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SCHOOL SIZE AND LOCATION AND THEIR RELATIONSHIPS WITH CLIMATE AND STUDENTS' PERFORMANCES

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Abstract: *In accordance with the cultural-ecological model, students' perception of the school climate is influenced by individual and contextual factors. This study aims to analyze the relationships between the school climate and the school performances in small and medium schools, located centrally or non-centrally. The tools, School Climate Questionnaire and the Socio-demographic Questionnaire are applied to 605 students, from eight schools, middle and high. The results show that some differences concerning the climate are in favor of small and non-central schools. These findings may be useful by school authorities in making administrative decisions and to focus more precisely the interventions to optimize the climate*.

Key words: *school climate, size, location, secondary education.*

1. Introduction

The school climate is a construct with various conceptualizations and measuring instruments (Zullig, Koopman, Patton, & Ubbes, 2010), being defined as a school personality (Halpin & Croft, 1963), school health (Miles 1969) social system of shared norms and expectations (Brookover et al., 1978), a social atmosphere perceived by persons belonging to a determined environment (Moos, 1979; Janosz et al., 1998). The school climate is a pattern of experiences reflecting norms, purposes, values, interpersonal relationships, teaching and learning practices, organizational structures (Cohen, 2009) that influence the students' affective and cognitive development (Hofman, Hofman, & Guldemond, 2001).

Existing relationships between personal traits, culture, environment and school climate are intertwined by the cultural-ecological model (Bronfenbrenner & Ceci, 1994; Bronfenbrenner & Morris, 2007). The major assumptions of this model are: (a) learners are actively involved in building social norms, being able to use personal, cultural and environmental influences in their adaptation; (b) the individual's immediate backgrounds (family, community, school) transmit cultural norms, values, behaviors and expectations; (c) school climate perceptions are influenced by bidirectional interactions of personal, cultural and contextual variables (La Salle, Meyers, Varjas, & Roach, 2015). Comparative school climate studies have confirmed the existence of significant

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differences between schools belonging to different cultures (Jia et al., 2009; La Salle et al., 2015).

Past studies have focused on the socio-emotional consequences of school size, others on cognitive outcomes. Thus, studies show that in small schools pupils are more satisfied with school, they feel attached to it, their relationships with teachers and colleagues are closer (Greenwald, Hedges, & Laine, 1996; Lleras, 2008; Monk & Haller, 1993). Satisfaction with school is the expression of positive experiences associated with stronger involvement in learning (Smokowski, Cotter, Robertson, & Guo, 2013). The size effect was stronger for students of lower socio-economic status than students with higher socio-economic status (Bryk, Sebring, Allensworth, Luppescu, Easton,1993).

Other studies have highlighted the benefits of smaller schools to ensure student safety, to establish positive relationships between school community members and large schools (Koth et al., 2008). In small schools, teachers tend to have a positive perception of the school climate, their ability to influence school policy, resources, have greater control over classes, and respect for internal rules, making it easier to personalize teaching-learning (Newman et al., 2006). Some studies claim that the performance of pupils in small schools is higher than those in large schools. A longitudinal study showed that students' academic achievement in math and reading declines as school size increases and this negative effect is more in higher grades (Egalite & Kisida, 2016). In contrast, other authors have found no differences between the grades of pupils in large and small schools, but interpersonal relationships seem to be better in small schools, rarer alienation, partnership with parents more effective, attitude towards school is more favorable (Walberg, 1992), dropout rarer (Lee & Burkam, 2003).

Larger schools can offer a rich curriculum, can standardize the assessment by tests, the care systems, and school plans. This standardization may have a positive effect on live school quality (Blank et al. 2011, cit in Luyten, Hendriks, & Scheerens, 2014), and education costs are lower (Monk & Haller, 1993). Although it is accepted that large schools can offer a more varied curriculum, only a few students use these opportunities (Monk & Haller, 1993).

Some studies suggest that the relationship between school size and school results is not linear, it may vary depending on the political and cultural context. The aforementioned relationships do not work for schools in all cultures: for transition European countries, large schools are more conducive to performance, or there is a U-relationship between the two variables. For Romania, it was found that the size of the school and the PISA 2012 scores correlated negatively but poorly, and the association was significant only for reading and controlling the family environment (Coupé, Olefir, & Alonso, 2016). 'Small is beautiful!' a concluding conclusion at the level of everyday thinking (Luyten, Hendriks, & Scheerens, 2014) does not appear as the conclusion of all scientific studies.

