techniques of positive behavior interventions and supports would be to acknowledge the good behavior of students with a trip to the principal’s office to receive a token to be traded for a small prize such as ice cream at lunch. Researchers measure the success
of these approaches by reduction in discipline referrals (Horner, Sugai, & Todd, 2001). Kohn’s (1993) research, however, states that the use of rewards disrupts relationships, ignores underlying reasons for behavior, discourages risk-taking and undermines interest in immediate tasks. A relatively new psychological approach that influences an individual’s behavior related to the academic environment is the theory of emotional intelligence. Gignac (2006) declares that emotional intelligence is “...in (its) infancy, in comparison to measures of intellectual intelligence (p. 1576).” Emotional intelligence is the self-perceiving ability to identify, assess, and manage emotions to better communicate, solve problems and build relationships (Salovey, Mayer, Goldman, Turvey, & Palfai, 1995). Professional development in a behavior process that develops emotional intelligence enables teachers to create a classroom environment free of standard reward systems.

Literature Review

Haynes, Emmons & Comer (1994) define school climate as “the quality and consistency of interpersonal interactions within the school community that influence children’s cognitive, social and psychological development (p. 322).” At school, children cultivate interpersonal skills, discover and refine values, and struggle with vulnerabilities. As such, schools must provide a safe environment for optimal outcomes in terms of academics, character development, and emotional intelligence. A review of the literature on school climate reveals many interesting connections between the social microcosm of the school and its students’ personal and intellectual growth. School climate has also been linked to improved student behavior and academic achievement (Lehr & Christenson, 2002), student learning (Hoy & Sabo, 1998), student failure (Comer, 1993), student behavior and delinquency (Pink, 1982), absenteeism (Reid, 1983), student suspension (Wu et. al., 1982), too, and low school motivation (Goodenow & Grady, 1994). A preponderance of research suggests that a positive, supportive school climate has been deemed appropriate in improving educational quality and creating safer schools.

Haynes, Emmons & Ben-Avie (1997) suggested 15 key components of a healthy, supportive school climate: achievement motivation, collaborative decision making, equity and fairness, general school climate, order and discipline, parent involvement, school-community relations, staff dedication to student learning, staff expectations, leadership, school building, sharing of resources, caring and sensitivity, student interpersonal relations, and student-teacher relations. For these 15 supportive components to exist all members at the school - administrators, teachers, parents, staff and students - must possess a set of cooperative values that calls for shared power, a set of social and emotional skills that facilitate healthy interpersonal interactions, and self-regulation and conflict resolution skills to handle disagreements. These social competence skills are not always taught in teacher preparation programs. Whether a teacher possesses these skills or not often is determined by how they were parented, past relationships and media diet.

The publication of A Nation at Risk (United States, 1983) and other reports of the 1980’s led educators in a new research direction in motivation. The reinforcement-behavioral perspective of the 1970’s was redirected toward a cognitive-interpretive one (McCaslin, 2003). Brandt (1992) indicates in his article that educators like renowned Hank Levin worked diligently to transform schools. According to Brandt (1992), Levin’s Accelerated Schools model achieved an “internal transformation of culture.” A program titled Conscious Discipline® follows the tenets of this
direction with goals that include transforming the school environment via training elementary school teachers in the development of emotional intelligence and, subsequently, classroom management. The training specifically provides teachers with procedures, attitudes and understanding that enhance their own emotional intelligence, so that the teacher could then move from an external model of classroom management (based on tangible rewards and imposed punishments) to a relational-cultural view of classroom management (based on a positive cooperative class climate and conflict resolution). The teacher is the target audience or agent, thus aiming for the “internal transformation” sought by Levin.

Bailey (1994, 2001) developed Conscious Discipline, a program that integrates the principles of classroom management, emotional intelligence and character education into one seamless process. Teachers who practice Conscious Discipline create a positive school climate called the “School Family” and learn specific ways to transform conflict into opportunities that teach social-emotional life skills. The focus is on a cognitive, interpretive approach to motivation that emphasizes long-term development of pro-social behavior while de-emphasizing rewards and punishment; introducing seven basic skills of discipline designed to help teachers alter their response to conflict. The “School Family” becomes the internal motivation system where students feel cared for in a safe environment of unconditional acceptance and where they experience the pleasure of helping others. External motivators like treasure boxes, point systems and other behavior-tracking programs are not used. Children are motivated by: caring, connection, contribution, and the empowerment of conflict resolution.

