

### 3. ENVIRONMENTAL QUALITY AND EDUCATIONAL OUTCOMES

*For Ms. Harrington, the fact that her school does not have a centralized air-conditioning system is unfair to her students, especially during certain periods during the school year when tests are being conducted. As she explained, "When you don't have the comfort you need to maintain a healthy body you don't care about socializing, you don't care about history lessons and the revolutionary war, your worried about survival...that's one of the basic needs, the hierarchy of needs."*

#### What Is Known

Educators in the study consistently argued that poor environmental qualities, such as physical comfort and health, influenced the process of learning and teaching and ultimately educational outcomes such as achievement test scores and levels of attendance.

There is growing empirical evidence that the physical setting affects student and teacher behavior and attitudes and that these affects may have an influence on student performance and other educational outcomes.<sup>7</sup>

Physical variables that have been investigated have included acoustics and noise, lighting, interior color, seating position, classroom furnishing layouts and design, windowlessness, spatial density, crowding and stress. The most significant research evidence supporting the direct influential role of the physical variables on student performance concerns class size and school size; the greatest negative relationship between school size and student performance being most prevalent in urban schools. In addition, there is growing evidence that building age and condition, and thermal factors affect student achievement as well.

The following is a list of what is known from the literature about the influence of environmental qualities and educational processes and outcomes.

- Class sizes dictate the frequency and type of student-teacher interaction. As the size decreases interaction increases, classroom management improves, teacher stress decreases and teachers are more likely to try innovative techniques.
- School size, if smaller, offers greater opportunities for participation in community and other social organizations. A smaller school size also increases opportunities to exercise leadership roles, the number of courses offered, and student satisfaction. A lower incidence of crime levels and less serious student misconduct than larger schools will be encouraged, as well as a sense of responsibility and meaningful participation, particularly among students who have academic difficulty and come from lower socio-economic backgrounds.
- Acoustics and short-term noise have been found to be linked to classroom distraction, student and teacher morale and preferences.
- Increased spatial density and crowding influences various behavioral problems and satisfaction, aggressive behavior, movement and distraction on complex tasks.

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<sup>7</sup> Full bibliographic references available upon request.

- Thermal comfort has been shown to influence task performance, attention spans and levels of discomfort.
- Seating position affects teachers' evaluations of students. Students tend to sit in areas of the classroom in accordance with their goals and will select seats that provide opportunities for action and control of each other and the teacher. Students in front of classroom engage in more of their own work, are more attentive and likable by the teacher, have the highest rate of verbal interaction and participation.
- Classroom furnishing layouts designed to accommodate individualized instruction have been found to influence such student behaviors as movement patterns, purposefulness, disruptiveness and disorderliness, persistence and participation and attitudes toward class and other students.
- Private places in classrooms provide opportunities for conversations and solitude.
- Open space classroom designs may offer more opportunities for privacy than traditional designs. Teachers' adjustments of their activities to reduce distractions correlate with the amount of non-structural walls in the classroom. However, open schools high visual exposure can cause distraction, although modifications of open plan settings that provide better defined activity pockets or privacy nooks help prevent some of distractions.
- Open versus self-contained classroom comparisons indicate, based on research, that open classrooms promote more peer interaction and cooperative behaviors. Also, teachers hold more positive attitudes about their jobs and their schools, students' attitudes and self-images are generally better, students are more likely to secure acoustical and visual privacy, teachers experience greater feelings of autonomy and satisfaction, and there is an increased interaction among teachers and an overall enjoyment in teaching regardless of persistent noise problems. Students as well, experience an increased sense of autonomy, and engage in a greater variety of interactions and activities. However, transitions to new activities in open plan classrooms take longer and student 'off-task' behavior was greater than in traditional-plan schools.
- Windowless classrooms have been found to influence student and teacher attitudes negatively, and no consistent pattern of student performance has been attributed to the absence of an outside window .
- Vandalism is most likely to occur in school building locations where students gather in groups to play and socialize.

In summary, there is mounting evidence that many characteristics of the physical environment of the school can affect learning by indirectly affecting psychological processes such as behavior, attitudes, motivation, and morale.

Although all of these factors have been recognized individually, what is not known is how these environmental factors *interact* in contributing to educational quality. Which environmental factors take precedence over others? Which environmental factors do educators feel are most critical in supporting their educational activities and goals?

## Environmental Quality

Environmental quality recognizes the complex nature of the school setting. The relationships between the physical environment and educational activities are overlapping and integrated,

forming qualities that are experienced directly by occupants within the school setting. This study asks a more comprehensive question: what are the attributes of environmental quality, as perceived by teachers, that have an influence on the educational process?