More school-related studies show that openness, health, and favorable climate decline from central to peripheral schools. The school's social environment, different for central and non-central schools, is influenced by the relationship between school and family, parents' ability to interact with teachers: an unhealthy environment with inadequate institutional resources can alter the school climate; generate violent behaviors and the feeling of affiliation with school decreases (Eamon, 2005; Reardon, 2011).

The findings on the effect of school size on the climate and student outcomes are divergent. A meta-analysis of the last decade of the previous century on 60 studies shows a negative association between increasing the size of the school and the pupils'

performance, with the pupils in the big schools evaluating the school atmosphere in a less favorable way compared to those in the small schools (Greenwald et al., 1996). Another meta-analysis (Thapa et al., 2012) however, highlighted the various benefits to smaller schools for student achievement, safety and relationships among members of the school community, but the relationship varied according to school level: level, smaller schools are linked to better academic performance. Size and location of school is a recurrent theme in debates in Romanian education policy, and in public area, but unusual in research.

2. Material and Methods

Starting from the ecological approach, we propose to analyze the variations in school climate and pupils' performance in learning, according to the contextual features of school size, community localization, family characteristics, such as the level of education and the occupation of parents. For the location of the school, in this study, we will only consider urban schools that are centrally or non-centrally located, and for the size of the school only small and medium-sized schools all located in the same medium-sized city in Brasov country.

We formulate the following assumptions in line with previous research:

H1. The academic performances of students in central and small schools are higher than those of non-central and medium-sized schools.

H2. In the central schools and small schools, the school climate is perceived as more favorable compared to the climate in non-central schools and medium-sized schools respectively.

H3. School performance can be explained by the school climate, individual and contextual factors (family, school relationship with the community).

Although there is no unanimity on the size of a small, medium or large school, in this study we have classified the eight schools in small and medium. For small schools, the top limit in our research was 500 students, and in the mid-sized schools category, units with at least 600 pupils, but no more than 1,200, including both gymnasium and high schools, were introduced. We considered that large schools are absent in the investigated sample. The grouping of schools by location was made after consulting several headmasters in the town, keeping their opinions unanimous: the schools were grouped into two categories: schools in the center of the town and non-central schools. We have brought together both the neighborhood and periphery units in the latter category.

The participants are 605 students, girls and boys, from the 7th to the 12th grades. Parents of pupils in the sample fit into education in one of the four categories: no school, general, secondary and higher education, and occupations are classified into six categories ranging from unemployed to head of institutions and employers. The two categories of data were recorded separately for mother and father.

The School Climate Questionnaire - SCQ (Orzea, 2016) and the Socio-demographic Questionnaire were used. The 72 items of SCQ are grouped into seven factors: Student affiliation with school, Inter-college student relationships, Teacher-student relationships, School leadership, Order / Security / discipline, Pupils' school involvement, Teacher engagement. The internal consistency for the identified scales is good to very good, with the coefficients being between .74 and .85, reaching 0.94 for the global climate. Correlations between factors are weak or moderate, ranging from 0.39 to .54. The Socio-

demographic Questionnaire requested data on the level of parental education and occupation, global school performance and other disciplines, school, class, gender. Instruments were applied in pencil-paper format, during school hours, after obtaining the agreement of directors and participants.

3. Results

Using parents' studies and occupations, we have created an index of economic and social status (ISES) for each family. First quartile includes 28.7% of the participants (clues 4-7), the second - 26.4%, includes clues 8 and 9), the third quartile - 18.7% (clues 10, 11 and 12) and top quartiles - 26% (13-18). The differences are significant only related to the location of the school. Central and small schools include students from families with higher SES (Table 1).

Index of SES differences depending on size and school location Table 1

Typs of schools	N	Mean	Std. Dev.	Sig.	d' Cohen
Noncentral	156	8.11	3.11	t=8.86 p<.001	.84
Central	373	10.9	3.51		
Small	289	10.1	3.55	t=.551 p=.558	.04
Medium	240	9.95	3.71		

Students' overall and annual average scores are higher in central schools than in non-central ones, with highly significant differences. In small schools, overall marks at Mathematics and Romanian are higher than their correspondents.

