

# SCHOOL CLIMATE AND LEARNING<sup>1</sup>

As school administrators struggle with reform to improve students' academic performance, their concerns must encompass more than instructional change. This **BRIEF** describes school culture and school climate—two factors of a school's environment that can either impede or support learning—and focuses primarily on school climate and its relationship to learning. It also provides information on assessment instruments for measuring school climate.

## SCHOOL CULTURE AND SCHOOL CLIMATE

The terms **school culture** and **school climate** describe the environment that affects the behavior of teachers and students.

**School culture** is the shared beliefs and attitudes that characterize the district-wide organization and establish boundaries for its constituent units.

**School climate** characterizes the organization at the school building and classroom level. It refers to the “feel” of a school and can vary from school to school within the same district. While an individual school can develop a climate independently of the larger organization, changes in school culture at the district level can positively or adversely affect school climate at the building level.

## SCHOOL CULTURE

**School culture** *reflects the shared ideas—assumptions, values, and beliefs—that give an organization its identity and standard for expected behaviors.*

These ideas are deeply imbedded in the organization and, to a great extent, operate unconsciously. They are so ingrained that they are often taken for granted. Understandings shared by teachers, staff, and students structure their responses to demands made from outside (e.g., by parents and the community), and from inside (e.g., by the central administration and its communication of directions from the school board and state and federal governments). School culture is based on past experience which provides a template for future action based on “how we do things in this organization.”

### Components of School Culture

Culture is reflected in an organization's atmosphere, myths, and moral code. The characteristics of a school district's culture can be deduced from multiple layers:

- ❖ Artifacts and symbols: the way its buildings are decorated and maintained
- ❖ Values: the manner in which administrators, principals and staff function and interact
- ❖ Assumptions: the beliefs that are taken for granted about human nature
- ❖ As a school district's culture develops over time, it is maintained by several practices:
- ❖ Common beliefs and values that key individuals communicate and enforce
- ❖ Heroes and heroines whose actions and accomplishments embody these values
- ❖ Rituals and ceremonies that reinforce these values
- ❖ Stories that reflect what the organization stands for

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<sup>1</sup> Adapted from *Best Practices Briefs*, Michigan State University, 2004.

The following chart shows how these components of school culture can support or impede learning.

School culture that ...

	<i>Supports Learning</i>	<i>Impedes Learning</i>
<b>Artifacts and symbols</b>	The building and its arrangements reflect the children, their needs, and their educational accomplishments.	There is little that reflects an emphasis on children and their education.
<b>Values</b>	Administrators, teachers, students, and parents participate in decision making.	Decisions are made without participation of teachers and parents.
<b>Assumptions and beliefs</b>	All students can learn. Parents want their children to succeed. Parents are partners in education.	Some students are incapable of learning or are too lazy to learn. Parents don't care. Parents know nothing about education.

## SCHOOL CLIMATE

**School climate** *reflects the physical and psychological aspects of the school that are more susceptible to change and that provide the preconditions necessary for teaching and learning to take place.*

School climate, the focus of this **BRIEF**, is evident in the feelings and attitudes about a school expressed by students, teachers, staff and parents—the way students and staff “feel” about being at school each day.<sup>2</sup>

School climate is a significant element in discussions about improving academic performance and school reform. It is also mentioned in discussions of potential solutions to problems such as bullying, inter student conflicts, suicide, character education, and moral education.

### Components of School Climate

Although there is no consistent agreement in the literature on the components of school climate or their importance, most writers emphasize **caring** as a core element. However, some place **safety** foremost<sup>3</sup>, defining school climate as “an orderly environment in which the school family feels valued and able to pursue the school’s mission free from concerns about disruptions and safety.”

Several aspects of a school’s physical and social environment comprise its climate. One organization identified the following eight areas:

<sup>2</sup> Gonder, P. O., & Hymes, D. (1994). *Improving school climate and culture* (AASA Critical Issues Report No. 27). Arlington, VA: American Association of School Administrators. This report provides extensive information on school climate and school culture and step-by-step suggestions for improvement.

