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Expansion Schools Report #2: Classroom Climate, Instructional Practices and Effective Behavior Management in eMINTS Expansion Classrooms

Many ingredients go into being an effective eMINTS teacher. Results of 99 classroom observations in eMINTS Expansion Schools indicated that effective and less effective behavior management could be distinguished on the basis of teacher's sensitivity to five areas in creating their classroom environment: exhibiting work that was student-produced; arranging space for flexible use; providing elements that afford a soft, sensory, tactile option; maintaining physical comfort; and interacting in a respectful and encouraging manner. Teachers observed conducting facilitated lessons were also more likely to have classrooms with these positive aspects. The combination of a positive classroom and the use of facilitated, inquiry-based instructional practices helped to construct a well-ordered and effective learning environment.

Introduction

Effective behavior management is one of the most challenging aspects of teaching in an elementary classroom.¹ Traditionally, an effective classroom is one with a high level of teacher control over student activity, e.g., students are sitting still, completing teacher-assigned tasks, in a very quiet classroom. These characteristics generally don't describe student work in an eMINTS classroom. Nonetheless, teachers and principals report fewer discipline problems and higher rates of work completion among eMINTS students.

Effective behavior management in an eMINTS classroom differs significantly from the traditional model. In eMINTS classrooms successful behavior management translates into students being on task, working cooperatively, being actively engaged in learning, and helping to find solutions to problems. The eMINTS professional development program stresses the application of project-oriented, authentic tasks that encourage students to work in cooperative learning groups. In classrooms where the eMINTS instructional model is consistently applied students are energetic agents in their own learning and development as they exchange ideas with each other. In a single class, one group of students may be developing a skit, a second group completing a diorama, while a third group is writing a newsletter. The completion of eMINTS lessons requires consultation

1White, C. & Coleman, M. (2000). *Early Childhood Education* (p. 331). New Jersey: Prentice Hall.

This report is one product of the eMINTS evaluation project. Other reports and their overall evaluation plan are available at <http://emints.more.net/evaluation>.

The eMINTS Evaluation focuses on student impacts, teacher impacts, changes in learning environments, and outcomes of project services.

between students and access to a broad range of resources. eMINTS students need to be able to move around to collect the information they need to complete this type of work.

The well-functioning eMINTS class is not chaotic, rather students help each other and work together as their learning tasks require. Instead of sanctioning students, teachers monitor student activity and think ahead to avoid problems. They use positive techniques to guide and support students. The existence of this less structured classroom raises many questions about how to create and sustain this environment. Two factors are central to the creation of a learning environment where this type of supportive and collaborative work is possible: the instructional practices of the teacher and the physical attributes of the classroom. In attempting to measure these characteristics, the eMINTS evaluation team observed a set of 99 classrooms in 27 eMINTS Expansion schools using a variety of scales. The analysis of the overall classroom environment focused on two measures: the eMINTS Lesson Typology² and the Classroom Climate Scale described in this report.

This report describes the Classroom Climate Scale and uses its dimensions to understand how teaching activities and the physical environment support effective classroom management practices in the eMINTS classrooms. In addition to data collected by the Classroom Climate Scale, this report draws from classroom observations, field notes, and teacher interviews.

Background on the Expansion Schools

Evidence from eMINTS schools has demonstrated that the combination of teacher professional development and multimedia technology can be used to support inquiry-based instructional practices that, in turn, support high levels of student achievement. Students in eMINTS classrooms consistently score higher than their non-eMINTS peers, and the participation in the eMINTS professional development program has had a positive impact on the instructional practices of eMINTS teachers. In 2001 the eMINTS program identified 27 schools from the first and second cohorts of the project as “Expansion Schools.” The eMINTS Expansion schools received two additional eMINTS classrooms and professional development for two additional eMINTS teachers in the third and/or fourth grades. In each school, the “veteran” eMINTS teachers worked as mentors to the new teachers. Principals were provided support and professional development and were asked to devise plans for expanding the eMINTS instructional resources beyond third and fourth grade.

Methods

Data for this research study were collected at the 27 eMINTS Expansion schools in the winter of 2002. Each of the 99 classrooms (49 veteran and 50 new eMINTS teachers) was observed for at least two classroom lessons. During these lessons teacher and student work was observed and coded according to several rubrics developed by the eMINTS program. One of these rubrics assessed the overall climate of the classroom.

² See *A General Typology of eMINTS Lessons* on the eMINTS website: <http://emints.more.net/evaluation>.