In an effort to answer this question, working groups were asked to determine which prioritized environmental issues they felt influenced any of three educational outcomes: Student Academic Performance, Student Social Development and/or Teacher Instructional Performance. These three educational outcomes were defined as follows:

- *Student Academic Performance* referred not only to achievement test scores, but also to evidence of day-to-day academic performance on in-class work assignments, quizzes and other tasks.
- *Student Social Development* was intended to refer to various social behaviors such as evidence of cooperative and competitive behaviors, incidents of disruptive behaviors, as well as feelings of self-esteem.
- *Teacher Instructional Performance* was intended to refer to the ability of a teacher to focus effectively on the instructional needs of his/her students.

A selected number of attributes of environmental quality are perceived by working groups as most significantly influencing educational outcomes in their particular schools.<sup>8</sup>

### Link between Environmental Quality Concerns and Educational Outcomes

**The study found that a decreasing number of high priority environmental quality concerns experienced by school occupants is significantly correlated with higher levels of student performance.**

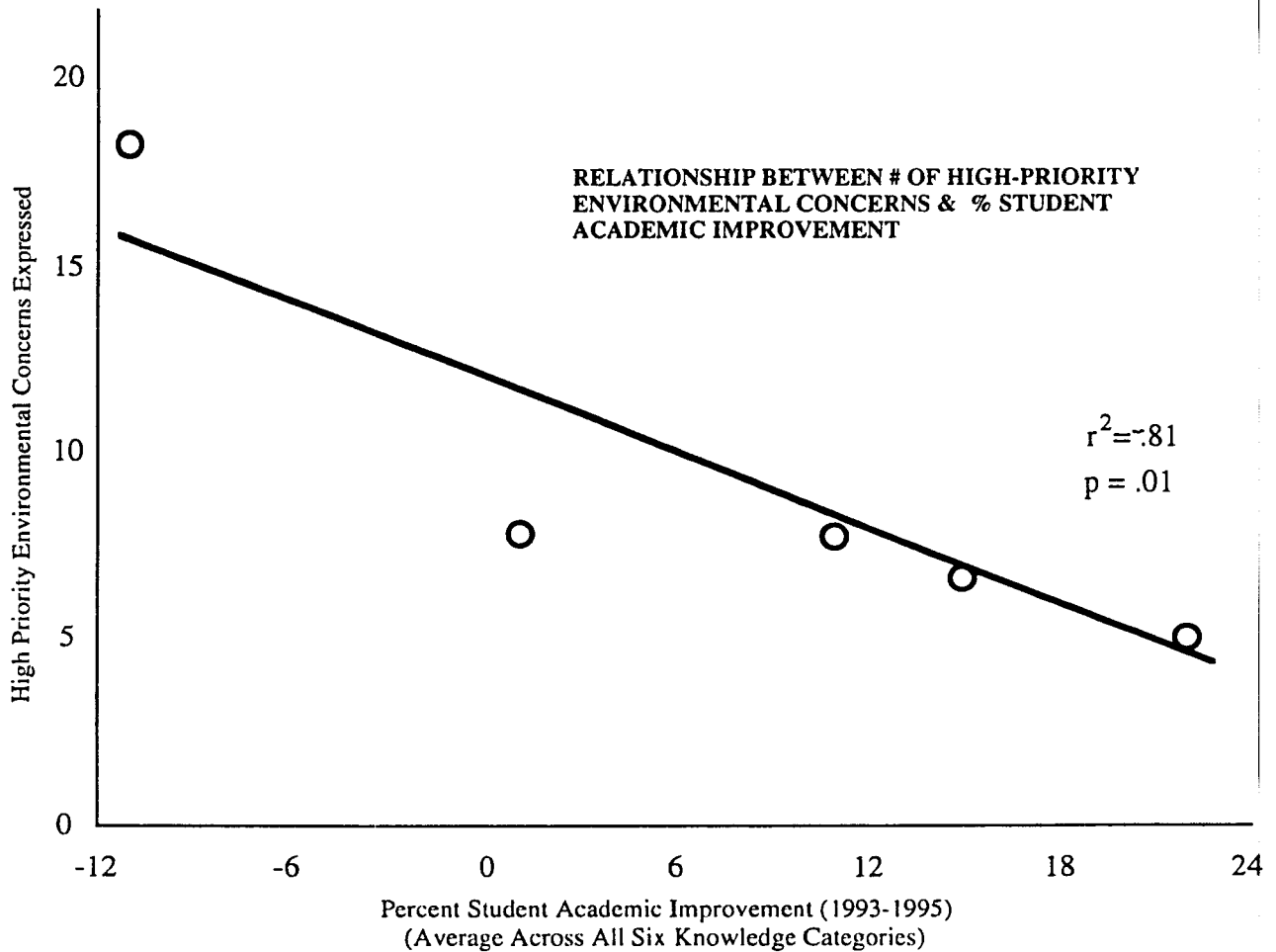
Specifically, when high priority issues expressed by the working groups in each school are correlated with an aggregated percentage of student academic improvement between 1993-1995<sup>9</sup>, a significant relationship is observed ( $r^2=.781$ ,  $p=.01$ ). Although this study is exploratory, the sample of schools is small, and the correlation does not suggest a causal relationship, there does appear to be a general emerging pattern between environmental quality and educational outcomes.