<sup>3</sup> Philadelphia Citizens for Children and Youth and the Alliance Organizing Project. (2001, June). *The City-Neighborhood Schools Initiative: Improving school climate is everybody’s business.*

- ❖ Appearance and physical plant
- ❖ Faculty relations
- ❖ Student interactions
- ❖ Leadership/decision making
- ❖ Disciplined environment
- ❖ Learning environment
- ❖ Attitude and culture
- ❖ School-community relations<sup>4</sup>

The comprehensive view used in this **BRIEF**, and summarized below, defines school climate in terms of four aspects of the school environment:

- ❖ A **physical environment** that is welcoming and conducive to learning
- ❖ A **social environment** that promotes communication and interaction
- ❖ An **affective environment** that promotes a sense of belonging and self-esteem
- ❖ An **academic environment** that promotes learning and self-fulfillment<sup>5</sup>

	<i>Supports Learning</i>	<i>Impedes Learning</i>
<p><b>A Physical Environment that is Welcoming and Conducive to Learning</b></p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> School building contains a limited number of students.</li> <li><input type="checkbox"/> Students are, and feel, safe and comfortable everywhere on school property.</li> <li><input type="checkbox"/> Classrooms are orderly.</li> <li><input type="checkbox"/> Classrooms and grounds are clean and well-maintained.</li> <li><input type="checkbox"/> Noise level is low.</li> <li><input type="checkbox"/> Areas for instruction and activities are appropriate for those uses.</li> <li><input type="checkbox"/> Classrooms are visible and inviting.</li> <li><input type="checkbox"/> Staff members have sufficient textbooks and supplies.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> School building contains a large number of students.</li> <li><input type="checkbox"/> Students are harassed by other students in halls, restrooms, lunch rooms, or playgrounds.</li> <li><input type="checkbox"/> Classrooms are disorganized.</li> <li><input type="checkbox"/> Classrooms and grounds are dirty, poorly lit, and poorly maintained.</li> <li><input type="checkbox"/> Noise level is high.</li> <li><input type="checkbox"/> Classrooms are in rooms not intended for that use. Space is overcrowded.</li> <li><input type="checkbox"/> Classrooms are hidden and protected from scrutiny.</li> <li><input type="checkbox"/> Textbooks and supplies are insufficient. Deliveries are delayed</li> </ul>

<sup>4</sup> Western Alliance for the Study of School Climate. (No date). Introduction to assessment at the WASSC. [www.calsttela.edu/centers/schoolclimate/assessment.html](http://www.calsttela.edu/centers/schoolclimate/assessment.html)

<sup>5</sup> Ibid #2.

<p><b>A Social Environment that Promotes Communication and Interaction</b></p>	<p style="text-align: center;"><i>Supports Learning</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Interaction is encouraged. Teachers and students actively communicate. Teachers are collegial. Student groupings are diverse. Parents and teachers are partners in the educational process.</li> <li><input type="checkbox"/> Decisions are made on-site, with the participation of teachers.</li> <li><input type="checkbox"/> Staff are open to students' suggestions; students have opportunities to participate in decision-making.</li> <li><input type="checkbox"/> Staff and students are trained to prevent and resolve conflicts.</li> </ul>	<p style="text-align: center;"><i>Impedes Learning</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Interaction is limited. Students and teachers do not speak to each other. Teachers are isolated from one another. Students self-segregate. Parents are not treated as equal partners.</li> <li><input type="checkbox"/> All decisions are made by central administration or the principal without teacher involvement.</li> <li><input type="checkbox"/> Students have no role in determining classroom or building activities and decisions.</li> <li><input type="checkbox"/> Bullying and conflicts are ignored.</li> </ul>
<p><b>An Affective Environment that Promotes a Sense of Belonging and Self-Esteem</b></p>	<p style="text-align: center;"><i>Supports Learning</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Interaction of teachers and staff with all students is caring, responsive, supportive, and respectful.</li> <li><input type="checkbox"/> Students trust teachers and staff.</li> <li><input type="checkbox"/> Morale is high among teachers and staff.</li> <li><input type="checkbox"/> Staff and students are friendly.</li> <li><input type="checkbox"/> The school is open to diversity and welcoming to all cultures.</li> <li><input type="checkbox"/> Teachers, staff, and students are respected and valued.</li> <li><input type="checkbox"/> Teachers, staff and students feel that they are contributing to the success of the school.</li> <li><input type="checkbox"/> There is a sense of community. The school is respected and valued by teachers, staff, students, and families.</li> <li><input type="checkbox"/> Parents perceive the school as warm, inviting and helpful..</li> </ul>	<p style="text-align: center;"><i>Impedes Learning</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Interaction of teachers and staff with students is generally distant and minimal. Students are subject to favoritism. Some students are overlooked. The circumstances of some students are ignored.</li> <li><input type="checkbox"/> Students do not see teachers and staff as acting in their interest.</li> <li><input type="checkbox"/> Morale is low among teachers and staff.</li> <li><input type="checkbox"/> Staff and students are unfriendly.</li> <li><input type="checkbox"/> The school "belongs" to the majority students.</li> <li><input type="checkbox"/> Teachers and staff feel unappreciated. Students receive no positive reinforcement for work or actions.</li> <li><input type="checkbox"/> Teachers, staff and students do not feel they have any impact on what happens in the school.</li> <li><input type="checkbox"/> Teachers, staff, students, and families do not feel they are part of the school community.</li> <li><input type="checkbox"/> Parents do not feel welcome at the school. Parents feel "blamed" for their child's difficulties.</li> </ul>