Classroom Climate Scale

The Classroom Climate Scale provided a framework for a systematic observation of the physical characteristics of each eMINTS classroom. This scale contained ratings of thirteen dimensions of the classroom ranging from the arrangement of student tables and desks to the teacher's approach to student discipline. Each dimension was scored using a four-point ordinal scale. The scores on each of these dimensions were correlated to one another to identify key relationships between the observable features of the classroom setting and effective behavior management. The results of this analysis frame the discussion below.

Description of Classroom Climate Scale

The Classroom Climate Scale is designed to measure the extent that the classroom environment can support the types of instruction encouraged by the eMINTS program. The term *classroom climate* is used to express the immediate educational environment in the classroom. Classroom climate is used as a summary of the classroom setting, including the physical and the emotional components of the learning environment. To identify conditions conducive to a positive classroom climate, evaluators prepared the Classroom Climate Scale. The scale categorized the physical features of the classroom, the interplay between the teachers and students, and the materials and objects in the room. Research addressing the environmental climate needs of school-age children and the unique properties of a technology rich learning environment were used in preparing the scale.³

The scale tallied individual eMINTS classrooms on thirteen dimensions. These dimensions assessed:

1. the nature of the items exhibited in the classroom,
2. the use of space,
3. the presence of tactile elements,
4. the physical comfort,
5. the character of the interactions between teachers and students,
6. the availability of user-friendly student workspaces,
7. the ability of the teacher to monitor students at their computer workstations,
8. the availability of appropriately-sized student chairs,
9. the safety of the wiring and cable installation,
10. the accessibility of a classroom telephone,
11. the representation of diverse ethnic groups in classroom displays,
12. the provisions made for students with special needs, and
13. the approach used by the teacher for behavior management.

³ The scale was drawn from *School Age Care Environmental Rating Scale*, North Carolina State University Cooperative Extension; *Project Better: Building Effective Teaching Through Educational Research*, Maryland State Department of Education; *Early Childhood Education*, Prentice Hall, and *Developmentally appropriate practice in early childhood programs*, National Association for the Education of Young Children.

Each of the thirteen variables was rated on a scale from 0 to 3. A ranking of “0” described a classroom characteristic that compromised the quality of the learning environment; a ranking of “1” described a classroom characteristic that limited the learning environment; a ranking of “2” described a classroom characteristic that supported the learning environment; and a ranking of “3” described a classroom characteristic that improved the learning environment.

Taking the “user-friendly student workspace” dimension as an example, the classroom would earn the score of “0” if there were loose screws, sharp edges, or nails poking out of student desks, or if the lid of the student desk presented a physical hazard by closing unexpectedly. The classroom would earn a score of “1”, if there were no inherent risks in the student workspace. Student workspaces would earn a score of “2” if two students had room to work comfortably and there were no inherent risks. The student workspaces would receive a score of “3” if there were no inherent risks, the students could work comfortably, and there was space for each child’s belongings. Overall the scoring reflects the capacity of the student desks and tables to accommodate a variety of student work arrangements. Effective eMINTS classrooms require flexibility in student workspaces, as students access different types of resources and as they work together in groups.

Key Measures: Relating the eMINTS Classroom Environment to Effective Behavior Management Strategies

eMINTS classrooms are very different from regular classrooms. eMINTS classrooms have multiple student computers, they feature special student desks, and they have to accommodate extra electrical and Internet wiring. Teachers in these classrooms are encouraged to create lessons that require student collaboration, investigation and discovery. One question that arises from instruction in the eMINTS classroom is whether, and how, teachers are able to maintain an effective learning environment.

This analysis attempts to address this question by using the measures from the Classroom Climate Scale. The analysis shows that five dimensions of this scale are positively related to effective behavior management practices in eMINTS classrooms. This analysis also shows that teachers who were observed conducting student-centered, facilitated lessons scored higher on each dimension. This suggests that the combination of these five physical dimensions of eMINTS classrooms and the application of inquiry-based, student-centered instructional practices contribute to the creation of an effective learning environment within eMINTS classrooms.

The discussion below presents the distribution of six key measures drawn from the Classroom Climate Scale that are related to the presence of effective behavior management strategies in eMINTS classrooms. Four of these measures address aspects of the classroom space, while the fifth is concerned with the interactions between students and teachers. The first measure to be discussed is the main dependent variable, the application of effective behavioral management strategies.

Effective Behavior Management Strategies

Expectations for student behavior in eMINTS classes include being on task, working cooperatively, and being actively engaged in learning. In every class there are times when students are tempted to become off task and to become uncooperative. Teaching strategies that helped students develop intrinsic skills necessary to behave in socially acceptable ways was the focus of the *behavior management* variable. Teachers' behavior management strategies influenced children's self-discipline. Teachers who practice good behavior management strategies establish high standards for behavior with clear expectations. They provide students with on the spot coaching for possible alternative actions, and identify and reward desired behavior in the classroom.⁴ As seen in the following examples, the eMINTS teachers using effective behavior management strategies provided students with these opportunities.