Marzano (2003) also agrees that the mental model of classroom management has the largest effect on reducing classroom disruptions. Langer has addressed mental set, or consciousness, at length (1989; Langer & Rodin, 1976; Langer & Weinman, 1981). Conscious Discipline works with mental set to help adults and children become more aware of their thoughts, feelings and actions, and the consequences of each on themselves and others. A growing body of scientifically based research on the impact that social and emotional behaviors have on success in school developed into a 17-state partnership (KIDS COUNT, 2005) that created a document entitled “Findings from the National School Readiness Indicators Initiative.” This research concludes that “healthy social-emotional development is the foundation for cognitive development. And, without saying, cognitive development is essential for academic progress (p. 62)”.

Method

Participants

More than two hundred pre-kindergarten through 6th grade teachers from four elementary schools and four early childhood centers in Florida enrolled on a voluntary basis for the Conscious Discipline workshops. Four different educators conducted the school training, all of whom were trained and employed by Dr. Becky Bailey. The workshop model consisted of a one-day overview of Conscious Discipline followed by once per month training for seven months over the course of the academic school year.
The four trained educations introduced a specific skill at each of the seven monthly sessions, including self-control, conflict resolution and improved emotional intelligence. A survey (discussed in the Survey section) administered in September, 2001, and again in April, 2002, assessed attitudinal change. The survey was voluntary resulting in 206 completed surveys in September and 117 in April. Demographics pertaining to the respondents’ grade level taught and numbers of years of experience are shown in Table 1. Elementary school number 8 and early childhood center number 4 missed the overview due to a hurricane.

Table 1.
Sample Sizes, Means and Standard Error of the Means for Years of Experience and Grades Taught for the Eight Schools

<table>
<thead>
<tr>
<th>School</th>
<th>Entity</th>
<th>Group 0</th>
<th>September pre-survey sample size</th>
<th>April post-survey sample size</th>
<th>Years experience Mean (S.E.)</th>
<th>Grade taught Mean (S.E.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1*</td>
<td>49</td>
<td>23</td>
<td>6</td>
<td>3.29 (.15)</td>
<td>3.91 (.19)</td>
</tr>
<tr>
<td>2</td>
<td>2*</td>
<td>38</td>
<td>17</td>
<td>2</td>
<td>3.54 (.10)</td>
<td>4.06 (.19)</td>
</tr>
<tr>
<td>3</td>
<td>3*</td>
<td>37</td>
<td>7</td>
<td>5</td>
<td>3.19 (.17)</td>
<td>3.55 (.17)</td>
</tr>
<tr>
<td>4</td>
<td>4*</td>
<td>12</td>
<td>10</td>
<td>6</td>
<td>3.64 (.28)</td>
<td>1.82 (.44)</td>
</tr>
<tr>
<td>5</td>
<td>1*</td>
<td>12</td>
<td>1</td>
<td>7</td>
<td>2.58 (.36)</td>
<td>2.50 (.45)</td>
</tr>
<tr>
<td>6</td>
<td>2*</td>
<td>8</td>
<td>2</td>
<td>6</td>
<td>3.00 (.33)</td>
<td>2.75 (.48)</td>
</tr>
<tr>
<td>7</td>
<td>3*</td>
<td>14</td>
<td>4</td>
<td>2</td>
<td>2.85 (.27)</td>
<td>2.89 (.42)</td>
</tr>
<tr>
<td>8</td>
<td>4*</td>
<td>36</td>
<td>11</td>
<td>8</td>
<td>2.56 (.18)</td>
<td>3.59 (.19)</td>
</tr>
</tbody>
</table>

Procedures

Due to similarities in demographics, the eight schools were collapsed into four entities with entity 1* comprised of elementary school 1 and early childhood center 5; 2* of elementary school 2 and early childhood center 6; 3* of elementary school 3 and early childhood center 7; 4* of elementary school 4 and early childhood center 8 (see Table 1).

The researchers used the multivariate statistical procedure of discriminant analysis (Morrison, 2005) to analyze the data. Some teachers left one or more questions unanswered on the survey. Those missing values were replaced with the median value of the teacher’s four statistically nearest neighbors. This substitution for missing values minimally affected results because of the relatively few cases of a teacher skipping one of the 45 questions. The largest missing percentage was 4% (13 omissions from 323 teachers).