	<i>Supports Learning</i>	<i>Impedes Learning</i>
<b>An Academic Environment that Promotes Learning and Self-Fulfillment</b>	<input type="checkbox"/> There is an emphasis on academics, but all types of intelligence and competence are respected and supported. Teaching methods respect the different ways children learn. <input type="checkbox"/> Expectations are high for all students. All are encouraged to succeed. <input type="checkbox"/> Progress is monitored regularly. <input type="checkbox"/> Results of assessments are promptly communicated to students and parents. <input type="checkbox"/> Results of assessments are used to evaluate and redesign teaching procedures and content. <input type="checkbox"/> Achievements and performance are rewarded and praised. <input type="checkbox"/> Teachers are confident and knowledgeable.	<input type="checkbox"/> Academic performance is downplayed or not rewarded. Teaching methods do not allow for a variety of learning styles. <input type="checkbox"/> Expectations are low. Some students are expected to fail. <input type="checkbox"/> There is minimal or no periodic assessment. <input type="checkbox"/> There is little communication about results of assessments. Students do not know how to improve their performance. Parents discover that their child is struggling academically at report card time. <input type="checkbox"/> Results are not used to improve teaching and learning. Teachers and students repeat the same cycle of failure. <input type="checkbox"/> Rewards and praise are minimal. <input type="checkbox"/> Teachers are unsure or under-prepared.

**Interrelationships.** These various aspects of school climate do not operate independently of one another. For example, the physical environment can encourage or discourage social interaction. Similarly, social interaction facilitates a warm, affective environment. Collectively, the physical, social and affective environments contribute to, and are impacted by, the academic environment.

## How does school climate affect school performance?

Numerous studies document that students in schools with a better school climate have higher achievement and better socioemotional health. Probably the most comprehensive work in this area is being done by the Search Institute, a nonprofit organization that encourages schools and communities to develop and empower young people. In a review of studies on the impact of support in school, the Search Institute found that a caring school climate is associated with:

- ❖ Higher grades, engagement, attendance, expectations and aspirations, a sense of scholastic competence, fewer school suspensions, and on-time progression through grades (19 studies).
- ❖ Higher self-esteem and self-concept (5 studies).
- ❖ Less anxiety, depression and loneliness (3 studies).
- ❖ Less substance abuse (4 studies)<sup>6</sup>

<sup>6</sup> Scales, P. C., & Leffert, N. (1999). *Developmental assets*. Minneapolis, MN: Search Institute.

Another study, by John Schweitzer of Michigan State University, found that when students in Detroit schools felt a sense of community with one another and a sense of belonging to their schools, they achieved higher scores on MEAP tests.<sup>7</sup>

A national study of more than 12,000 seventh to twelfth graders found that connectedness to family and school significantly protects youth from seven of eight behaviors risky to their health.<sup>8</sup>

**Measuring school climate.** There are numerous instruments designed to measure what various authors define as school climate. These are listed and rated in the Appendix. Further information is available on the Kansas Multi-Tiered System of Support (MTSS) web site (<http://www.kansasmtss.org/>).