Teachers Established High Standards and Clear Expectations

Effective behavior management was noted when there was evidence that the teacher thought ahead to establish standards and expectations. In those cases, time was taken to establish predictable routines. In many classrooms teachers and students collaborated on key classroom rules by drafting a formal "classroom contract." When the students helped develop the rules they felt an ownership for them and were more likely to abide by those rules. In many classes the student responsibilities were determined by student decision. The rules echoed the expectation of civility and established a code of conduct that applied to the appropriate treatment of each other as well as the appropriate treatment of materials in the room. Examples in three classroom contracts follow:

- You can do anything you want as long as you are on task, treating all people with respect, and concentrating on learning and not bothering any other students.
- Use kind words; be quick to forgive; listen; share; encourage; take turns, think before acting; talk it over.
- We the undersigned agree that 3rd grade will make good choices, respect others, respect property, and respect ourselves.

Teachers Provided On-The-Spot Coaching

Frequently, teachers monitored classroom activities to anticipate problems and proactively intervened. The following example involves a student with special needs:

As the student attempted to complete a task, [the student] was becoming frustrated. The teacher knelt beside the student and calmly said, "Let's start slowly. Take a deep breath. Let's try it one more time."

⁴ Kostelnic, M., Soderman, A., & Whiren A. (1999). *Developmentally Appropriate Curriculum: Best Practices in Early Childhood Education* (p. 213). New Jersey: Prentice Hall.

In another classroom one child started to weep because she could not think of anything to write. The teacher helped the child come to the conclusion that perhaps her brain just needed a short rest and after going to the library, her brain would be ready to work.

At other times teachers helped children find their own solutions through discussion. For example, in one classroom one pair of students was having a disagreement. When it became apparent that they were not going to find a solution without intervention, the teacher entered the picture. She said, “Are you using language that is appropriate in our room?” When suitable language was used, she went on to ask them “What do we have to do to settle this?” When the pair gave their solutions, she asked, “Do you think that is an acceptable alternative?” The pair did find a solution and went to work on their project.

Teachers Identified and Rewarded Desired Behavior

Teachers also offered incentives and rewards for appropriate behavior in the form of activities, privileges, and special attention. When students in the classrooms were modeling desired behavior, the teachers called attention to those students. The teachers attended to appropriate behavior and never resorted to belittlement when inappropriate behavior was encountered. Comments like, “[Student] is making an excellent choice right now;” “I see [student] being a very good listener;” and “thanks for working that out.” were heard. Several examples of rewarding and attending to desired classroom behavior were witnessed. When students completed their homework their reward included wearing a favorite team’s sports jersey; for studying math facts students could participate in an ice-cream sundae party; for kind behavior, students could have their name on a class bulletin board and a note sent home to parents; for completing in-class work their stories could be read over the intercom by the principal, and for reaching a goal, students could eat with their teacher.

Table 1
Behavior Management Strategies Used in Classroom

Value	Criteria	Frequency	Percent
0	Physical punishment, belittlement apparent	0	0
1	Teacher enforced compliance <i>or</i> little control evident	24	24.2
2	Praise, attention & rewards given for good behavior	40	40.4
3	Students help develop class rules and procedures. Students helped to find solutions to problems through discussion. Good behavior rewarded. Teacher thinks ahead to avoid problems.	35	35.4
Total		99	100.0

The results of the behavior management observations in the classrooms are shown in Table 1. In the Expansion Classrooms, physical punishment or belittlement was not observed. Twenty-four classrooms were controlled by either enforced compliance where the teacher took the major responsibility for the class conduct and primarily used the threat of punitive consequences for enforcement, or, the teacher had minimal conduct expectations for the classroom and students were noisily talking about other things besides their schoolwork. Teachers who used praise, attention and rewards as a strategy were most often observed. Forty classrooms fell in this category. Thirty-five classrooms had teachers who thought ahead to avoid problems. When a problem did arise, it was handled before it escalated. The children helped develop and felt ownership of the classroom procedures and rules. When warranted, the teacher helped the students find solutions to problems through discussion and coaching.

Exhibiting Student-Produced Work

Student-produced work exhibited by the students was a visual representation of their effort in the classroom. An environmentally rewarding classroom is one in which children have opportunities to display their work.⁵ Maslow accepted that there is an emotional need for recognition. Displaying student's work at their eye level encourages them to share their work with others. White and Coleman assert, "The amount and type of children's work displayed in a classroom is a good indicator of a developmentally appropriate classroom."⁶ Work on view from every student in the class that matched a current topic was the focus of the *student-produced work* variable.