To what degree the maintenance and improvement of environmental quality contributes overall to educational quality is unclear from this study. However, it is clear that environmental quality is perceived by the occupants of each school in the study as one of the critical indicators of educational quality along side the more familiar indicators as the school's social climate, student socio-economic background and the quality of the student's home and neighborhood environments.

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<sup>8</sup> Several environmental qualities, such as Crowding/Spaciousness and Sensory Stimulation, not mentioned in Finding #2, were also seen as having an affect on educational outcomes. See Appendix A: Attributes of Environmental Quality for a more detailed discussion of these attributes.

<sup>9</sup>As reported in the Maryland School Performance Program Report, 1995



In order to discover which specific environmental qualities might be linked to educational processes and outcomes, participants were asked to identify those environmental qualities that they perceived are having the greatest impact on various educational outcomes:

### **Student Academic Performance**

Within the context of the five schools in the study, the environmental quality attributes most often mentioned as having an influence on Student Academic Performance include: Physical Comfort & Health and Classroom Adaptability. The environmental qualities of Safety & Security, Building Functionality, Personalization & Ownership and Privacy were also identified as having an influence on Student Academic Performance, but were not mentioned as often.<sup>10</sup>

<sup>10</sup>Environmental qualities are listed in order of confidence of finding which is determined by the number of times a particular quality was mentioned by working groups across all schools in the study.

**Physical Comfort and Health, in particular, concerns over thermal comfort, air flow, ventilation, and noise can have a significant affect on Student Academic Performance.**

- Poor air flow circulation and ventilation were the main causes of concern for all schools. Even when the few operable second floor windows are opened, very little fresh air can be effectively circulated. These conditions may be contributing to air borne bacteria causing many health-related problems which may in turn have the potential of influencing student attitudes, mood, and ultimately performance through lost instructional time. (25, 31, 32, 138, 142)<sup>11</sup>
- Thermal comfort can be of real concern especially during periods when tests are being conducted. Students are often unable to concentrate as easily on tasks. (25, 31, 32, 138, 142)
- Problems with noise in open space instructional areas is identified by the working group as a moderate priority that could have some influence on Student Academic Performance by continually distracting students from their work.(25, 138, 142)
- Concerns for lack of ventilation have kept one teacher from conducting science projects in his instructional area, hindering potential curricular choices that could impact Student Academic Performance.(142)

**Classroom Adaptability, in particular, concerns over both open plan and self-contained classrooms and technological adaptability, can have a significant affect on Student Academic Performance.**

- Open plan instructional areas are seen as having an affect on Student Academic Performance. The open plan arrangement, the working groups argued, causes problems with noise and distractions from other classes that tend to break students' concentration. (25, 31, 138, 142).
- One working group feels that the availability of electrical outlets and lack of wire cable runs for future computer installation may influence classroom adaptability thereby potentially affecting Student Academic Performance. (31)
- The requirement to use tables for cooperative learning takes up more room than the chairs once did. The inefficient layout and installation of new classroom computers in a few rooms take up even more space. The tightness of space and of working groups does not provide students, at times, with enough of a work surface to do their work creating distractions and affecting the quality of their work. (32)

**Safety and Security concerns, in particular, concerns over poor neighborhood quality, feelings of safety on building grounds, and safety from intruders, can significantly affect Student Academic Performance.**

- Safety and security as represented by the issues of poor neighborhood quality and psychological safety on school building grounds, is seen by teachers to potentially affect

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<sup>11</sup>Each issue is ranked by the number of schools mentioning that issue. Schools identifying a particular issue are noted in parentheses.