School performances depending on size and school location Table 2

School performances*	School location/ size	Mean	Std. Dev.	Sig.	d' Cohen
GPA*	Noncentral	8.22	1.17	t = 9.35***	.91
	Central	9.10	.71		
Overall mark at Math **	Noncentral	7.13	1.77	t= 6.27***	.57
	Central	8.10	1.64		
Overall mark at Romanian **	Noncentral	7.23	1.72	t= 8.97***	.84
	Central	8.55	1.42		
GPA*	Small	8.87	.97	Ns.	.08
	Medium	8.79	.94		
Overall mark at Math **	Small	8.05	1.68	t =3.97***	.33
	Medium	7.48	1.77		
Overall mark at Romanian **	Small	8.35	1.59	t =3.44***	.28
	Medium	7.89	1.65		

Note: ** GPA is obtained in the previous year of research; ** Math and Language overall mark are obtained in the previous semester of research; *** p<.001*

There are no significant statistical differences in GPA (Table 2). The correlation coefficient between mother`s studies and school performance is medium and significant ($r = .45$, $p < .001$), higher than that reported in the father's studies ($r = .34$, $p < .001$).

In the investigated sample, the general climate is more favorable to non-central schools than to those located in the center of the city. As far as the dimensions of the climate, the position of the school induces differences on four of the school climate factors (Table 3). There is only one exception according to the dimension, the one that concerns students' relations, accepted as more favorable by central school students, but the difference is not statistically significant.

School climate depending on size and school location Table 3

Climate dimensions	Schools' categories	M	SD	Sig.	d' Cohen
Belonging at school	Noncentral	39.52	8.67	t=2.41	.21
	Central	37.72	8.26	p= .01	
Students' relationships	Noncentral	46.89	7.18	t =1.46	.12
	Central	47.68	7.21	p= .16	
Teachers-students relationships	Noncentral	38.06	5.50	t=5.79	.49
	Central	35.07	6.68	p<.001	
Leadership	Noncentral	33.60	5.07	t=2.65	.23
	Central	32.23	6.73	p<.01	
Safety/ security/ discipline	Noncentral	25.67	4.79	t =.46	.04
	Central	25.44	5.55	p = .64	
Students' school implication	Noncentral	37.93	5.92	t=1.69	.15
	Noncentrale	36.99	6.35	p= .09	
Teachers' school implication	Noncentrale	51.15	7.53	t=3.36	.32
	Centrale	48.69	8.54	p<.01	
Global climate	Noncentral	280.79	31.35	t=2.85	.26
	Central	271.65	37.86	p<.01	
Belonging at school	Small	38.55	8.02	t =1.1	.08
	Medium	37.86	8.92	p= .31	
Students' relationships	Small	48.06	6.64	t=2.53	.07
	Medium	46.53	7.82	p<.01	
Teachers-students relationships	Small	36.40	5.96	t=1.93	.16
	Medium	35.36	6.92	p<.05	
Leadership	Small	33.2	6.03	t=2. 68	.19
	Medium	32.0	6.64	p<.05	
Safety/ security/ discipline	Small	26.17	5.18	t=3.62	.30
	Medium	24.60	5.44	p<.01	
Students' school implication	Small	37.34	5.89	t =.31	.03
	Medium	37.18	6.74	p= .75	
Teachers' school implication	Small	49.89	7.55	t=1.77	.14
	Medium	48.75	9.16	p<.09	
Global climate	Small	276.99	34.24	t=2.09	.17
	Medium	270.67	38.54	p<.05	

In order to identify the influence of the essential variables from the perspective of the cultural-ecological model, we used the hierarchical regression, introducing variables into blocks 1 (gender), 2 (school size and location), 3 (index of SES status) and 4 (school climate dimensions). All models are statistically significant (Sig. F Change < .01), but model 4 explains most of the variations of the overall average (34%). The coefficients

and their significance are detailed in Table 4. It is noted that the factors explaining the school performance belong to the presumed environments of the cultural-ecological model, the greatest influence being exercised by School location and index of SES status.