When children in the class see their work displayed, they have material evidence of their accomplishments. Having students own efforts exhibited in the room helps to build their confidence. During observations, eMINTS students were eager to showcase their work and describe it to visitors. When cooperative learning activities were displayed, students had tangible evidence of the work of their classroom community. In the well-disciplined classroom, the work of all students was recognized; teachers displayed evidence of reading improvement, creativity, art, student writing samples, and other work products.

⁵ Morrison, G. (2001). *Early Childhood Education Today* (p. 364). New Jersey: Prentice Hall.

⁶ White, C. & Coleman M. (2000). *Early Childhood Education* (p.306). New Jersey: Prentice Hall.

Table 2
Student-Produced Work Exhibited in the Classroom

Value	Criteria	Frequency	Percent
0	No school work or artwork displayed	41	41.4
1	Adult produced work displayed	18	18.2
2	Some child -produced items displayed	23	23.2
3	One item per child displayed	17	17.2
	Total	99	100.0

Table 2 presents the frequency and percent of student-produced work exhibited in the classroom. In 41 of the 99 classrooms, there was no schoolwork or artwork displayed in the classroom; in 18 of the classrooms, the only items displayed were commercial or teacher-made objects. In the remaining 40 classrooms, there were some child-produced items on display and in 17 of the classes; each child had something on display, either in the classroom or the hallway.

Arranging Space for Flexible Use

Effective arrangement of space was used to support curricular goals in the classroom. “The organization of physical space is an effective predictor of program quality as it affects what children do, determines the ease with which they are able to carry out their plans, and affects the ways in which they use materials.”⁷ Classroom space arrangements which were flexible and accessible enough to allow students to work in small groups and create the spaces they need to complete their work was the focus of the *flexible space* variable.

Good space arrangement helps create an enabling environment. Teachers could use well-planned space to accommodate complex instructional activities. As the examples below show the arrangement of space gave children the opportunity to explore, to contact, to discover, to investigate, and to share.

How Classroom Space Supports Student Learning

Through the careful use of space, the environment fostered the students’ ability to explore their ideas and concepts. One of the new teachers copied the room design of another teacher, but soon discovered, “there was just no space.” The teacher rearranged the space, “I feel like if I want to do an activity inside, a circle activity, or a cooperative learning thing, I have room to do it.” The accessible and flexible space arrangements worked to the student’s advantage in three ways: it promoted the independent use of space by the children; it encouraged collaborative action; and it allowed the children to be more experiential in their learning.

⁷ Kostelnik, M, Soderman, A, & Whiren A. (1999). *Developmentally Appropriate Curriculum: Best Practices in Early Childhood Education*. (p. 151). New Jersey: Prentice Hall.

Flexible Classroom Space Promotes Independent Use by Students

In many schools very large aisles provided extra space. In others there was room for two extra tables of different heights to account for different sized elementary school children. Other examples were niches, platforms, nooks, and crannies, equipped with benches, beanbags, floor pillows or chairs. Students could go to a comfortable spot to solve problems, read, or start their own investigation.

Flexible Classroom Space Encourages Collaborative Action

Having the available space, helped students interact with more of their classmates. One teacher said, “[With eMINTS], we do a lot of hands on collaborative work and project oriented work.” In some of the schools, movable partition walls made the space more accommodating. In one school, all four of the 4th grade classes were collaborating on an Olympic theme. The rooms had partition walls that were opened to accommodate the four classes that had been converted to Olympic villages. The expanse of space made it possible for some to be working on building web pages about the Olympics, while others were inventing a new Olympic sport, and still others were writing autobiographies as if they were competing in the Olympics. The students were encouraged to help others when they finished their task.

Likewise, long-term projects require space for partners to work. In some of the eMINTS classrooms observed in the 2001-2002 school year students designed towns that would support human life as part of a moon unit; they built and outfitted model covered wagons as part of an unit on the Oregon Trail, they designed circuits as part of an electricity unit; constructed scientific instruments as part of a weather unit; built clay models showing the layers of the earth as part of an earth-science unit; and assembled sketchbooks as part of a skyscraper unit. Each of these activities required places to work, places to confer, and places to store materials.