Student Academic Performance as illustrated by their students' preoccupation with problems at home which take time away from focused school work. (25, 31, 32, 138, 142)

- Teachers in the working group are well aware of the implications of safety and security problems on the ability of students to focus on learning. Due to recent incidents the custodian has established a new policy to lock the main entrance doors very soon after classes start and again directly after dismissal. The students' awareness of these incidents further contributes to an inability to focus on their work. (31)

**Building Functionality concerns, in particular, concerns over handicapped accessibility and mismatches between building layout and educational programs, can influence Student Academic Performance.**

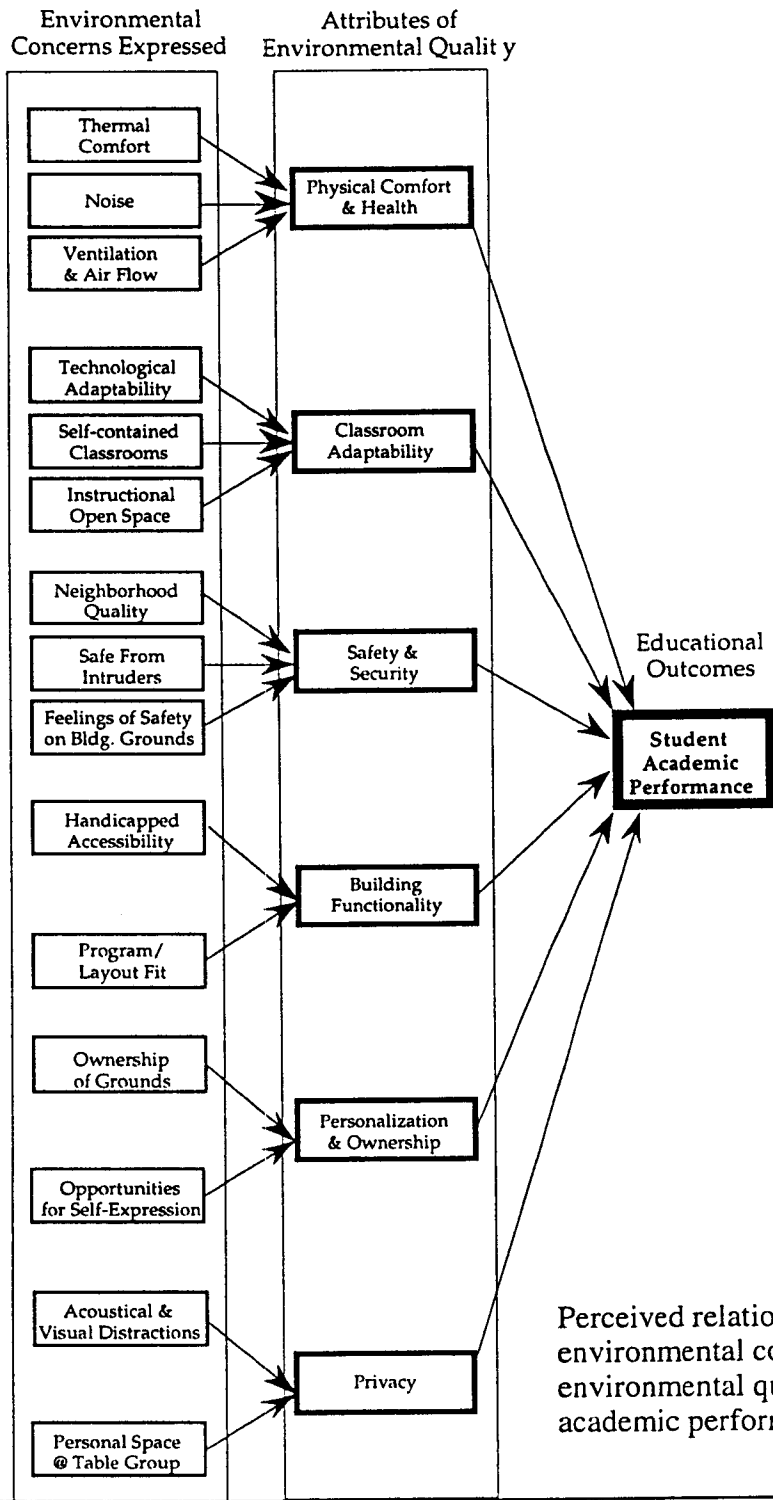
- Concerning the issue of ADA Accessibility, several of the working groups reasoned that although they did not have any physically disabled students, if they were to have one, accessibility issues might affect that student's ability to use the entire facility, thus affecting that student's performance. (25, 31, 32, 138, 142)
- Currently, mismatches between building functionality and organizational activities in one school are perceived by teachers to be affecting Student Academic Performance. Instructional space has been occupied by various outside agencies limiting the size and thus the functional effectiveness of many open space instructional areas. (142)

**Personalization and Ownership concerns, in particular, encouraging ownership of school grounds, as well as providing opportunities for self-expression within the school, can have an affect on Student Academic Performance.**