**Search Institute Assets.** The Search Institute is a nonprofit research organization that researches and promotes the development of external and internal assets for youth. Although the Institute's exploration of developmental assets does not discuss school climate *per se*, the external assets it has identified reflect the environment that results in the behavior and values identified in the internal assets. The following external assets, excerpted from the Search Institute's 40 Developmental Assets™, are descriptive of school climate:

### **Support**

Other adult relationships. *Young person receives support from three or more non-parent adults.*  
Caring school climate. *School provides a caring, encouraging environment.*

### **Empowerment**

Community values youth. *Young person perceives that adults in the community value youth.*  
Youth as resources. *Young people are given useful roles in the community.*  
Safety. *Young person feels safe at.... school.*

### **Boundaries and Expectations**

School boundaries. *School provides clear rules and consequences.*  
High expectations. *Teachers encourage the young person to do well.*<sup>9</sup>

## **CHANGING SCHOOL CLIMATE AND SCHOOL CULTURE**

Improving student behavior and academic performance generally requires changing school climate and school culture. Change may require moving individuals and organizations along a continuum from “at risk” to “safe” to “thriving.” This process takes time to accomplish.<sup>10</sup>

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<sup>7</sup> New Detroit: The Coalition. (2003). *A progress report: School improvement in the Detroit Public Schools*. East Lansing: Michigan State University. See also Brookover, W. B., Schweitzer, J. H., Beady, C., Flood, P., & Wisenbaker, J. M. (1978). Elementary school social climate and school achievement. *American Educational Research Journal*, 15, 301-318.

<sup>8</sup> Resnick, M.D., et al. (1997). Protecting adolescents from harm: Findings from the National Longitudinal Study on Adolescent Health. *Journal of the American Medical Association*, 278, 823-832.

<sup>9</sup> Young, N., Gardner, S., Coley, S., Schorr, L., & Bruner, C. (1994). Making a difference: Moving to outcome-based accountability for comprehensive service reforms (Resource Brief 7). Falls Church, VA: National Center for Service Integration.

<sup>10</sup> Young, N., Gardner, S., Coley, S., Schorr, L., & Bruner, C. (1994). Making a difference: Moving to outcome-based

While making positive changes in school climate motivates staff and students to improve, the district-level school culture must also change if school reforms are to be sustained for long-term improvement.

Both school climate and school culture require significant attention when a principal or superintendent is new or when major changes are being implemented in the school system. It is worth noting that educational reform under the No School Left Behind Act is essentially a long term effort to change school culture. Note the central mantras of educational reform:

- ❖ Teachers and the school are accountable.
- ❖ All children can and must learn.

## WHO MUST LEAD THE CHANGE?

The superintendent of the district and the central administration backed by the school board, initiate and promote changes in school culture and school climate. Their decisions on building size, budget allocations, selection of staff, as well as communication of the school district's mission, training priorities, and promotional activities, all play a part in encouraging change.

Within each building, the principal plays a primary role, providing leadership, articulating goals and behavioral expectations of teachers, and supporting staff in developing an effective school.<sup>11</sup> When teachers are supported, students are supported.

**The role of teachers.** Site-based management and the organization of principals, teachers, and staff into a learning community<sup>12</sup> are routes to participatory decision making. When teachers are actively involved in mapping change, the result is improved morale and willing participation.

## SOME APPROACHES TO CHANGE

### Promoting a Safe and Orderly Environment

- ❖ Maintain buildings in good physical condition
- ❖ Reward students for appropriate behavior
- ❖ Enforce consequences for inappropriate behavior
- ❖ Use contracts with students to reinforce behavioral expectations
- ❖ Post behavioral policies on bulletin boards; periodically announce them over the public address system
- ❖ Initiate anti-bullying, conflict resolution and peer mediation programs
- ❖ Engage students, staff and parents in planning school safety activities
- ❖ Increase number and accessibility of counselors, social workers, and mentors
- ❖ Create anonymous tip lines or suggestion boxes for reporting potentially dangerous situations or providing ideas to improve school climate
- ❖ Provide more in-school options to “blow off steam”

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accountability for comprehensive service reforms (Resource Brief 7). Falls Church, VA: National Center for Service Integration.

<sup>11</sup> Ibid #1.

<sup>12</sup> Senge, P.M. (1994). *The fifth discipline: The art and practice of the learning organization*. New York: Currency Doubleday.