Table 3
Space Arranged for Flexible Use in the Classroom

Value	Criteria	Frequency	Percent
0	Space prevents teachers' access to all students. Fixed, unchangeable arrangement.	2	2.0
1	Space affords low mobility. Teacher and students have to squeeze by to get to some parts of classroom.	16	16.2
2	Space does not interfere with activities, can be restructured for more than one activity at a time.	52	52.5
3	Space promotes independent use, small group work, and whole group work. New spaces can be created.	29	29.3
Total		99	100.0

Flexible Classroom Space Allows Experiential Learning

Experiential learning is developmentally appropriate in the primary grades. The National Association for the Education of Young Children advocates experiential learning in a meaningful context.⁸ According to Wood in *Schools That Work*,⁹ “Hands-on experiences require classroom arrangements that facilitate movement, group work, and varied activities.” This philosophy was echoed by one of the eMINTS teachers. “I do a lot of hands on [activities]. I think all elementary students learn by doing.” The space in some eMINTS classrooms ensured the opportunity for this sensory involvement. Even in very crowded classrooms, the space could be arranged to allow for experiential learning. For example, during one observed lesson, the students conducted tests to distinguish between transparent, translucent, and opaque objects. By having even limited space available, the students were able to make predictions about light travel and length of light and shadow, using a penny, a flashlight, and a troll. Students explained what they learned and followed this experiment with an interactive website to enhance the concepts. Even in the smallest classrooms students could use flexible space arrangements for scientific exploration, creative expression and construction of projects.

Table 3 shows how space was arranged in eMINTS classrooms. In two of the classrooms, the space was arranged in such a manner, that the teacher could not physically get to all students and the students were essentially immobile while in the classroom. In one of the classrooms that offered low mobility the teacher said that classroom management was the

⁸ Bredekamp S., & Copple, C. eds. (1997). *Developmentally Appropriate Practice in Early Childhood Programs* (p141). Washington D.C.: National Association for the Education of Young Children

⁹ Wood, G. (1992). *Schools That Work* (p. 122). New York: Dutton.

hardest part of the job. “It’s hard having it like this...I can’t get around that end... Just the way we have to have our room set up a certain way, we can’t move because of the computers. It makes it difficult. If we could just move a little.” Even to form a small group, students had to leave the classroom and confer in the library or outside. Poor space planning also limited student access to the SMART Board. In one class there was a lot of unnecessary transition time between activities. In discussing this, the teacher said, “You just have to keep them entertained [during this transition time].”

In 29 percent of the classrooms the space could be rearranged to accommodate different activities. These classrooms had the flexibility not only for individual work, but also for small group and whole-class work. The classes had the space, or made the space, for children to rearrange furniture, and to create new spaces. Some of these classrooms had the square footage to make it easy to have space for activities; other classrooms had to carefully plan to accommodate the space needs for a variety of activities and curriculum goals.

Providing Soft, Sensory, Tactile Elements

Supplying soft, sensory, tactile elements in a classroom helped create supportive places for student work. These classrooms were places rich with textures, patterns, sounds, and sometimes aromas, which were lacking in more institutional settings. The work environments for the children were places where there was comfort and “soft spots.” Early childhood professionals support this element in the classroom.¹⁰ “The inclusion of classroom soft spots does more than provide a homelike environment. Some soft spots help to absorb noise; others provide comfort. And still other soft spots have a sensory appeal that helps to focus children’s attention.”¹¹ Soft, malleable, stuffed, textured components available for students’ use was the focus of the *soft, sensory, tactile elements* variable.

Field notes from three classrooms follow:

- There is a purple beaded curtain at the door entrance; food is allowed in the room; student work is featured on the walls; and music plays. There are four floor pillows, two chair pillows, and a large wicker chair with a Pooh coverlet.

¹⁰ Bredekamp S., & Copple, C. eds. (1997). *Developmentally Appropriate Practice in Early Childhood Programs* (p141). Washington D.C.: National Association for the Education of Young Children

¹¹White C.DS. & Coleman, M. (2000). *Early Childhood Education* (p. 303). New Jersey: Prentice Hall.

- There is a child-sized love seat in the reading area, which is a carpeted space. A string of lights circle the bulletin board. Student-made mobiles hang from the ceiling.
- There are live animals for students to care for and hold: guinea pigs, a gerbil, and a rabbit. Piles of pillows are in the reading corner that the students have brought from home to use. Curtains are on the window. This is a comfortable, inviting classroom.

The teachers in these classrooms maintained that senses enrich the lives of elementary school-aged children. Comfortable child-sized furniture, soft cushions, wall hangings, warm rugs, and stuffed objects were a plus in the classrooms. More than a few rooms had live classroom pets that could be held. In some classrooms, a tactile table awaited the children. The tables could contain soil, bags, trinkets, clay, or a variety of things that could be manipulated. There were many sensory experiences to stimulate learning. A few of the teachers' retrieved cast-offs and repaired and reused them. An example from one teacher was retrieving soft, comfortable, padded rolling office chairs from the trash and cleaning and repairing them for student use. Simple things that made the surroundings more appealing contributed favorably to classroom discipline.