- The lack of ownership of the school grounds is seen as potentially affecting student attitudes and behavior that may hinder their performance. Evidence of this lack of ownership on the part of the community confronts students and teachers alike everyday: garbage, broken bottles, graffiti and other paraphernalia are strewn across the school site. (25, 31, 32, 138, 142)
- Within the school however, teachers and students are capable of personalizing their space and have gained a strong sense of ownership. Students learn the importance of taking responsibility for their actions. These attitudes, according to working groups, eventually influence their academic performance as well. (25, 31, 32, 138, 142)
- Teachers have developed several strategies to help students gain a sense of ownership and control over the limited space they do have. Most students have individual lockers (some students have to share with others) that are all individually personalized with the student's name and some artwork they have completed in a recent assignment. However, in some instances, due to the use of tables for cooperative learning strategies, students do not have desks to store their materials, and as a result, many student's personal belongings may be stacked on top of the working group tables, limiting effective workspace. Several teachers have developed a system of shoe boxes for students to keep their materials and supplies in. The school has thus far been unable to procure adequate under table drawers for these tables so as to provide some additional working surface on the tables. (32)

**Privacy concerns, in particular, concerns over acoustic and visual privacy in open space instructional areas and personal space at table groupings, can have a significant affect on Student Academic Performance.**

- Open space instructional areas are seen by the working group as providing little privacy for students which has the potential to affect Student Academic Performance. The performance of some students who work well in small groups or in privacy that are unable to do so because of the physical layout of the school, may suffer. Some classroom areas within the school provide places such as corners or activity areas, others do not. Several teachers indicated that students are allowed to go to any place within the classroom, but often only a few choose this option. (25, 138, 142)
- When students don't always get the personal space they need, the situation often results in fights. One teacher stated: "We average several fights a week." In a situation such as this, students can become territorial about their workspace and this can become another major obstacle to securing their sense of privacy and personal space. Self-contained classrooms limit the ability of teachers to provide semi-private work areas for students in need of a such as place. Crowded classroom tables in these classrooms add to this perception. (32)



Perceived relationships between environmental concerns, attributes of environmental quality, and student academic performance



### Student Social Development

Within the context of the five schools in the study, the environmental quality attributes most often mentioned as having an influence on Student Social Development include: Physical Comfort & Health, Safety & Security, Personalization & Ownership. The environmental qualities of Aesthetics & Appearance, Classroom Adaptability, Building Functionality, and Places for Social Interaction were also identified as having an influence on Student Social Development, but were not mentioned as often.<sup>12</sup>

### **Physical Comfort and Health concerns, in particular, thermal comfort, air flow, ventilation and noise can have a significant affect on Student Social Development.**

- Teachers indicated that when students do not have the thermal comfort they need they become less interested in socializing and more interested in just surviving the heat or the cold. Some students withdrawal, while others become disruptive. (25, 31, 32, 138, 142)
- Poor air flow circulation and ventilation were the main causes of concern for all schools as well. Even when the few operable second floor windows are opened, very little fresh air can be effectively circulated. These conditions may be contributing to air borne bacteria causing many health-related problems which may in turn have the potential of influencing student attitudes and behavior and ultimately opportunities for positive social development. (25, 31, 32, 138, 142)
- Problems with noise in open space instructional areas is identified by the working group as moderate priority that could have some influence on the social development of students by continually distracting students from interaction with their immediate group. (25, 138, 142)

### **Safety and Security concerns, in particular, poor neighborhood quality, lack of safe places to play, feelings of safety, and safety from intruders, can significantly affect Student Social Development.**

- Student Social Development was perceived by teachers to be affected by poor neighborhood quality as illustrated by in-school fighting, the result of social behavior learned at home or in the community subsequently brought into the school. (25, 31, 32, 138, 142)
- Safety on the playground is interpreted by the working group to hinder possibilities for Student Social Development, in that the deteriorating conditions of the playground and equipment do not as easily support teachers' attempts at organizing constructive play, thereby creating more reluctance on the part of the teacher to have students play on the grounds. Playground safety has also been seen as a high-priority problem. As is a problem at many Baltimore City schools, the playground has not been updated since the school's original construction. Outdated metal pipe. "jungle gym" playground equipment has slowly degraded to the point of being extremely unsafe. (25, 31, 32, 138, 142)

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<sup>12</sup>Environmental qualities are listed in order of confidence of finding which is determined by the number of times a particular quality was mentioned by working groups across all schools in the study.