Regression for the dependent variable GPA Table 4

Model 4	Coefficients		t	Sig.	Correlations		
	B	Beta			Zero-order	Partial	Part
(Constant)	5.51		19.55	.001			
Gender	.32	.17	4.72	.001	.14	.20	.17
School location	.74	.37	9.43	.001	.41	.38	.34
Index of ESS	.07	.27	7.05	.001	.40	.3	.25
Belonging at school	-.02	-.14	-3.02	.003	.02	-.13	-.11
Relationships between teachers and students	.02	.12	2.68	.008	.09	.12	.10
Students' school implication	.03	.21	4.52	.001	.22	.19	.16

4. Conclusion and Discussions

This paper focuses on analyzing the relationship between school performance, school climate, school location and size, some characteristics of pupils and their families according to the ecological-cultural model. Preliminary analyzes have shown that in central and small schools SES is higher, these schools concentrating advantaged students.

The first hypothesis is almost entirely supported, confirming others studies: in central schools and in small schools, student outcomes are better than in non-central schools, or in medium-sized schools, with the exception of GPA which is not different for the latter category. In agreement with other higher SES studies (Bourdieu & Passeron, 1977), higher education of mothers (Bronfenbrenner, 1994) is more strongly associated with the school performance of children. Although families with low sociocultural status may appreciate the importance of school in intergenerational mobility, these parents have less capacity to support their own children, their cognitive and social skills and their own school experiences are less developed, comparative of higher education parents (Auerbach, 2007; Harris & Goodall, 2007; Lareau, 2002). There are studies that claim that school results can be good even in "good quality" neighborhood schools (Eamon, 2005) but in our research, student performance is significantly better in central schools, confirming other studies that indicate them as a consequence of positive relationships among colleagues (Lavy et al., 2009).

The second hypothesis confirms the association of school climate with size of the school, but not its location; so, in small schools, the school climate is perceived as more favorable compared to the climate in medium-sized schools. Affiliation, Teacher-Student Relational Climate, Leadership, Student Involvement, Teacher Involvement and Global Climate are perceived as more favorable in non-central schools, contrary to some of the world's research. Students who attend non-central schools in neighborhoods or districts perceive the relationship with teachers as supportive, offering opportunities to improve their lower school performance in their own family (Eccles & Roeser, 2011; Mitchell & Bradshaw, 2013). In the Romanian context, student-teacher relationships tend to be perceived as tense in central schools, perhaps because of competition maintained by

family and teachers, the very high stakes in good grades in these schools, where there are students with high academic performance compared to non-central schools.

The investigated schools are all located in a provincial city with fewer inhabitants, not in a very large city/ town. According to the OECD study (2009), in schools located in a city, all actors reported better relationships, regardless of the location of the school. This particular effect, found for Eastern European countries, could explain the absence of differences in school climate between the investigated schools.

In terms of size, our results confirm the hypothesis and support conclusions from other cultures (Eamon, 2005; Hong & Espelage, 2012) that intercolegial climate, teacher-student relations, order, security, discipline, teacher involvement and global climate are more favorable in small-scale schools compared to medium-sized schools.

The variables explaining school performance are school location, social-economic status index, gender, school student involvement, student relationships, and belonging to school. Similar to previous studies, the present study supports the hypothesis that academic results differ according to the location of the school, with central schools being favored (Hamnett et al., 2007). We emphasize the negative relationship between performance and belonging to school/ affiliation, contrary to studies in other countries, but which could be explained by Romanian context factors. The pressure in the family and the pressure of teachers for high grades may be an explanation for the low level of satisfaction in the central schools, given that in Romania the academic achievements obtained in secondary school and high school are criteria for admission in high school or university. The competition experienced by students in central schools and its attribution to teachers and school leadership can be an explanation for tense relationships with them. On the other hand, the rules in these schools are restrictive, in contrast to the adolescent's desire for self-expression, autonomy, identity, which can generate tense relationships with certain teachers and the school leadership.

Taking into account the parents' education and occupational status, we found in this study that the students whose parents have a higher education and a high occupational status are the ones that make up the vast majority of the school population in the central schools. In the Romanian educational system, central schools are dominated by senior teachers who have internalized values towards education and towards adult-child relationship different from their pupils' parents. Even the teaching-learning methods used can lead to a gap between parents' expectations and the de facto state of school. The expectations of parents and their critical attitude towards teachers can be passed on to children within the family, which can lead to tense student-teacher relationships. Parents are predominantly protective or hyper protective with their children and teachers are predominantly authoritarian with students, which generates new conflicts (Bear et al., 2017). It is possible, however, that a more lenient pupil scoring and more permissive rules to contribute to a more favorable perception of climate in non-central schools.