Table 4
Soft, Sensory, Tactile Elements Provided in the Classroom

Value	Criteria	Frequency	Percent
0	No soft, sensory, or tactile elements available for students' use	32	33.0
1	One soft, sensory, or tactile element available for students' use	46	47.4
2	Two or more soft, sensory, or tactile elements available for students' use	10	10.3
3	Two or more soft, sensory, or tactile elements especially sized for children	9	9.3
Total		97	100.0

Frequency missing = 2

Table 4 shows that the majority of classrooms had only one sensory element available for students' use. Most often this one element was a rug. Nearly one-third of the classrooms afforded no tactile elements for the students' use. Only 10 percent of the classrooms had two or more elements available for students and only 9 percent had elements in the classrooms especially sized for children.

Maintaining Physical Comfort

Physical comfort was maintained so that children could tolerably go about their work in the classroom. "Children work best when the temperature is comfortable, the air is fresh, and the light is adequate."¹² Providing adequate light, sufficient ventilation and satisfactory room temperature was the focus of the *physical comfort* variable.

The lighting equipment found in eMINTS classrooms ranged from brand new lights to the original lamps installed when a school building was constructed. Occasionally, light fixtures contained burned out bulbs or were non-functional.

Although the specifications for eMINTS classrooms required air conditioning, some classrooms were missing this component. When this component was missing, the rooms were extraordinarily hot because of the heat produced by the computers. There were instances where the classrooms were equipped with air conditioning, but the unit could not be turned on because someone other than the classroom teacher controlled it. Some classrooms had windows that could be opened when it became unbearably hot, while other classrooms had windows that were sealed shut. Ceiling or freestanding fans were sometimes present to move the air. In a minority of the classrooms, HEPA air filters were in place.

¹² Kostelnic, M., Soderman, A., & Whiren A. (1999). *Developmentally Appropriate Curriculum: Best Practices in Early Childhood Education* (p151). New Jersey: Prentice Hall.

Table 5
Physical Comfort Maintained in the Classroom

Value	Criteria	Frequency	Percent
0	Room lacks good light, ventilation and temperature.	0	0
1	Room has one of the three components present	4	4.0
2	Room has two of the three components present	27	27.3
3	Room has good light, ventilation and temperature	68	68.7
Total		99	100.0

Looking at Table 5, over two-thirds of eMINTS classrooms were clean, well lit, well maintained, and well ventilated, although there were exceptions.

Interacting in a Respectful and Encouraging Manner

A communication pattern based on respect and encouragement fostered an emotionally secure climate in the classroom. In a classroom, where the students knew that their questions or attempts would not be ridiculed the students felt safe taking risks. This atmosphere can best be summed up in the words of one of the teachers,

My plan at the beginning of the year was to create a classroom environment that they felt comfortable taking risks...they had to learn who they could trust...With each other and with me, knowing that they can make a mistake and it's okay. Sometimes I don't say the right thing...so it's okay, and then they learn from that. That's my intention, at least.

Evaluation team members rated classroom members on their communication patterns observing if teachers showed respect for students and if students also showed respect for their teacher and fellow students. A communication pattern that revealed respect for students and conveyed a confidence in student capability was the focus of the *respectful and encouraging interactions* variable. Respectful, encouraging communication patterns showed the strongest correlation with effective behavior management.

Teachers Words Revealed Respect and Encouragement for Students

Well-behaved, high-achieving students typically experience positive interactions with teachers.¹³ eMINTS teachers who had positive interactions were more likely to have well-behaved classrooms. They were polite to their students, saying, “please” and “thank you”; they called their work “super sensational” and “magnificent.”

The following are examples of teachers’ communication and interaction with their classes from the field notes:

- How the students are taught is as important to this eMINTS teacher as what they are taught. There is a caring attitude. When a student gives an incorrect response, [teacher] politely says, “Let’s look at it like this,” and gives the student another chance. When one student speaks too softly, [teacher] says, “Remember my old ears.”

¹³ Good, T.L. & Brophy, J.E. (1994). *Looking in classrooms* (6th ed.). New York: Harper Collins.

- This is a very pleasant teacher. [Teacher] treated each student as a welcome part of the classroom. She asked about their families, knew which family member had been ill or hospitalized, knew about grandparents. The teacher never had to raise her voice or correct a student during the two class periods.

Teachers Conveyed Confidence in Student Abilities

Teachers encouraged students by instilling confidence in their ability to complete the assigned work. In the work of Eccles, Wigfield, and Schiefele, an atmosphere that values academics and sends a clear message that all pupils can learn is part of a positive class environment.¹⁴ This type of atmosphere was apparent in the following observed scenarios:

- When a student was struggling, one of the teachers advised, “Try all the things you know first.”
- Another teacher repeats the same message found on a classroom poster to a child who didn’t get a correct answer, “Making a mistake is ok, we are learning.”
- When two students were struggling, the teacher remarked, “I know it’s hard, but you can do it,” and “Try this one again, you’re almost there.”