- The presence of vehicular traffic is seen as potentially inhibiting social development of students through the limited opportunities for safe places to play. (31, 142)
- Teachers in the working group are well aware of the implications of intruders on the social development of their students. Students are aware of the defensive stance the school must take with regard to visitors and intruders. Due to recent incidents the custodian has established a new policy to lock the main entrance doors very soon after classes start and again directly after dismissal. (31)

**Personalization and Ownership concerns, in particular, encouraging ownership of school grounds, as well as providing opportunities self-expression within the school, can have a significant affect on Student Social Development.**

- The lack of neighborhood quality illustrated by lack of ownership of the school grounds is seen as potentially affecting student attitudes and behavior that may hinder social development. (25, 31, 32, 138, 142)
- Within the school however, teachers and students are capable of personalizing their space and have gained a strong sense of ownership in their school. Students learn the importance of taking responsibility by sharing in classroom clean-up routines, helping with the hanging of wall displays, being involved in landscaping projects and other similar group activities outside of more formal instruction. (25, 31, 32, 138, 142)
- Students have few ways to personalize their area, as they may have been able to do when they had their own desk. The teachers try to compensate by placing students' work on the walls of the classroom and in the hallways of the school thereby instilling a sense of personalization and ownership on a larger scale (i.e., 'this is my classroom, this is my school'). (25, 31, 32, 138, 142)
- Where personalization and ownership qualities are clearly in view is at the main entrance lobby of each school. It is here where the life of the school is visually expressed with an abundance of slogans on the walls, posters announcing events, and flyers littered on waiting tables. (25, 31, 32, 138, 142)
- Teachers often personalize their instructional areas even though at first glance each area appears to have common features similar to others in the pod. Within guidelines established by teachers, there is evidence students have opportunities to personalize as well as take ownership in their instructional area. (25, 138)
- Within the school, teachers provide many opportunities for students to personalize their classrooms by displaying student work, and to take ownership of their school through participation in the Safeties, Plant Brigade, and other school service-related tasks.(31)

**Aesthetics and Appearance concerns, in particular, a school's cleanliness, orderliness and character, can have an affect on Student Social Development.**

- The appearance of the school, it's cleanliness, orderliness and character are believed by some teachers to influence Student Social Development. The school building was perceived as influencing occupant and visitors' first impressions of the school. To teachers, a clean school equals an orderly school. Clean and shiny floors, fluorescent light strips that brightly shine without flickering, displays that are orderly and colorful, these are the symbols of a school that is on a progressive track toward excellence. The

quality of aesthetics and appearance is perceived as instilling cultural awareness and pride in students as well as visitors to the school. Maintaining a positive appearance of the building reinforces personalization and ownership for not only its occupants, but for the community as well. (25, 31, 32, 138, 142)

- The poor appearance of the building grounds and lack of visually attractive playground equipment in all schools in the study are seen by some working groups as having an influence on students' social development. (25, 31, 32, 138, 142)

**Classroom Adaptability, in particular, concerns over open plan and self-contained classrooms can have a significant affect on Student Social Development.**

- Open plan instructional areas are seen as having an affect on Student Social Development. Managing class activities in an open space in a manner sensitive to other classes, limits the range of behavior and activities that can take place, such as music, dance, and other activities requiring movement of tables and chairs in the classroom. (25, 31, 138, 142).
- The requirement to use tables for cooperative learning take up more room than the chairs once did. The inefficient layout and installation of new classroom computers in a few rooms that take up even more space. The tightness of space and of working groups does not provide students at times with enough of a work surface to do their work creating distractions and affecting the effectiveness of their work. (32)

**Building Functionality concerns, in particular, handicapped accessibility, lack of adequately equipped outdoor playareas, and space for school-wide assemblies, can have a significant affect on the social development students.**