According to the self-determination theory, students are more likely to internalize the values of those with a strong attachment. Since students' relationships with non-center school teachers are perceived by pupils as being, on average, better than those of the pupils with their central school teachers, pupils in the first schools are more likely to internalize the values of those with a strong attachment (Ryan & Deci, 2000). The student-to-teacher supporting relationships meet student affiliation needs and are positively associated with pupils' school involvement, as other research supports (Benard, 2004; Danielsen et al., 2009; Malecki & Demaray, 2003) thus making the pupils in non-

central schools more perceptive about their own school involvement and teachers. A positive social climate between pupils and teachers influences favorably the pupils' motivation and students' commitment (Crowd et al., 2002), but also the motivation of teachers' work and, implicitly, work performance.

The analysis of several articles focused on the size of the school shows that there are no unanimously accepted limits for large or small schools. Complementarily, the size of the school can be seen not only as a factor of good results but also as an effect: the finding that a small school is good, that the added value is high, leads to its request by parents. In this way, the size of the school may increase (Garrett et al., 2004). Simultaneously, the size of the school is an effect of population density, especially in rural areas, isolated and influences the costs of education.

The results from this study should be viewed with caution: the sample is not nationally representative, the inclusion of a school in a location or size category may be subjective and the characteristics of cultural contexts difficult to investigate objectively. In some questionnaires, there is no mention of the level of education and occupation of parents, and the anonymous character did not allow their completion. We assume that these terms are missing in the case of pupils from disadvantaged families (assumption based on spontaneous observations).

Future research directions could be centered on school space, another environmental dimension that impacts students' feelings about safety. The SES index can be complemented by cultural status in line with PISA 2015. Climate change according to class size would be a good analysis opportunity in the Romanian context, where teachers frequently denounce the large number of pupils in the class as the source of poor school results or high personal stress. Other personality traits can be included in the analysis that could influence both the perception of the school climate and the performance: well-being, resilience, violence in school.

The importance of the results is related to the debates in the Romanian media and other countries that have focused and are still centered on the optimal size of the school, as a possible factor for the growth and maintenance of school performances, the well-being of students and teachers, and also the financial efficiency. These findings may be useful to school authorities in making administrative decisions and focus more precisely on interventions to optimize climate.

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References

Bear, G. G., Yang, C., Mantz, L.S., & Harris, A.B. (2017). School-wide practices associated with school climate in elementary, middle, and high schools. *Teaching and Teacher Education*, *63*, 372-383.

Bronfenbrenner, U., & Ceci, S. J. (1994). Nature-nurture reconceptualized in developmental perspective: A bioecological model. *Psychological Review*, *101*(4), 568-586.

Bronfenbrenner, U., & Morris, P. A. (2007). The Bioecological Model of Human Development. *Handbook of Child Psychology*, *1*, 14-16.

Brookover, W. B., Schweitzer, J. H., Schneider, J. H., Beady, C. H., Flood, P. K., & Wisenbaker, J. M. (1978). Elementary school social climate and school achievement. *American Educational Research Journal*, *15*, 301-318.

Bryk, A. S., Sebring, P. B., Allensworth, E., Luppescu, S., & Easton, J. Q. (2010). *Organizing schools for improvement: Lessons from Chicago*. Chicago, IL: University of Chicago Press.

Cohen, J., McCabe, L., Michelli, N. M., & Pickeral, T. (2009). School climate: Research, policy, practice, and teacher education. *Teacher College Record, 111,* 180-213.

Coupé, T., Olefir, A., & Alonso, J. D. (2016). Class size, school size and the size of the school network. *Education Economics, 24*(3), 329-351.

Eamon, M. K. (2005). Social-Demographic, School, Neighbourhood, and Parenting Influences on the Academic Achievement of Latino Young Adolescents. *Journal of Youth and Adolescence*, *342*, 163-174.

Egalite, A.J., & Kisida, B (2016). School size and student achievement: a longitudinal analysis. *School Effectiveness and School Improvement. An International Journal of Research, Policy and Practice*, *27*(3), 406-417.

Greenwald, R., Hedges, L. V., & Laine, R. D. (1996). The effect of school resources on student achievement. *Review of Educational Research, 66,* 361-396.