In the well-disciplined classes teachers were not the only source of answers. One way in which the teachers conveyed confidence in their students’ capabilities was by letting the students do the explanations in class. One teacher said, “When they figure something out on their own, not me telling them, they’re like, ‘Oh, I did it myself!’ It gives a burst of self-confidence.” Later in the interview, the teacher said the students “learned a different method of doing, not just this way is right. They’ve come up with different ways that I’ve never thought of.” Other examples witnessed of teachers were: they asked different groups to come up with the important points in a lesson and they recognized that there are many ways to complete the lesson.

Part of the eMINTS’ philosophy of cooperative learning could be seen when teachers encouraged students to teach other students. There was a belief that children could learn from each other and there were provisions for children to communicate with each other. One teacher said the students “feed off of each other. I try to create an environment where we’re a team...that we’re all here to help each other.”

¹⁴ Eccles, J.S., Wigfield, A., & Schiefele, U. (1998). *Handbook of Child Psychology: Vol. 3, Social, emotional, and personality development* (pp. 1017-1095). New York: Wiley.

Table 6
Respectful and Encouraging Interactions in the Classroom

Value	Criteria	Frequency	Percent
0	Mainly tense interactions heard. Children cry as a result of interaction.	1	1.0
1	Mainly custodial and cordial interactions heard.	27	27.3
2	Mainly encouraging interactions heard. Expectation that students can learn from each other, and are expected to do so.	39	39.4
3	Encouraging and respectful interactions heard between all classroom members. Confidence voiced on student capability. Students learn from each other.	32	32.3
Total		99	100.0

Table 6 presents the frequency and percent for the interaction dimension on the classroom climate instrument. Teacher-student interaction patterns varied among the ninety-nine teachers. Encouraging interactions were observed in over 70 percent of the eMINTS Expansion classrooms. An optimal interaction pattern existed in thirty-two of the classrooms. In these thirty-two classrooms an encouraging and respectful communication pattern revealed a belief that all children could learn; there was confidence voiced about the students' capacity to learn; and the students in the class spoke respectfully to each other.

One distinguishing feature of teacher-student interactions was the way teachers responded to student questions. The teacher in the *mainly tense interactions* criteria responded to a child's question with, "Just get it done." In the same classroom, each time a student asked a question it was met with the teacher exhaling so deeply, it could have been intimidating to some children. When a student had another idea for an answer, teacher said, "I'm not taking this, just change your answer." Examples of *mainly custodial and cordial interactions* was, "That is not right, either." and "Make sure you are not talking to your neighbor." Many of the twenty-seven teachers rated in this category, asked and answered their own questions, and shushed students when they attempted to answer questions. An example of a teacher-student interaction placed in the *mainly encouraging interactions* was "Would there be a clue in your social studies book?"

Classroom Climate Supports Effective Behavior Management

The six dimensions of the Classroom Climate Scale discussed above are positively correlated with effective behavior strategies teachers employed as part of their instructional activities.

Table 7
Correlations between Behavior Management and Classroom Climate Variables

	Student Work Exhibited	Flexible Use of Space	Tactile Elements Provided	Physical Comfort Maintained	Respectful Interactions
Correlation	0.34	0.29	0.27	0.23	0.76
p-value	0.0006	0.0029	0.0073	0.0195	<0.0001
Number of Teachers	99	99	97	99	99

The correlations in Table 7 show a moderate correlation between the effective behavior management variable and four physical attributes of the classroom: the exhibition of student work, the provision of flexible classroom work space, the availability of soft and tactile elements in classrooms, and the provision of adequate, heat, light and ventilation in the eMINTS classrooms. The remaining variable addresses the character of the interaction between teachers and students.

The results of this analysis show that the strongest correlation is between effective behavior management and the character of the interactions between teachers and students. This suggests that there are positive classroom behavior consequences for teachers who adopt a respectful and encouraging interaction style with their students. The character of the interaction in the classroom impacts how well students are able or willing to regulate their behavior. Teacher attitudes and strategies that treat students as valued members of the classroom are beneficial for the students, the teacher, and the rest of the classroom community. Secondly, the other four variables were significant. These differences are important and contribute to the overall positive climate of an eMINTS classroom.