Traditionally, discriminant analysis assumes that data arises from a multi-normal distribution, but remains robust despite departures from this assumption. Obviously, with ranked (answers being 1 through 5) rather than continuous data, there is an issue, but univariate plots reveal unimodal and mostly symmetric distributions. The goal of discriminant analysis is to discover a linear function of the survey responses that generates a composite score for each teacher participant. When the discriminant analysis does its job well then the score is a clear-cut indicator of which
group the teacher participant belongs. In this research, the distribution indicates whether a respondent is in group 0 (exhibits no characteristics of exposure/embracing tenets of Conscious Discipline training); is in group 1 (exhibits traits of partial exposure/embracing tenets of Conscious Discipline); or is in group 2 (exhibits high level of exposure/embracing tenets of Conscious Discipline). The score that is derived from the survey answers associated with school climate and classroom management yields marked delineation (i.e. statistical significance) proving that a teacher’s school climate assessment and their involvement with the emotional intelligence program are intimately intertwined. Closer examination of the scores can reveal which components of the survey (and thus the social climate) are most highly correlated with the use of Conscious Discipline.

Survey

The Conscious Discipline program is designed to help teachers enhance social and emotional skills of children and thus enhance the overall school climate. A 1987 report by Arter identified 42 separate school climate surveys, and since 1987 more have been developed (Bernardo, 1997; Bobbett & French, 1991; Butler & Rakow, 1995; Haynes, Emmons & Comer, 1994; Jones, 1996; Roberts, Hom & Battistich, 1995; Worrell, 2000). This study used a survey adapted from the Development Studies Center (Roberts, Hom & Battistich, 1995). These researchers developed and validated an instrument designed to measure teachers’ and students’ perceptions of their school climate (Battistich, Solomon, Watson, & Schaps, 1997). Their original survey consisted of 39 student-sense-of-school-community scale items and 15 teacher-sense-of-school-community items. Those 15 queries dealing with teacher-sense-of-school-community were included in the current study’s survey. There were an additional 30 questions directly interspersed, addressing the objectives and target outcomes of Conscious Discipline.

The 15 environment questions from Roberts, Hom, & Battistich measured teachers’ opinions about their own students’ classroom participation and behavior, their own comfort levels, colleague relationships and the principal’s involvement at the school. The 30 Conscious Discipline items measured the teacher’s own use of reward systems, teaching/learning locus of responsibility, job satisfaction and level of support for innovation. Teachers responded to the survey by answering: 1 (strongly disagree), 2 (disagree), 3 (neutral), 4 (agree) or 5 (strongly agree) to each statement.

Analysis

Three types of Conscious Discipline usage groups were identified: the pre-training group from September with no exposure (group 0); the group that answered the April post-survey and stated that they used less than 50% Conscious Discipline (group 1); the group that answered the April post-survey and stated that they used at least 50% Conscious Discipline (group 2).

Discriminant analyses were conducted via SPSS (1999) on each of our four school entities to assess the separation of the three groups. The objectives were to:

1) Determine statistically significant linear discriminant functions, i.e. weighted combinations of the survey responses to assign each teacher to his or her true group (with
three groups up to two scores from two discriminating functions can be used to discern membership;  
2) Provide graphs for this concept of group separation;  
3) Identify the variables (survey questions) that contribute most dramatically to the discriminating function, i.e. find the survey characteristics of school climate that highly correlate with Conscious Discipline practice.

Results

Table 2 contains the p-values for testing the significance or worth of one and/or two scores for discernment based on Wilkes lambda statistic (Morrison, 2005). School entity 1* clearly requires two scores to explain group membership; in school entities 2* and 4* teacher group membership can be distilled into one score computed from the school climate responses and classroom management queries. For teachers in school entity 3* there appears to be no relationship between the attitudes toward school climate and their use of Conscious Discipline. Thus, three of the four study environments exhibit significant correlations between teachers’ perceptions of school climate and their state of emotional intelligence (as measured by answers to classroom management inquiries). Visual interpretations for school entity 1* are given. Discussion of school entity 2* and 4* will be eliminated since results are similar to that of school entity 1*.