- ❖ Develop strategies to ensure safety during lunch periods and between classes; provide more structured activities during lunch hour
- ❖ Provide accommodation or time-out rooms throughout the day
- ❖ Provide in-school suspension programs with academic supports and consistent staffing

### **Facilitating Interaction and Relationships**

- ❖ Build smaller middle and high schools
- ❖ Reduce the impact of size in larger schools<sup>13 14</sup> by dividing large middle and high schools into smaller self-contained units; organizing students into cohorts that move through classes as a group; and reducing the number of teachers interacting with each student in middle school by assigning home room or a second subject to a subject area teacher
- ❖ Use smaller teacher-student ratios (no more than 80 students per teacher in a secondary school)
- ❖ Use team teaching
- ❖ Provide for small group activities
- ❖ Provide multiple and varied opportunities to participate in extracurricular activities
- ❖

### **Promoting a Positive Affective Environment**

- ❖ Use summer school rather than retention in grade for failing students
- ❖ Promote cooperation rather than competition; avoid winners and losers
- ❖ Assure that every student has an active connection to at least one adult in the school
- ❖ Provide professional development on such issues as cultural and class differences, emotional needs of other children, parental involvement, and bullying and harassment

### **The Size of the School**

The number of students within the school building, or within each separate unit of the building, impacts the social and affective environment. Smaller schools provide more opportunities for interaction between students and teachers. Students are less likely to be overlooked and are more likely to be involved in activities. It has been well-documented that students in smaller schools do as well as, if not better academically than, students in larger schools. While there is no consensus on what constitutes a “large” school versus a “small” school, research results indicate that best results are obtained with no more than 300-400 students in an elementary school, and 400-800 in a secondary school.<sup>15</sup>

## **CONCLUSION**

School culture and school climate are useful terms for the intangibles that can affect learning. As such, they deserve serious attention in the effort to improve performance. Comprehensive models that have been developed for school reform have invariably included change in school culture and school climate.

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<sup>13</sup> Felner, R. D., Ginter, M., & Primavera, J. (1982). Primary prevention during school transitions: Social support and environmental structure. *American Journal of Community Psychology, 10*, 277-290.

<sup>14</sup> Cotton, K. (1996). School size, school climate, and student performance (School Improvement Research Series, Close-Up No. 20). Portland OR: Northwest Regional Educational Laboratory.

<sup>15</sup> Ibid 14.

## APPENDIX

Educators should recognize that The Communities That Care Survey (<http://beta.ctcdata.org/>) is the most frequently used tool to measure climate and culture in Kansas schools. It is currently the focal point for measuring “Conditions for Learning” for the Safe and Supportive Schools (S3) Grant.

Schools are also encouraged to align culture and climate with MTSS principles for student behavior (see MTSS document within this manual).

The following tables explain and rate several instruments for measuring school climate. All instruments and ratings were adapted from *The Charter Education Partnership*,<sup>16</sup> (<http://www.character.org/>) which has been a partner with KSDE through the Partnership in Character Education Program Grant.

Ratings explanation: low (1) to high (3). N/A: not available.

	<i>Reliability</i>	<i>Validity</i>	<i>Administration And Scoring</i>
<b>Elementary School</b>			
<b>1. Vessels School Climate Questionnaire<sup>17</sup></b>  Classroom climate scale plus 4 school climate subscales related to moral emotion/prosocial conscience, moral thought/prosocial attitudes, moral knowledge/prosocial skill, moral/prosocial behavior. 52 items.	N/A	N/A	3
<b>2. School as Caring Community Profile—II<sup>18</sup></b>  Covers perceptions of students and of adults. 42 items.	3	3	3
<b>3. Sense of School as Community Scale<sup>19</sup></b>  Measures extent to which students feel school as a whole is supportive, welcoming and safe. 14 items.	3	3	3
<b>4. Liking for School Scale<sup>20</sup></b>  Measures students’ enjoyment of, and feelings of attachment to school.	3	3	3
<b>5. Enjoyment of Class Scale<sup>21</sup></b>	3	3	3

<sup>16</sup> Adapted from the Character Education Partnership, Assessment Instrument Index.

[www.character.org/resources/assessment/index.cgi?file=climate](http://www.character.org/resources/assessment/index.cgi?file=climate) and other Web sites.

<sup>17</sup> . Vessels, G. (1997). Student Climate Questionnaire. Gordon Vessels, 35 Highlands Ct., Oxford, GA 30054.