Differences in Classroom Climate Dimensions by eMINTS Lesson Typology

Analysis of Classroom Climate scores also shows statistically significant differences across the different levels of the eMINTS Lesson Typology.¹⁵ Teachers who employ facilitated teaching practices in their classrooms also employ better behavior management strategies. This implies that having the students up and about in the classroom does not mean that they are not paying attention and not learning. The case can be made that what may appear to some to be commotion, is in fact engaged learning. Classrooms led in a student-centered, facilitated manner fit the eMINTS model of teaching and are those classrooms most strongly related to effective behavior management.

¹⁵ See *A General Typology of eMINTS Lessons* on the eMINTS web site: <http://www.emints.more.net/evaluation>

Table 8
Mean Differences in Class Climate by Facilitated vs. Non-facilitated Teachers.

	Number of Teachers	Mean	Standard Deviation	P-value	Difference in Means
<u>Student Displays</u>					
Student-Centered Facilitated Lessons	43	1.55	1.16	0.0022	0.70
Other Lessons	56	0.85	1.05		
All Lessons	99	1.16	1.14		
<u>Flexible Space</u>					
Student-Centered Facilitated Lessons	43	2.27	0.70	0.0238	0.33
Other Lessons	56	1.94	0.72		
All Lessons	99	2.09	0.72		
<u>Tactile Elements</u>					
Student-Centered Facilitated Lessons	43	1.27	0.90	0.3069	0.16
Other Lessons	56	1.00	1.74		
All Lessons	99	0.95	0.90		
<u>Physical Comfort</u>					
Student-Centered Facilitated Lessons	43	2.79	0.46	0.0237	0.26
Other Lessons	56	2.53	0.60		
All Lessons	99	2.64	0.55		
<u>Encouraging Interactions</u>					
Student-Centered Facilitated Lessons	43	2.51	0.63	<00001	0.85
Other Lessons	56	1.66	0.72		
All Lessons	99	2.03	0.80		
<u>Behavior Management</u>					
Student-Centered Facilitated Lessons	43	2.58	0.58	<0.0001	0.83
Other Lessons	56	1.75	0.69		
All Lessons	99	2.11	0.76		

As seen in Table 8, of the two groups of lessons, student-centered facilitated and other, non-facilitated lessons, there was a clear distinction in the classroom climates. The teachers of facilitated lessons were remarkable in that they consistently attended to four of the five climate factors deemed important in behavior management. Many of these teachers had an item displayed from everyone in their class that matched a current class topic or theme. They utilized space to its best advantage. Traffic patterns allowed smooth movement and there was space to do activities away from their assigned student desks. Their classrooms were places of physical comfort, with adequate lighting, ventilation, and temperature. The clearest difference between the facilitated teachers and the non-facilitated teachers was in the area of respectful and encouraging interactions. A look inside these classrooms finds teachers encouraging further dialogue, being careful how to answer questions to encourage growth, and encouraging students' potential. Students in the class are kind and encouraging to each other. There is a significant difference for all measures, except the soft, sensory, tactile elements.

Summary

Classrooms are complex social systems where climate matters. In Expansion eMINTS schools, the classroom climate and its multiple influences were examined as part of the learning environment. There was a mutual relationship between the environment and students and teachers. Parts of the physical setting and classroom atmosphere were identified that could influence classroom behavior. The results of this Classroom Climate survey show that successful, student-centered facilitative teachers are more likely to use effective behavior management skills and encourage student interactions.

The results of this report challenge educators to focus on more than the educational qualities of the classroom. In the eMINTS Expansion classrooms, the quality of the learning environment as well as the quality of instruction was important. The smooth functioning eMINTS classrooms employed effective behavior management strategies. The facilitative teachers set up their classroom environment to enable student's learning to take place. Exhibiting work that was student-produced, arranging space for flexible use, providing elements that afford a soft, sensory, tactile option, maintaining physical comfort, and interacting in a respectful and encouraging manner were evident in classrooms with effective behavior management. The teachers who employed a facilitative teaching strategy were more likely to maintain a well-disciplined class. Facilitated eMINTS classrooms were physically more comfortable than non-facilitated classrooms. They were places where students had ownership of the procedures in the classroom and the items on display. Facilitated teachers were significantly better able to flexibly use their classroom for both large and small group work. Having tactile elements in the classroom was not significantly important between all types of eMINTS classrooms.

For a prospective eMINTS teacher, these results serve as a guideline for improving levels of competencies related to the classroom environment. For the current eMINTS teacher, this study could serve as an opportunity to evaluate their current classroom climate. For the eMINTS trainers, it may be useful to identify and establish specific competencies for teachers related to classroom climate. The Expansion eMINTS classrooms in this study were in early elementary classes. As eMINTS expands to older classrooms, the importance of classroom environment will have to be reexamined.