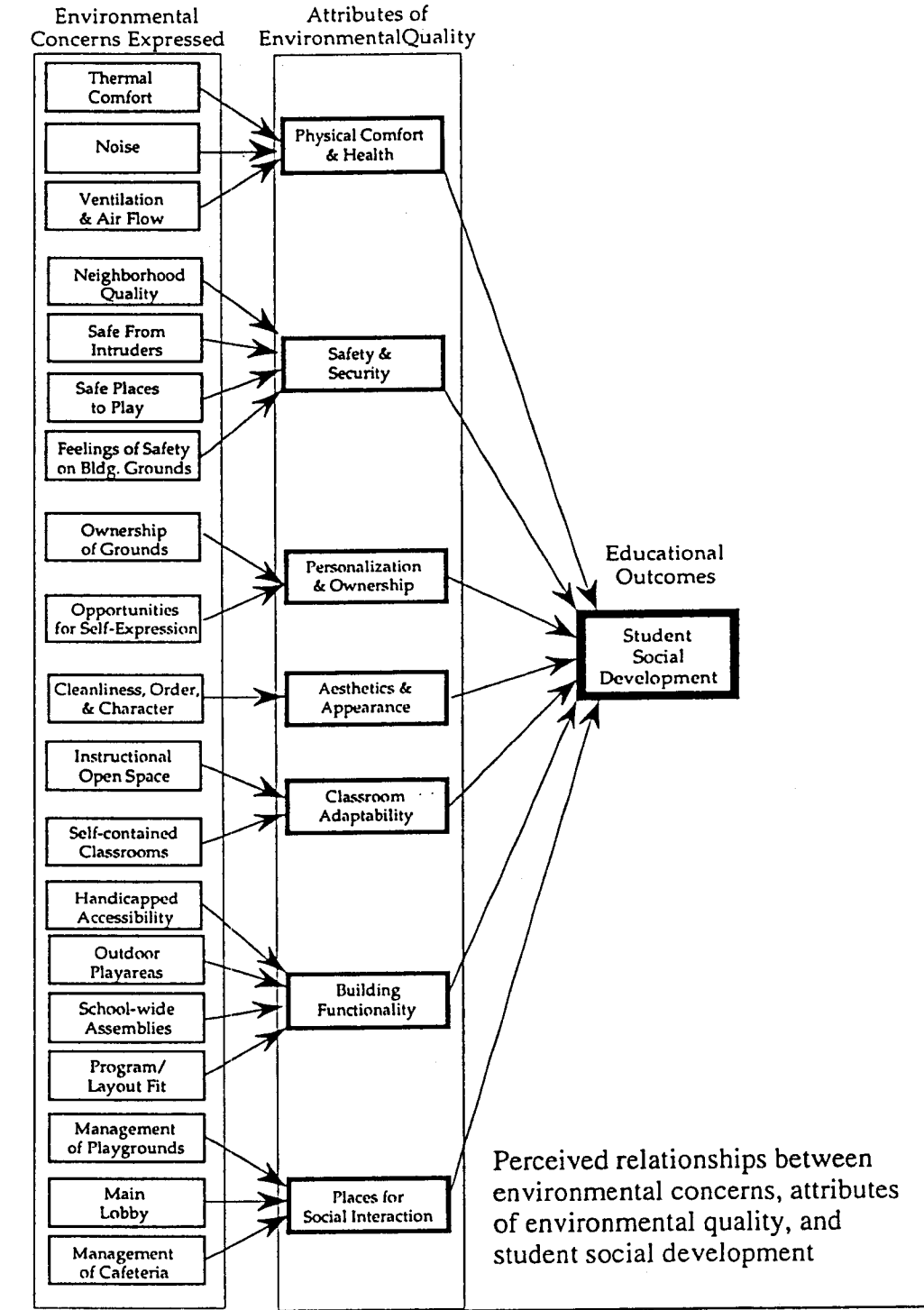
- Concerning the issue of ADA Accessibility, several the working groups reasoned that although they did not have an physically disabled students, if they were to have one, accessibility issues might affect that student's ability to use the entire facility. Due to limited access to the school building, a physically disabled student would not able to participate in all the activities of the school, thereby limiting his or her social development. (25, 31, 32, 138).
- The playground is interpreted by the working group as inadequately functioning to support teachers' efforts to organize constructive outdoor play, limiting opportunities for Student Social Development. (142)
- Currently, mismatches between building functionality and organizational activities in one school are perceived by teachers to be affecting social development. (142)
- The lack of space for school-wide assemblies limits opportunities for quality social interchange between a larger group of students, teachers and the community. (142)

**Places for Social Interaction, in particular, concerns over adequate management of playgrounds and cafeterias and providing opportunities for informal social interaction in main lobby spaces, can have an influence on Student Social Development.**

- The playground and the cafeteria are the two locations that students are free to express themselves and let off some energy. Even with teacher concerns over the lack of

opportunities for constructive play, students find imaginative ways to make the playground their own. (25, 31, 32, 138, 142)

- The most openly social place in all of the schools in the study is the main lobby and main office waiting area. It is this area that provides the liveliness, and rich informal social interaction throughout the day. This combination of areas serves to support social development of students. (25, 31, 32, 138, 142)
- The centralized location of the Commons serves as a true community forum. The Commons was observed as serving as a cafeteria, student meeting area, staff meeting space, community commons and informal social encounter space that clearly supports social development. (25)
- Even though the underutilized library/media center is not programmed for any particular purpose, it has become an informal place for students from various classes to informally gather and socialize, and serves as a small group instructional area as well. One teacher has allowed her students to spill over into the unused space if they need more privacy for doing their work. (142)
- Shared lockers are seen as a place encouraging social development even though sharing may produce feelings of lack of privacy, and lack of personalization and ownership on the part of students. (142)



### Teacher Instructional Performance

Within the context of the five schools in the study, the environmental quality attributes most often mentioned as having an influence on Teacher Instructional Performance include: Physical Comfort & Health and Classroom Adaptability. The environmental qualities of Safety & Security, Building Functionality were also identified as having an influence on Teacher Instructional Performance, but were not mentioned as often.<sup>13</sup>

### **Physical Comfort and Health concerns, in particular, thermal comfort, air flow and noise, can have a significant influence on Teacher Instructional Performance.**