Table 2.  
*Levels of Significance (p-values) for Testing Number of Dimensions for Discriminant Analysis*

<table>
<thead>
<tr>
<th>Entity</th>
<th>Significance of 2-dimensions</th>
<th>Significance of adding 2(^{nd}) dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>1*</td>
<td>.013</td>
<td>.062</td>
</tr>
<tr>
<td>2*</td>
<td>.003</td>
<td>.291</td>
</tr>
<tr>
<td>3*</td>
<td>.593</td>
<td>.778</td>
</tr>
<tr>
<td>4*</td>
<td>.093</td>
<td>.644</td>
</tr>
</tbody>
</table>

The two-dimensional separating function for school entity 1* appears in the scatterplot in Figure 1. Each plotted point represents a teacher with his or her two scores (an X and a Y) derived from the aggregation of survey responses calculated from the linear discriminant functions produced by SPSS. A square plot icon represents a teacher in the post-training, self-declared high-usage of Conscious Discipline group 2. A circle represents a teacher in the post-training, self-declared low-usage of Conscious Discipline group 1. An X represents a teacher from the pre-training group 0. The small p-values give confidence that the discriminant functions produced would demonstrate good discerning power in a repeated experiment at school entities 1* and 2* and 4*.
The researchers determined which factors of school climate are most interwoven with the tenets of Conscious Discipline by viewing the ten survey questions that have the largest absolute value of the correlation ($r$) with the scores (i.e. stripping $r$ of its sign). The plus and minus signs on $r$ are interpreted as movement along the X and Y-axes in Figure 1. High agreement (a response of 5 on the survey) paired with a positive correlation indicates a right or upward movement and paired with a negative correlation indicates a left or downward movement; low agreement (a response of 1 on the survey) paired with a positive correlation indicates a left or downward movement and paired with a negative correlation indicates a right or upward movement. The attributes described in Table 3 are those that tend to have the highest influence on discriminant scores. The ten most important correlates of the 45 are shown for school entity 1*. Table 3 contains results that include the correlations as well as the mean vector of scores for the three groups. The means are plotted as stars within the previously discussed Figure 1. Additionally in Table 3, noted next to each variable, is an indication of whether it was extracted from the school climate survey developed by Roberts, Hom & Battistich (by SC) or whether the survey question was designed to measure Conscious Discipline principles (by CD).
Table 3.

Survey Questions and Their Correlations with the Discriminant Function Along with Overall Mean Scores For Each Group in School Entity 1*

<table>
<thead>
<tr>
<th>Function (plot axis)</th>
<th>Mean Group 0</th>
<th>Mean Group 1</th>
<th>Mean Group 2</th>
<th>School climate (SC) or Conscious Discipline (CD)</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>1=X</td>
<td>-0.5</td>
<td>-0.4</td>
<td>3.0</td>
<td>Good relations for teachers &amp; students</td>
<td>.325</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1) I enjoy my students</td>
<td>.280</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Reward individual students</td>
<td>-.270</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Give class points for good behavior</td>
<td>-.237</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Little I can do to insure student achievement</td>
<td>-.220</td>
</tr>
<tr>
<td>2=Y</td>
<td>-0.7</td>
<td>1.9</td>
<td>-0.1</td>
<td>Teachers provide stimulating environment</td>
<td>.311</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Teachers are supportive of each other</td>
<td>.306</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>I get good advice from other teachers</td>
<td>.237</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Everyone is working toward a common goal</td>
<td>.218</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A different method can affect student achievement</td>
<td>.211</td>
</tr>
</tbody>
</table>

Discussion

Figure 1 and Table 3 indicate that the pre-workshop teachers (group 0) were not cognizant of the tenets of Conscious Discipline, evidenced by their agreement with the behavioral theory of rewards and punishment. These respondents scored low on emotional intelligence and perceived a school climate that offered them little support from colleagues and no stimulus to try different teaching approaches to affect student achievement; they also felt that their school community was not working towards a common goal.

The post-workshop teachers of group 1 who are implementing very little (less than 50%) of the workshop skills differ from both groups 0 and 2 on the second dimension, perception of school climate (see Figure 1 movement along the Y-axis). This group perceives a better school climate than those in pre-workshop group 0 and the post-workshop group 2. Their perceptions of community with other teachers differ prominently from group 0 and group 2. The post-workshop group 2 teachers (practice more than 50% of CD methods) exhibit a moderate and statistically significant increase along the second dimension of the discriminant functions (school climate) when compared with the pre-workshop group 0, but less of an increase than group 1. See Figure 1 movement along the Y-axis. The mean values for group 0, group 1, and group 2 are <-.7, 1.9, -.1>. Since all of the standard errors of the means are less than .3 score units the groups differ significantly on this dimension of school climate.