Halpin, A. W., & Croft, D. B. (1963). *The organizational climate of schools*. Chicago: University of Chicago Handbook of the sociology of education (pp. 327–344). New York: Kluwer Academic/Plenum Publishers. http://www.donpugh.com/

Hofman, R H., Hofman, W. H., & Guldemond, H. (2001). Social context effects on pupils' perceptions of school. *Learning and Instruction, 11*(3), 171-194.

Janosz, M., Georges, P., & Parent, S. (1998). L'environnement socioéducatif à l'école secondaire, un modèle théorique pour guider l'évaluation du milieu. *Revue Canadienne dePsychoéducation*, *27*(2), 285-306.

Jia, Y., Way, N., Ling, G., Yoshikawa, H., Chen, X., Hughes, D., & Lu, Z. (2009). The influence of student perceptions of school climate on socioemotional and academic adjustment: A comparison of Chinese and American adolescents. *Child Development, 80*(5), 1514–1530.

Koth, C. W., Bradshaw, C. P., & Leaf, P. J. (2008). Multilevel Study of Predictors of Student Perceptions of School Climate: The Effect of Classroom-Level Factors. *Journal of Educational Psychology, 100*(1), 96–104.

Kumpfer, K. L. (1999). Factors and Processes Contributing to Resilience. The Resilience Framework. In Glantz, M. D., Johnson, J. L. (Eds.), *Resilience and Development: Positive Life Adaptations*. New York: Kluwer Academic/Plenum Publishers.

La Salle, T. P., Meyers, J., Varjas, K., & Roach, A. (2015). A Cultural-Ecological Model of School Climate. *International Journal of School Educational Psychology, 3*(3), 157–166.

Lee, V. E., & Burkam, D. T. (2003). Dropping out of high school: The role of school organization and structure. *American Educational Research Journal, 40*(2), 353–393.

Leithwood, K., & Jantzi, D. (2009). A Review of Empirical Evidence about School Size Effects: A Policy Perspective. *Review of Educational Research* Spring, *79* (1), 464–490. DOI: 10.3102/0034654308326158

Lleras, C. (2008). Hostile school climates: Explaining differential risk of student exposure to disruptive learning environments in high school. *Journal of School Violence*, *7*, 105–135.

Luyten, H., Hendriks, M., & Scheerens, J. (2014). School Size Effects Revisited**:** *A Qualitative and Quantitative Review of the Research Evidence in Primary and Secondary Education*. London: Springer.

Miles, M. (1969). Planned change and organizational health: figure and ground. In Carver, F.D., Sergiovanni, T.J. (Eds), *Organizations and Human Development* (p. 375-391). McGraw-Hill, New York, NY.

Monk, D. H., & Haller, E. J. (1993). Predictors of High School Academic Course Offerings: The Role of School Size. *American Educational Research Journal, 30*(1), 3-21.

Moos, R. H. (1979). *Evaluating educational environments*. Jossey-Bass Publishers, San Francisco

Newman, M., Garrett, Z., Elbourne, D., Bradley, S., Noden, P., Taylor, J., & West, A. (2006). Does secondary school size make a difference? A systematic review. *Educational Research Review, 1*(1), 41-60.

Reardon, S. F. (2011). The widening academic achievement gap between the rich and the poor: New evidence and possible explanations, Chap. 5 in R. Murnane and G. Duncan eds. *Whither Opportunity? Rising Inequality and the Uncertain Life Chances of Low-Income Children*. New York: Russell Sage Foundation Press.

Smokowski, P. R., Cotter, K. L., Robertson, C. I. B., & Guo, S. (2013). Demographic, psychological, and school environment correlates of bullying victimization and school hassles in rural youth. *Journal of Criminology, 5*, 1-13.

Thapa, A., Cohen, J., Higgins-D'Alessandro, A., & Guffey, S. (2012). *School Climate Research Summary: School Climate Brief*, 3. National School Climate Center, New York, NY. (www.schoolclimate.org/climate/research.php).

Walberg, H. J. (1992). On local control: Is bigger better? *Source Book on School and District Size, Cost, and Quality*, 118-134.

Zullig, K. J., Koopman, T. M., Patton, J. M., & Ubbes, V. A. (2010). School climate: Historical review, instrument development, and school assessment. *Journal of Psychoeducational Assessment, 28*, 139-152.