- At times, the lack of thermal comfort can affect a teacher's attitude, mood and motivation to instruct, thereby affecting their performance. (25, 31, 32, 138, 142)
- Poor air flow circulation and ventilation were the main causes of concern for all schools. Even when the few operable second floor windows are opened, very little fresh air can be effectively circulated. These conditions may be contributing to air borne bacteria causing many health-related problems which may in turn have the potential of influencing Teacher Instructional Performance lost instructional time. (25, 31, 32, 138, 142)
- Problems with noise in open space instructional areas are identified by the working group as moderate priority that could have some influence on Teacher Instructional Performance. Constant distractions from neighboring classes can affected teacher mood and attitudes thereby affecting instructional performance. (25, 142)

### **Classroom Adaptability concerns, in particular, the design and adaptability of both open plan and self-contained classrooms, and technological adaptability, and available display and storage space, can have a significant affect on Teacher Instructional Performance.**

- Open plan instructional areas were seen as having an affect on Teacher Instructional Performance. In much the same way as with students, teachers are constantly distracted from noises and movement from other classes around them. These distractions can decrease, to some degree the effectiveness of their instruction. In addition, open instructional areas do not have enough wall space or chalkboard space. Some teachers compensate for the lack of wall space by hang posters from the ceiling, or placing displays over semi-transparent windows. (25, 31, 138, 142).
- Instituting a cooperative learning philosophy into the existing self-contained classrooms was seen as a welcome albeit challenging change for teachers with respect to classroom adaptability. A few teachers see these changes limit classroom flexibility impacting their instructional performance. All desks were replaced by classroom tables causing problems with the flexibility of classroom space: desks were seen by some teachers as providing more flexibility than bigger tables which took up the majority of classroom space. The classroom table issue impacted the ability of teachers in some cases to effectively conduct cooperative learning exercises that at times required free movement which is obviously difficult to do in a room occupied by tables. (32)

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<sup>13</sup>Environmental qualities are listed in order of confidence of finding which is determined by the number of times a particular quality was mentioned by working groups across all schools in the study.

- There was some concern over the installation of the computers that resulted in a limited use of valuable bulletin board space in several classrooms. It appeared to the working group that the computers could be organized in such a way to limit the amount of direct wall space they occupied by grouping them back to back. This issue was seen as potentially affecting instructional performance. (32)
- Teachers mentioned wall hanging problems in warm weather as being one problem that often affected their instructional performance by forcing them to take time out of their planning to re-hang visuals, posters and student artwork. (32)
- Although teachers feel they have adequate storage, it is just not properly organized or managed as well as it could be. As a result, it is hard to conduct an inventory of books and supplies and there is no room for additional storage needs. Books and supplies stored in open instructional areas are routinely stolen or misplaced. (142)

**Safety and Security concerns, in particular, concerns over poor neighborhood quality, feelings of safety, safety from intruders, and the securing of personal belongings, can have a significant affect on Teacher Instructional Performance.**

- Due to poor neighborhood quality, an ever-present undercurrent of anxiety is created in the minds of many teachers. Perceived psychological safety on building grounds can have an affect on teachers' attitudes and moods. Bad experiences teachers bring into the school can adversely affect their ability to focus on the task of teaching. (25, 31, 32, 138, 142)
- The physical state of the school and its grounds can also have an affect on Teacher Instructional Performance. Locked and frosted windows constantly remind teachers of the surroundings. Stories of past intruders remind teachers of the lack of control they have at times even within the building. Although teachers feel psychologically safe within the building and often claim to be habituated to the situation, an ever present concern for their safety and the safety of their students pervades their day and is every so often heightened by new events that may impact them directly. These feelings, they argue, indirectly affect their performance by distracting them from their immediate task of teaching. (25, 31, 32, 138, 142)
- Although recent steps have been taken by the school to cut down on intruders, teachers in the working group are very aware of the intruder safety problem on their ability to focus on the instructional need of their students. (31, 138)
- Security concerns over teachers' locked storage is believed to serve as a distracter on a teacher's ability to focus on instruction. Teachers should not have to worry about whether his or her personal belongings are secure or not. (31, 32, 138, 142)

**Building Functionality concerns, in particular, concerns over mismatches between building layout and educational programs, can affect Teacher Instructional Performance.**

- Currently, mismatches between building functionality and organizational activities in one school are perceived by teachers to be affecting their own performance. Due to the influx of outside community agencies in the school, created as a result of a community school vision, open-plan instructional space has been compromised decreasing the availability of space for instruction. (142)

- Teachers feel their performance suffers when supportive instructional spaces have not been managed well: they must cope with an abandoned library/media center, unorganized centralized storage rooms, a crowded administration area, and directing lost parents who cannot find their student's classroom.(142)