<sup>18</sup> Center for the 4th and 5th Rs. (2003). School as Caring Community Profile-II. Cortland, NY: SUNY Cortland.

<sup>19</sup> Child Development Project. (1993). Sense of School as Community Scale. Oakland, CA: Developmental Studies Center.

<sup>20</sup> Ibid 19.

<sup>21</sup> Ibid 19.

Measures students' positive feelings about being in class.			
<b>ELEMENTARY, MIDDLE AND HIGH SCHOOL</b>			
<b>6. Classroom Observation Form</b> <sup>22</sup> a. Scores nature of instruction at 5-minute intervals. b. Scores student-to-student behaviors and teacher-student behaviors. c. Scores quality of general classroom interactions.	NA	NA	2
<b>7. Character Development Survey</b> <sup>23</sup> Measures caring, respect, responsibility, fairness, honesty, and school expectations re: behavior. Student, staff and parent questions.	1	1	3
<b>MIDDLE SCHOOL AND HIGH SCHOOL</b>			
<b>8. Kettering Scale of School Climate</b> <sup>24</sup> (four subscales) <b>a. General Climate Factors</b> Respect, trust, high morale, input opportunities, academic/social growth, cohesiveness, school renewal, caring. <b>b. Program Determinants</b> Active learning opportunities, individualized performance expectations, varied learning environments, flexible curriculum and extracurricular activities, support and structure appropriate to learner's maturity, cooperatively determined rules, varied rewards systems. <b>c. Process Determinants</b> Problem solving ability, improvement of school goals, identifying and working with conflicts, effective communications, involvement in decision making, autonomy with accountability, effective teaching-learning strategies, ability to plan for future. <b>d. Material Determinants</b> Adequate resources, supportive/efficient logistical system, suitability of school plant.	3	3	3
<b>10. NASSP School Climate Survey</b> <sup>25</sup>	NA	NA	NA

<sup>22</sup> Ibid #17.

<sup>23</sup> Johns, J. (1997). Character Development Survey. Salt Lake City: Utah Community Partnership for Character Development, Utah State Office of Education.

<sup>24</sup> Fox, R. S. (no date). *School climate improvement: A challenge to the school administrator*. Bloomington, IN: Phi Delta Kappa International, 408 N. Union Street, P.O. Box 789, Bloomington, IN 47402-0789. 800-766-1156. Out of print.

<sup>25</sup> National Association of Secondary School Principals. (no date). The NASSP School Climate Survey. Kalamazoo: Western Michigan University, College of Education.

Ten subscales on teacher-student relationships, security and maintenance, administration, student academic orientation, student behavioral values, guidance, student/peer relationships, instructional management, student activities. Student, teacher and parent questions.			
<b>HIGH SCHOOL</b>			
<b>11. School Culture Scale<sup>26</sup></b> Four factors: Normative expectations, student-teacher/school relationships, student relationships, educational opportunities. Measures moral and learning atmosphere. 25 items.	3	3	3
<b>12. School Climate Questionnaire<sup>27</sup></b> Eleven subscales. 155 items. For students and adults.	NA	NA	3
<b>13. Effective School Battery® to Assess School Climate<sup>28</sup></b> Teacher reports cover safety, morale, innovative approach to planning, administrative leadership, resources, race relations, community involvement, and student participation in decisions. Student reports cover safety, respect, fairness, clarity of rules, and student influence. Also covers teacher and student characteristics.	NA	NA	NA
<b>TEACHERS</b>			
<b>14. School-level Environment Questionnaire<sup>29</sup></b> Eight dimensions: Affiliation, student supportiveness, professional interest, achievement orientation, formalization, centralization, innovativeness, resource adequacy.	3	2	3
See also items 2, 7, 10, 12, and 13 in this appendix.			

<sup>26</sup> Higgins-D'Alessandro, A., & Sad, D. (1997). The dimensions and measurement of school culture: Understanding school culture as the basis for school reform. *International Journal of Educational Research*, 27, 553-569.

<sup>27</sup> Ibid #17.

<sup>28</sup> I. Gottfredson Associates. Effective School Battery® to Assess School Climate.

<sup>29</sup> Rentoul, A. J., & Fraser, B. J. (1983). Development of a school-level environment questionnaire. *Journal of Educational Administration*, 21, 21-39.