Group 2 has a significantly large score in the emotional intelligence realm, the first dimension of the discriminant functions. See Figure 1 movement along the X-axis. These participants practice the tenets of Conscious Discipline by dealing with behavior issues as
learning experiences rather than via the more traditional reward/punishment system. They build positive relationships with their students and sense that they are positively affecting their students’ achievement.

A potential synopsis of Figure 1 indicates that two distinct perceptions emerged from the training workshops: group 1 perceived socializing provided an improvement in school climate and group 2, who spent more time learning, perceived a smaller but still significant benefit in improvement in school climate and a larger improvement in skills associated with emotional intelligence. Ross & Smith (1994) previously found that participants in a reading enhancement endeavor reported heightened colleague support, providing further evidence that increased interpersonal association stems from organized activities.

When a survey question exhibits a positive correlation as in Table 3, then the larger response value (like 4 or 5 for agreement) will place that teacher farther to the right in a positive direction on the X-axis and/or farther up in a positive direction on the Y-axis in the plot in Figure 1. Conversely, negative correlations move the plotted point left and/or lower on the grid when there is a large response value (agreement). Summarization of Figure 1 would be facilitated by labeling the X-axis (first dimension) the “CD-use for student teacher-enhancement” direction and labeling the Y-axis (second dimension) the “teacher-camaraderie” direction. The pre-workshop group 0 scores low on both of those dimensions. The post-workshop teachers of group 1 who use some of the Conscious Discipline teachings score nearly the same as the pre-workshop respondents on the CD use for student teacher enhancement, but higher on teacher-camaraderie. In contrast, those using the most Conscious Discipline exhibit moderate improvement in the teacher-camaraderie dimension, with a most dramatic increase in their scores for the CD use for student teacher enhancement.

Limitations

Due to strategic data collection difficulties, a matched pair analysis was not feasible, therefore, the researchers considered the data as if the group responses were independent observations. Statistically, existing differences in groups need to be greater in unmatched pairs analysis than in matched pairs to uncover a difference, yet differences were uncovered (see Results section). In future work, the researchers suggest tracking each teacher individually so they may serve as their own experimental control unit.

Criticism regarding bias due to self-selection - both for participating in the training and for executing Conscious Discipline methods - is understandable. Perhaps the conclusions should include the caveat that improved perceptions of school climate and high use of Conscious Discipline principles among teachers who are motivated to learn about and try new things is evident.

Not all variables in an educational setting can be controlled, but when teachers of similar educational background and socio-economic status participate within the same schools, a reduction of overwhelming variability from non-study factors can be assured, as in this study. A more stringently designed and administered scenario of workshops, in a more concentrated time
period with incentives to practice Conscious Discipline such as in-class mentors or helpers for the teachers, may provide even more informative results.

Summary

The researchers designed this study to assess, via survey, activities and opinions of teachers both before and after workshop instruction to confirm the relationship between healthy components of school climate and the ability of teachers to develop relationship expertise in classroom management. Researchers had high expectations that teachers who had mastered methods of Conscious Discipline will respond more positively to survey questions that directly reflect CD tenets, teacher/student relationships and other components of school climate. Positive responses to the school climate questions should arise when teachers gain confidence by mastering classroom management techniques, easing interactions with their school environment (Haynes, Emmons & Ben-Avie, 1997). This research also determines that pre-workshop, post-workshop low-Conscious Discipline users and post-workshop Conscious Discipline users are statistically different and can be delineated by factors associated with the use of Conscious Discipline principles interleaved with positive views of school climate.

This study has important implications for educators exploring ways to improve school climate. Since prior studies have shown the positive contribution of improved school climate, the desire to identify and facilitate the enhancement of school attributes is longstanding. Good, Biddle & Brophy (1976) write “the existence of effective teachers suggests that teaching could be improved by the systematic collection of information describing how these teachers accomplish their results (p. 371).” They cite many studies that support the positive associations between teachers’ demeanors and student learning. One study links teachers’ “willingness to push pupils to achieve (p. 369)” with greater learning at their schools and another illustrates the importance of teachers’ affective behavior (on) pupils’ reading achievement.

The outcome of this study advocates the training of teachers in classroom management approaches that foster more intrinsic motivation to behave, learn, and excel. The use of these emotional intelligence principles such as those taught via Conscious Discipline lead to more positive school climate perception.
REFERENCES


SPSS for Windows (1999), Release 9.0.1, Chicago, IL: SPSS, Inc.

